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Are Islamic Banks More Resilient to Financial Crises? A Critical
Analysis of Islamic and Conventional Banks with Particular
Reference to Saudi Arabia

PhD Research Project

08/2018

By

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ABSTRACT

This study seeks to determine whether the regulatory basis and operational structure of the Islamic financial model position it as the front-runner in terms of sustainability and resilience to financial crises. A critical review of the extant literature reveals that Islamic banks have performed better than conventional banks during economic shocks because Islamic banks are less exposed to risks. However, this study maps the profile of financial institutions that are generally resilient to financial crises, and notes that Islamic banks do not match this profile. Nonetheless, an assessment of the risk management strategies of Islamic banks reveals that they are in fact less likely to trigger instability when using profit-loss sharing schemes. The study utilises existing statistical data as part of the inter-disciplinary understanding of the effects of financial crises. The data is derived from various surveys and reports that chart overall performance considering the stressful financial environment of 2007-09 and beyond. This is complemented with original qualitative data that has been collected through surveys that identify the perceptions of key stakeholders in the banking sector on the resilience of their respective banking systems and how those systems could ultimately be improved. The traditional tripartite analysis of knowledge is adopted. The analysis at a generic level reveals that banks using the profit-loss sharing schemes match the profile of institutions that are generally more resilient to financial crises. The analysis at the level of the State reveals that where Islamic banks are accommodated within the same regulatory framework as conventional banks, the former are more resistant to financial shock. Lastly, the analysis at the level of individual banks reveals that the stress testing frameworks of the conventional banks may be rated as less effective than those of Islamic banks.

DECLARATION

I hereby declare that this thesis has not been, and will not be, submitted in whole or in part to another University for the award of any other academic award.

Signature: Bader Aldosari

LIST OF ABBREVIATIONS

AAOIFI	Accounting and Auditing Organisation for Islamic Financial Institutions
ABCP	Asset-Backed Commercial Papers
ALM	Asset and Liability Management
BCL	Banking Control Law
BCBS	Basel Committee for Banking Supervision
BCCI	Bank of Credit and Commerce International
BIS	Bank for International Settlements
BSL	Basic Law of Governance
CA 2006	UK Companies Act 2006
CCAR	Comprehensive Capital Analysis Review
CGFS	Committee on the Global Financial System
CMA	Capital Market Authority
CML	Capital Market Law
CRD	Capital Requirements Directive
CV	Curriculum Vitae
EBA	Environmental Bankers' Association
ECB	European Central Bank
ES	Expected Shortfall
EU	European Union
FATF	Financial Action Task Force
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
IBB	Islamic Bank of Britain
ICAP	Internal Capital Adequacy Process
IFRS	International Financial Reporting Standards
IFSB	Islamic Financial Services Board
IMF	International Monetary Fund
IRB	Internal Rating Base
IRR	Interest Rate Risk
KRI	Key Risk Indicator
KSA	Kingdom of Saudi Arabia
LIBOR	London Interbank Offered Rate
MC2	Means, Competence and Community
MENA	Middle East and North Africa Region
MBS	Mortgage-backed Securities
NCB	National Commercial Bank
OIC	Organisation of Islamic Cooperation
ORMD	Operations Risk Management Department
PER	Profit Equalisation Reserve
PLS	Profit Loss Sharing
QR	Quantile Regression
RAROC	Risk-Adjusted Return on Capital
ROA	Return on Assets

ROE	Return on Equity
SAMA	Saudi Arabian Monetary Authority
SPV	Special Purpose Vehicle
STD	Standardised Approach
UAE	United Arab Emirates
USA	United States of America
USD	United States Dollar
UK	United Kingdom
VaR	Value at Risk
YANSAB	Yanbu National Petrochemical Company

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Chapter 1: Introduction

1.1 Introduction

Given the experiences of recent decades, a cloud still looms over the global financial market. The 2007-09 financial crisis and its aftermath have left institutions and national economies looking for ways to improve their banking systems to ensure that the failures witnessed during this period do not replicate themselves again in the future. As part of this exploration, many have questioned which banking model is in fact the most resilient, with consideration given to the conventional, Islamic, and various other models used around the globe such as the Grameen Banking model, the MC2 model, and the village banking model.¹ This study aims to determine whether the regulatory basis and operational structure of the Islamic financial model position it as the front-runner in terms of sustainability and resilience to financial crises. Further, it seeks to ascertain whether the conventional model may accommodate the unique aspects of Islamic finance in their domestic banking regulations in order to enhance the resilience of conventional banks.

The early roots of Islamic banking and finance were established in Muslim society during the golden age when early forms of proto-capitalism and free markets started to become key drivers of success and economic growth for the medieval caliphates.² Early forms of mercantilism emerged between the 8th and 12th centuries which some scholars regard as the birth of Islamic capitalism.³ During the golden age, early economic concepts evident in Islamic banking emerged. Such concepts include unsophisticated forms of partnership or *Mufuwada*, capital or *al-mal*, trusts or *waqf*, ledgers, limited partnerships or *Mudaraba*, and capital accumulation or *nama al-mal*.⁴ Meanwhile, independent business enterprises also

¹ See for example, AV Vernikov, 'Comparing the Banking Models in China and Russia: Revisited' (2015) 26 *Studies on Russian Economic Development* 178, 178-187; M Montagna and T Lux, 'Hubs and Resilience: Towards More Realistic Models of Interbank Markets' in IA Fernandes and T Ausina (eds), *Banking Integration and Financial Crises: Some Recent Developments* (BBVA 2015) 163-187; J Birchall and LH Ketilson, *Resilience of the Cooperative Business Model in Times of Crises* (International Labour Organisation 2009) 10-13; N Krauss and I Walter, 'Can Microfinance Reduce Portfolio Volatility' (2008) New York University. Available at: <https://www.microfinancegateway.org/sites/default/files/mfg-en-paper-can-microfinance-reduce-portfolio-volatility-dec-2008.pdf> [02 March 2018].

² See Z Iqbal and A Mirakhor, *An Introduction to Islamic Finance* (1st edn, John Wiley & Sons 2011) chapter 1.

³ Ibid.

⁴ A Alharbi, 'Development of The Islamic Banking System' (2015) 3 *Journal of Islamic Banking and Finance* 12, 13.

developed during the medieval period in the Islamic world and later spread to Europe in the 13th century as a result of Muslim conquests.⁵

This development continued in the following centuries, and after periods of the emergence and disappearance of Islamic empires, Islamic banking evolved into the modern banking system that took hold in the 1960s.⁶ During the 1960s and into the 1970s, the principle of interest-free banking began to gain traction in the Islamic world. This was a banking system based on the concepts of *Mudaraba* and the sharing of profit and loss.⁷ As academic work on the concept of interest-free banking continued to gain ground in the Islamic world, politics chipped in fuelled by the emergence of young economists from Muslim backgrounds.⁸ This ensured that in most Muslim societies, there were specific rules and regulations governing all financial transactions, bank notes and commercial papers that were widely accepted, and a strong judicial system capable of enforcing all contracts that comply with the regulations.⁹

After a sustained study¹⁰ on the benefits of a banking system based on the model of *Mudaraba*, the first interest-free loan savings banks were established in 1963 in Mit Ghamr, Egypt. That same year, the first Sharia-compliant fund was established in Malaysia.¹¹ The success of these two initiatives increased interest in the concept of Islamic banking and attracted institutional involvement. In 1970, Islamic countries held the Conference of the Finance Ministers in Karachi.¹² The Egyptian study followed in 1972, and later the first international conference on Islamic economics was held in Mecca in 1976.¹³ These efforts led to the establishment of the Islamic Development Bank in 1975 in Dubai, making it the first modern commercial bank in the Islamic world.¹⁴ Since then, a myriad of Islamic banks have emerged in different parts of the world characterizing the rapid growth of the industry.

⁵ M Ayub, *Understanding Islamic Finance* (1st edn, John Wiley & Sons 2007) section 2.3.1.

⁶ S Zineb and M Bellalah, 'Introduction to Islamic Finance and Islamic Banking: From Theory to Innovations' in M Bellalah and O Masood (eds), *Islamic Banking and Finance* (1st edn, Cambridge Scholars Publishing 2013) 2.

⁷ Ibid,

⁸ For an overview of the works of some influential scholars at the time, see M Al-Ansari, M Hasan and S Metwally, *Islamic Banks* (Al-Ahram Establishment 1988) 24-25.

⁹ A Alharbi, note 4, 13-14. See also, A Nasser, *Essentials of Islamic Bank Assets and Operational Aspects* (Appollo 1996) 15-16.

¹⁰ A Chachi, 'Origin and Development of Commercial and Islamic Banking Operations' (2008) 21 *Journal of King Abdulaziz University-Islamic Economics* 3, 17.

¹¹ M Iqbal and P Molyneux, *Thirty Years of Islamic Banking* (1st edn, Palgrave Macmillan 2005) 36.

¹² Ibid

¹³ B Kettell, *Introduction to Islamic Banking and Finance* (1st edn, Wiley 2011) 34.

¹⁴ Z Iqbal and A Mirakhor, note 2 above.

Over the next forty years, the Islamic banks continued to develop and expand their offerings to viably compete with their conventional counterparts in a growing economy. However, this growth was quickly halted in the mid-2000s. The 2007-09 global banking crisis put all banking systems, including both conventional and Islamic models, to the test. This crisis, originating from the subprime mortgage crisis in the United States, extended far beyond its borders, impacting major economies around the world.¹⁵ It resulted in financial losses for banks and economic recessions in economies that affected bank financial reports. Most importantly, it tested the sustainability of various banking models in light of competing financial, economic, and consumer concerns.¹⁶ In the wake of the crisis, there was much speculation on the causes of the financial crisis. However, it would appear that the Islamic banking sector was less adversely affected by the crisis than its conventional counterpart.

In attempting to determine why this was the case, many Islamic regulators such as the central banks of Bahrain, Iran, Kuwait, Malaysia, Pakistan, Saudi Arabia, Sudan along with the Islamic Development Bank and Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI),¹⁷ contend that Islamic banking carries fewer risks than conventional banking because its products are based on real assets.¹⁸ This stems from the regulatory restrictions put in place to ensure that Islamic banks remain Shariah compliant. Also, some scholars have asserted that Islamic financial institutions are significantly less affected by economic volatility than conventional banks.¹⁹ Conversely, other commentators argue that Islamic banking is subject to the same problems as conventional banking and its unique structure exposes it to additional risks such as Shariah-compliance risk which do not affect their conventional counterparts,²⁰ as well as to equity investment risk, displaced commercial risk, and rate of return risk because of the potential reduction in the fair value of equity held by the Islamic institution or the fact that fixed returns are not provided in exchange for deposits or the market rate of return may change unexpectedly.

¹⁵ M Almanaseer, 'The Impact of the Financial Crisis on the Islamic Banks Profitability – Evidence from GCC' (2014) 5 *International Journal of Financial Research* 176, 176.

¹⁶ Ibid.

¹⁷ A Khan, *What is Wrong with Islamic Economics? Analysing the Present State and Future Agenda* (Edward Elgar Publishing Limited 2013) 86.

¹⁸ M Obaidullah, *Islamic Financial Services* (Scientific Publishing Center 2005) 5.

¹⁹ A Ahmed, 'Global Financial Crisis: An Islamic Finance Perspective' (2010) 3 *International Journal of Islamic and Middle Eastern Finance and Management* 306, 307.

²⁰ T Beck, A Demirgüç-Kunt and O Merrouche, 'Islamic vs. Banking: Business Model, Efficiency and Stability' (2013) 37 *Journal of Banking & Finance* 433, 433-447.

Ultimately, therefore, the goal of this research is to attempt to reconcile these differing perspectives. Analysing banking systems requires a detailed understanding of the regulations that provide for the creation and operation of banks, the risks embedded in the products and services offered by the banks, and the proactive measures adopted by the banks and regulators to minimize financial risks. The effective management of risk exposure is critical to the successful operation of any financial institution, and is even more important during periods of volatility and recession, such as during the global banking crisis that has affected financial markets in the last decade.²¹ In this regard, effective corporate governance and risk management have become increasingly important as financial regulators and rating agencies have put greater emphasis on them following the 2007-09 financial crisis.²² They have become an important means to differentiate a bank from its competitors and give it a competitive advantage by acknowledging its methods for preventing or eliminating potential financial risks it may face. This is particularly important in emerging markets in which rapid expansion is closely related to higher risks, thus, making effective governance and risk management crucial.²³ In this context, all financial institutions, both conventional and Islamic, face significant challenges in managing their risk exposure across all asset classes and business sectors through effective evaluation, measurement, and pricing strategies.

Banking institutions need to establish the best risk management process that assists in ensuring the achievement of value and profit maximisation and thus the bank's success. This study therefore examines the performance of Islamic banks during the financial crisis and determines whether they were more resilient to shock than conventional banking models, and whether this may be explained by the risk management strategies of the Islamic banks, as well as the regulations in Islamic jurisdictions.

1.2 Aims of the Thesis

This thesis seeks to determine whether the contention that Islamic banks are more resilient to financial crises than conventional banks is justified. In this light, it ascertains what constitutes resilience to financial crises and attempts to demonstrate that if the above statement is true,

²¹ Ibid.

²² P Bromiley et al., 'Enterprise Risk Management: Review, Critique, And Research Directions' (2015) 48 *Long Range Planning* 265, 265.

²³ R Fairchild, 'Financial Risk Management: Is It a Value- Adding Activity?' (2012) 10 *Balance Sheet* 22, 22-25.

then the adoption of the Islamic banking model may strengthen the resilience of conventional banking systems.

The main purpose of this research is to establish a causal link between the principles of the Shariah, including good faith, mutual trust, fair dealing and profit and loss sharing, as applied to the banking sector, and the resilience of banks, as well as the overall perseverance strength of the financial system. It also seeks to establish whether follows that a financial crisis such as that of 2007-09 may not have been triggered by banks offering Shariah-compliant products and services. This thesis will also address the nuances of challenges for Islamic banks in the global financial sector that is overall more receptive to a conventional banking model, despite the observed weaknesses in the approach in light of the recent financial crises.

The above goals are achieved by critically assessing the performance of Islamic banks in comparison to conventional banks in the regulatory environment of the Kingdom of Saudi Arabia (KSA). Thus, the objective is to determine whether Shariah-compliant banks are more resilient than conventional banks, where they operate within the same regulatory environment. In the KSA, Islamic banks and conventional banks are required to comply to the same laws and regulations.

Additionally, this thesis aims to identify the foundational underpinnings of the Islamic banking model, taking into consideration the greater societal and economic goals that a Shariah compliant banking system seeks to achieve. For this purpose, this thesis adopts a heuristic approach to understanding the process of risk management in the Islamic banking system, and the evolution of the contemporary management strategies in use by some banks in the KSA. By understanding the structure of the model and the goals that it seeks to attain, one can then effectively compare it to the conventional banking models used by banks within the same regulatory environment. It is only through understanding the unique attributes of the Islamic model that one can understand not only how this model differs from conventional banking systems, but why it may be more desirable.

Given that each bank has a specific risk management strategy that determines how it identifies and manages risk, as well as underwriting standards that guide its decision to accept a client and credit risk, this thesis will also seek to ascertain whether Islamic and conventional banks in the KSA have developed specific risk management strategies that take

into account the unique risks embedded in their products and services. The objective of this comparative analysis is to determine whether the heterogeneity of each bank and effective prudential regulation are more important than the nature of the banking or financing activity.

Finally, this study aims to contribute to the literature on the challenges of developing regulatory tools that capture the multifaceted nature of the banking system. This thesis undertakes a critical review of the orders and several pieces of legislation that regulate banking transactions in the KSA. It shows how the regulator has honed prescribed standards and approaches to enhance the resilience of both Islamic and conventional banks, as well as the financial system.

1.3 Objectives of the Study

To accomplish the aims of this thesis, there are a number of core research objectives that guide the inquiries contained within. First, this thesis seeks to understand the similarities and differences between the principles and practices of the conventional and Islamic banking systems. It is only through such an understanding that one can accurately compare the two systems in light of each other and distil ideal practices for consideration.

Second, this thesis seeks to map the profile of the financial institution that is generally resilient to financial crises. This involves ascertaining the concept of ‘resilience’ in the context of financial system and examining the body of thought surrounding the concept. This will better equip regulators with knowledge of what needs to be done to become more resilient.

Third, this thesis attempts to determine whether in cases where Islamic banks are accommodated within the same legal and regulatory framework as conventional banks, the Islamic banks are more resilient to financial crises. This involves assessing the risk management strategies of Islamic banks in the KSA, as well as determining whether Islamic banks exceeded the minimum requirements and were more profitable than conventional banks during the crises in the KSA. It equally seeks to explain any discrepancies in the performances between Islamic and conventional banks.

Finally, this thesis examines how Islamic and conventional banks assess their resilience to crises. It attempts to determine whether Islamic banks use mechanisms that are tailored to their unique products and services and the economic conditions in which they operate. Thus, it seeks to determine whether the capital structure, adequacy levels and distributions are assessed from an Islamic perspective.

Financial crises are often systemic and may begin at any level in a system. The capacity of resilience must therefore be reinforced at the system level as well as the level of financial institutions. Nonetheless, it remains uncertain what are the most appropriate strategies for strengthening the financial environment and reinforcing the resilience of banks.²⁴ Resilience, in this context, ensures the continuous provision of financial services both in good and bad times. It is also still uncertain what characterises a resilient bank and financial system or what are the predictors of resilience to financial crises. The performance of banks during crises may be determined by factors such as bank capital ratio, funding structure or retail depository finding. Some commentators have held that regulators ought to use instruments to measure and mitigate risk given that resiliency is a function of risk management.²⁵ In other words, effective regulatory mechanisms may reduce the incentives of financial institutions to take risks and motivate them to manage risks better thereby contributing to their resilience during crises.²⁶ Thus, this study assesses the fundamentals that have contributed to the resilience of Islamic and commercial banks in the KSA in order to address the problem of the uncertainty of the sources and determinants of resilience.

1.4 Research Questions

The primary inquiry of this thesis is to identify what aspects of the Islamic banking model and its formation laws, implementation, and regulation in the KSA position it as a more resilient banking system when compared to conventional banking models in the face of domestic economic challenges and global financial crises.

²⁴ WT Selmier II, H Penikas and K Vasilyeva, 'Financial Risk as a Good' (2014) 31 *Procedia Computer Science* 115, 115-123.

²⁵ C Calomiris, 'An Incentive-Robust Program for Financial Reform' (2011) 79 *Manchester School* 39, 39-43. See also, R La Porta et al, 'Law and Finance' (1998) 106(6) *Journal of Political Economy* 1113, 1113-1115.

²⁶ L Ratnovski and R Huang, 'Why Are Canadian Banks More Resilient?' (2009) IMF Working Paper No WP/09/152. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1442254 [20 November 2018] 18.

In answering this main question, a number of supplementary questions are also considered, specifically:

1. What are the legal and regulatory underpinnings of the Islamic and conventional banking systems?
2. What are the key differences in regulatory structure, operational practices, and risk management tactics between the Islamic and conventional banking systems?
3. How sustainable are the conventional and Islamic banking models in response to financial crises, and what steps can be taken to improve their overall resilience?
4. What best practices or cautionary lessons can be learned from the respective systems' risk management strategies and how can these be implemented in their counterparts in the future?

1.5 Significance of the Contribution

This thesis evaluates the Islamic banking model and its resilience in the face of financial crisis, specifically in comparison to the performance of conventional banks under the same pressures. While there has been significant scholarly attention to and analysis of this proposition, it has been situated primarily from the financial and economic perspectives. This research has however taken a regulatory approach to understanding the operational aspects of these banking systems and how these aspects contribute to their ultimate resilience.

Chapter 2 (Section 2.5) critically analyses previous studies that have collected and analysed empirical evidence in order to support or confute the claim that Islamic banks are more resilient to financial crises than conventional banks. It discusses the methodology used by these studies to collect and analyse data from fully Shariah-compliant banks or banks that offer both Islamic and conventional products and services. It then analyses the findings of these studies after controlling for bank characteristics. Some studies found that the Islamic banks performed better during the 2007-2009 financial crisis because they were more equity financed, and so, their performance indicators, including capital adequacy, liquidity and profitability, were less affected by the crisis. In the same vein, other studies found that Islamic banks had greater liquidity but less liquidity risk exposure than conventional banks during the crisis. On the other hand, other studies found that conventional banks were more

profitable than Islamic banks and the latter were less efficient in expense management as well as risk management in regard to loans.

However, the majority of the studies that are reviewed in Chapter 2 conclude that Islamic banks are more resilient to financial crisis when compared to conventional banks. It is noted that they submit diverse reasons making it difficult to determine what specific features of Islamic financial institutions may explain under normal circumstances their resilience to financial crises compared to conventional institutions. Thus, it is argued that the findings of these studies reflect in different ways the effects of different rules and regulations in different regulatory environments. The prudential regulations of the countries in which these studies were conducted made a significant contribution to their findings. This is something that was generally overlooked. Regulations, which are not solely based on the principles of the Shariah, determine how the financial institutions operate and manage risks, and therefore ensure their safety and soundness. As such, although Islamic banks in a specific sample may have performed better than conventional banks before, during or after the 2007-09 financial crisis, it does necessarily imply that the principles of the Shariah (as interpreted in the specific jurisdiction) are causally linked to the performance of financial institutions.

This thesis stands out because it is premised on the contention that there is not necessarily a causal link between performance during the 2007-2009 financial crisis and resilience in general. Hence, the fact that a bank was not as adversely affected as other banks during the 2007-2009 crisis does not imply that the former is more resilient to financial crises. Some banks may have been more resilient because they were more active in the securitisation market and therefore enjoyed better capitalisation, higher profitability, and lower insolvency risk. However, the same banks may rely largely on the government which may be detrimental during a sovereign crisis if there is no good risk management strategy. As such, unlike the previous studies, this thesis places emphasis on establishing a theoretical link between principles of the Shariah and resilience to financial crises in order to determine whether Islamic banks are generally more resilient than conventional banks.

This thesis grounds itself by providing the foundational background for the rise of the contemporary Islamic banking model, leading up to the current regulatory regimes in place that govern the formation and operation of Islamic banks within various countries. This thesis

consequently engages in an analysis of regulatory goals for Islamic banks and provides a comparative exploration of these goals in the KSA. This research also explores in detail what makes the Islamic banking system unique, particularly as implemented in the KSA, and what the Shariah underpinnings are for the manifestation of these differences.

Having established the differences between these two models from a legal perspective and in principle, this thesis then engages with a critical analysis of how the models comparatively performed in light of the 2007-09 financial crisis. Using this global event as a litmus test for the resilience of the models, the study looks at how the performance of each system can be tied to the choices made from a regulatory standpoint long before the crisis came to pass. To demonstrate the arguably better performance of the Islamic banking system, this thesis contemplates the economic and financial aspects of the crisis and the relative performance of banks in each banking system around the globe to provide the raw data from which ultimate conclusions can be drawn.

Finally, this thesis concludes with a unique exploration of the lessons that each system can learn from one another to improve their overall performance in the face of crisis and to create a more harmonized global banking system. This thesis proposes actionable reforms that can be implemented in both the conventional and Islamic banking models to bridge the gap between securer global banking operations and regulatory practice.

1.6 Methodology

Understanding and evaluating banking regulation in any single system is a large task, and to conduct a comprehensive and comparative analysis of two systems, i.e., Shariah based and conventional, and their relative performance requires employing a number of research methods. To explore the relative performance of the conventional and Islamic banking systems and how legislative reform can further enhance their sustainability, this research employs the following methodologies—doctrinal analysis, comparative analysis, empirical observations, inter-disciplinary analysis, and qualitative statistical analysis.

First, this thesis engages in doctrinal analysis of the laws and regulations empowering the banking systems under conventional models and in Islamic states. The doctrinal method

involves charting the development of legal precedent, understanding the need for and impact of legislative reforms, and engaging in textual legislative interpretation of the laws and regulations and their application over time.²⁷ A critical conceptual analysis of the empowering banking laws and regulations for both exemplary conventional and Islamic banking systems is conducted to reveal the key provisions for their creation, operation and ongoing risk management. The goal of this analysis is to determine the underlying motivations for the regulations in order to assess their effectiveness in practice.²⁸ By systematically deconstructing and considering the relevant regulations governing the respective banking systems, one can analyse the relationship between the regulations as ideals for how the banks should operate and their impact in practice in light of the desired outcomes.²⁹ Undertaking doctrinal research of the existing banking regulations allows one to effectively compare the workings of the two systems and identify their respective strengths, weaknesses, and regulatory gaps. This information can then be used to assess whether these attributes affected the system's performance during the financial crisis and what regulatory reform suggestions can be made to improve risk management policies in the future.

In addition to the doctrinal textual analyses of the respective regulations of the conventional and Islamic systems, this thesis also engages in comparative analysis of these regulations in light of each other. The aim of this is to determine the similarities and differences between the models and what lessons could be learned from them as well as to engage in a discussion of the systems' respective responses to the global financial crisis. In particular, comparison is made with regard to how the differences highlighted in the regulatory comparison contribute to the system's resilience, or lack thereof, in light of severe financial and economic pressures. The goal of this comparative analysis is to evaluate how the two systems responded to the same crisis and evaluate their respective performance and how well their regulatory structure prepared them to handle such matters.

In conjunction with the comparative analysis outlined above, empirical observations are used to assess the systems' performance during the crisis. Qualitative data was collected from employees of four banks in the KSA to formulate theories about the resilience of Islamic

²⁷ T Hutchinson, 'The Doctrinal Method: Incorporating Interdisciplinary Methods in Reforming the Law' (2015) 3 *Erasmus Law Review* 130, 130.

²⁸ T Hutchinson, 'Vale Bunny Watson? Law Librarian, Law Libraries and Legal Research in the Post-Internet Era' (2014) 106 *Law Library Journal* 579, 584.

²⁹ D Pearce, E Campbell and D Harding, *Australian Law Schools: A Discipline Assessment for the Commonwealth Tertiary Education Commission* (Australian Government Publishing Service 1987) 312.

banks. The observations were therefore used to identify discrete instances in which a particular aspect of the banking regulations contributed to the system's resilience or caused it to falter, leading to broader economic implications for its jurisdiction. These empirical analyses serve as the foundation upon which the comparisons can be made and are used in an illustrative manner to show the pervasive implications of the financial crisis in all sectors of the globe.

Finally, this thesis employs qualitative statistical data as part of the inter-disciplinary understanding of the effects of the financial crisis on both the conventional and Islamic banking systems. Secondary data is derived from various surveys and reports that chart overall performance in light of the stressing financial environment of 2007 to 2009, and the aftermath in the following years.³⁰ This is then complemented with primary data through a survey that identified the perceptions of key stakeholders in the banking sector on resilience of the respective banking systems and how the systems could ultimately be improved. This data is also used to draw empirical observations of overall system performance that can be used to make actionable suggestions for legislative reform.

In addition to the traditional research methodologies listed above, this thesis concludes with proposals for regulatory changes. The purpose of the doctrinal, comparative, empirical, and statistical analyses throughout this research is to ultimately provide proactive regulatory reform suggestions that can be implemented in both systems to create a more cohesive global banking environment and improve the risk management practices of banks across the various regions of the globe.

This thesis adopts the case study approach. It conducts an in-depth investigation of a single jurisdiction, the KSA. This is because it is one of the unique regulatory environments in which Islamic and conventional banks are required to comply to the same laws. The thesis also conducts a comparative case study of four banks in the KSA. This approach emphasizes comparison within this context and produces more generalizable findings about causal questions.³¹ In this study, the causal questions relate to how and why Islamic banks are more

³⁰ See for example, IMF, 'Assessing Concentration Risks in GCC Banks' Gulf Cooperation Council: Annual Meeting of Ministers of Finance and Central Bank Governors (note 5124); IMF, 'Saudi Arabia: Financial Stability Assessment' IMF Country Report (note 504).

³¹ A similar approach was adopted in Delwyn Goodrick, 'Comparative Case Studies' (2014) UNICEF Methodological Briefs, Impact Evaluation No 9. Available at:

resilient to financial crises. This approach was adopted because of the need to understand and explain how features of Islamic banking enhance the resilience of the system. Thus, the findings help to tailor the regulator's intervention to help banks become more resistant to shocks. Comparative case studies have involved the analysis of the differences and patterns across the cases that share a common goal.

In order to achieve the objective of enhancing the inter-disciplinary understanding of the effects of the financial crisis on both the conventional and Islamic banking systems, the description of specific features of each case is required. This is because understanding each case is essential for establishing a foundation for the analytic framework that is used in the comparison. It follows that the specific features of the four banks of the KSA are described before the cross-case comparison. Information about the banks was obtained from their annual reports of 2007, 2014 and 2016. The choice of the reports is based on the fact that the study sought to ascertain the risk management strategies of the banks during the financial crises of 2007 and 2014, as well as the strategies currently used by the banks. The most recent annual reports published at the time the study was conducted was the 2016 reports. Information was also obtained directly from the compliance units or officers of the banks. This was through semi-structured questionnaires as shown below. The analysis was limited to information about the stress tests conducted by the banks, and how their senior management and Board of Directors engage with institutional and systemic failures.

It is important to note that some comparative case studies incorporate qualitative data because they focus on understanding the cases and context. Thus, the data collection method used includes document analysis and questionnaires. The document analysis is doctrinal as discussed above. The use of the questionnaire to collect data directly from banks in the KSA enabled the researcher to conduct a more extensive and synthesising analysis. The synthesis extended beyond comparing the Islamic and conventional banking products to ascertaining why the risk management strategies of Islamic banks are relatively more effective. Hence, the distinguishing feature was the ascertainment of causality: the extent to which Shariah-compliant risk management strategies enhance the bank's resilience to financial crises.

The researcher adopted a series of steps proposed by Rogers, a leading scholar on theory-based public sector evaluation, on how to develop a theory of change.³² These steps led the way for collection and testing of explanatory data.³³ They included as follows:

- The researcher clarified the research questions or key evaluation questions in regard to the research's aim and objectives. The comparative case study was deemed to be an appropriate design because the thesis sought to answer 'how' and 'why' questions about the resilience of Islamic banks when compared to conventional banks. Also, the understanding of the context is crucial to understanding the effectiveness of the regulator's intervention..
- The researcher defined initial theories on resilience, financial crises, and the resilience of Islamic banks to financial crises.
- The researcher defined the type of cases to be analysed and how this will be done. The type of cases included Islamic and conventional banks operating within the same jurisdiction, i.e., KSA, but in different contexts, namely, Shariah-compliant banking and conventional interest-based banking. The analysis was conducted at three levels. At the first level, this thesis critically reviews the extant literature on the resilience of Islamic banking to financial crises. At the second level, this thesis determines whether Islamic banks are more resilient to financial crises at the level of the State. The KSA is used as a case study because in this jurisdiction, Islamic banks are accommodated within the same legal and regulatory framework as conventional banks. At the third level, the thesis analyses the subjective experiences of four banks in the KSA, two Islamic banks and two conventional banks, and determines whether features of the experiences of the two Islamic banks provide sufficient reasons to hold that Islamic banks are generally more resilient to financial crises than conventional banks.
- The researcher identified the data collection and analysis methods across the cases. This included document analysis and the use of questionnaires.

³² PJ Rogers, 'Theory of Change' (2014) UNICEF Methodological Briefs, Impact Evaluation No 2. Available at: http://www.entwicklung.at/fileadmin/user_upload/Dokumente/Evaluierung/Theory_of_Change/UNICEF_Theory_of_change.pdf [08 November 2017] 3-6.

³³ See also, SC Funnell and PJ Rogers, *Purposeful Programme Theory: Effective Use of Logic Models and Theories of Change* (Jossey-Bass/Wiley 2012) 264-277; JO Prochaska and CC DiClemente, 'Transtheoretical Therapy: Toward a More Integrative Model of Change' (1982) 19 *Psychotherapy: Theory, Research and Practice* 276, 276-288.

The researcher considered alternative explanations of the research outcomes. For example, Islamic banks were not as adversely affected by financial crises as conventional banks because of limited exposure, especially to foreign counterparties in equity-based transactions, and limited exposure does not have the same connotation as better risk management and resilience to financial crisis. Also, some of the conventional banks examined may be less resistant to a financial shock because they made themselves vulnerable through overexposure to risks embedded in asset categories such as real estate and equities. These alternative explanations enabled the researcher to draw broad inferences from the specific findings.

- The researcher reported the findings. Quotes that are representative of the research findings were selected and presented with the results of previous studies that are poignant.

These three steps are further explained in 1.6.2 Tripartite Analysis below.

1.6.1 The Use of Questionnaire

This research used a questionnaire as a chosen method of data collection for the survey research. Two questionnaires (Appendices A and B) were used. They posed standardised and formally structured questions to a specific group of employees (compliance officers and staff in the compliance department) at the designated banks. They constituted a sample of the broader population, compliance officers at banks in the KSA. The choice of questionnaires was motivated by the fact that they are useful for collecting primary data about opinions, experiences and awareness of events.³⁴ They therefore provide insights into the processes by which banks in the KSA comply with regulatory requirements and ensure that their employees comply with internal procedures and policies aimed at identifying and mitigating or eliminating risks. The questionnaire is a practical research instrument because it is cost-effective.³⁵ It enabled the researcher to conduct an extensive study over a geographically dispersed population of bank compliance officers. Also, the questionnaires allowed the respondents the time to consider and provide answers to the various questions.

³⁴ See J Parfitt, 'Questionnaire Design and Sampling' in R Flowerdew and D Martin (eds), *Method in Human Geography: A Guide for Students Doing a Research Project* (Pearson/Prentice Hall 2005) 78-109.

³⁵ S McLafferty, 'Conducting Questionnaire Surveys' in N Clifford and G Valentine (eds), *Key Methods in Geography* (Sage 2010) 77-88.

The questionnaires used were designed in accordance with the common principles of good design and implementation as specified by De Vaus.³⁶ Hence, a critical review of the existing literature was conducted, alternative sources of information were considered, and in light of the research aim and objectives, organisational strategies were employed to design the questionnaires. The questions generally related to the broader research aim, as well as the researcher's understanding of the relevant processes and concepts. They helped to identify the appropriate respondents. Each question was carefully considered in regard to the context, and the researcher ensured that the question had a clear role towards achieving the research aim and answering the research questions. Ethical concerns were also considered as shown below. The types of question used in this survey are behaviour and attitude questions. Behaviour questions seek to ascertain what the target population do (in this case, manage compliance issues), while attitude questions aim at discovering what the target population thinks is appropriate. For example, the use of Islamic portfolios in stress testing, and what hedging strategies are used to mitigate the risks in these portfolios.

The survey therefore involved the selection of a sample from a pre-determined population or population of interest (group compliance officers or heads of compliance of the central bank and Islamic banks in the KSA), the collection of a relatively small amount of information from the sample, and the use of the information to draw broad references about the population of interest. Such research method produces information based on real-world observation or the general opinion of participants in the relevant industry.³⁷ Thus, the independence of the respondents that provided information enhanced the credibility of the results of the survey.³⁸ The use of this method was guided by the checklist of good practice in the conduct and reporting of survey research provided by Kelley et al.³⁹ The checklist assists budding researchers in producing work with credible results. The checklist requires a researcher to ensure that they are knowledgeable about the research problem, the study has a wide base with the exploration of related areas, the research method does not limit the questions that can be asked, the respondents are able to answer the questions, and the questions, whether open or closed, should not have been answered satisfactorily in previous

³⁶ See DA De Vaus, *Surveys in Social Research* (6th edn, Allen & Unwin 2014) chapters 7 and 8.

³⁷ JO Oyeibanji, 'Research and Philosophies' in HA Saliu and JO Oyeibanji (eds), *A Guide on Research Proposal and Report Writing* (University of Ilorin Press 2004) 41.

³⁸ MG Murgan, 'A Critical Analysis of the Techniques for Data Gathering in Legal Research' (2015) 3 *Journal of Social Sciences and Humanities* 266, 269.

³⁹ K Kelley, BCV Brown and J Sitzia, 'Good Practice in the Conduct and Reporting of Survey Research' (2003) 15 *International Journal for Quality in Health Care* 261, 262-265.

studies. Kelley et al also recommend that the questionnaire should be clear and well presented, and clear instructions should be given to the respondents to make the questionnaire easier to follow and complete.⁴⁰ A copy of the questionnaire used for this study is provided in Appendix I.

The researcher also ensured that all ethical concerns were addressed. Thus, the respondents' autonomy and right to confidentiality was respected. Also, the first part of the questionnaire used provided a description of the research aims. This ensured that the respondents were fully informed about the aim of the survey and their consent was properly obtained. The researcher also enquired from the regulator of the KSA, the Saudi Arabian Monetary Agency (SAMA), about legal requirements on data protection in the KSA in order to ensure that the survey adhered to all requirements.

1.6.2 The Tripartite Analysis

As noted above in 1.6, the analysis was conducted at three levels. The researcher therefore adopted the traditional tripartite analysis of knowledge that involves showing that a contention held by commentators is justified if it is true, the commentators believe it is true, and are justified in holding that it is true. In this context, what is true is epistemological, implying that what is true is what is known; given that not all truths are established truths. Hence, to 'know' something is factive.⁴¹ Knowledge provides access to a fact. This thesis establishes the truth condition by critically reviewing the extant literature on the resilience of Islamic banking to financial crises, and the performance of Islamic banks in comparison to conventional banks. Hence, at the first level of the tripartite analysis, it seeks to establish whether it is true that Islamic banks are more resilient. In light of the above, this may be understood as ascertaining the knowledge of commentators regarding the resilience of Islamic banks to financial crises.

⁴⁰ See also, T Hutchinson, *Researching and Writing in Law* (2nd edn, Law Book Co 2006) 54.

⁴¹ The knowledge is based on a presupposition about the truth. See A Hazlett, 'The Myth of Factive Verbs' (2010) 80 *Philosophy and Phenomenological Research* 497, 498.

At the second level of the tripartite analysis, the researcher sought to establish the belief condition. Belief in this context means high confidence in the veracity of the claim.⁴² Thus, knowledge does not necessarily translate into belief.⁴³ Many commentators may know some Islamic banks that were more resilient than conventional banks to the financial crisis of 2007-09. This does not necessarily imply that they believe that Islamic banks are generally more resilient than conventional banks, regardless of the context. Thus, commentators may see from their findings that Islamic banks are more resilient, but they may not believe that the findings are generalisable. The belief condition was established by analysing the contention that Islamic banks are more resilient to financial crises at the level of the State. The objective was to determine whether commentators are highly confident that Islamic banks may be accommodated within the same legal and regulatory framework as conventional banks and perform better with regard to risk management and resilience.

The third level of the analysis requires determining whether the belief is justified. This is certainly the most difficult task in a tripartite analysis of knowledge given that belief might be true although it is formed improperly. This implies that the belief is appropriate in an epistemic sense, although it may not be justified under all circumstances. The belief has the property of being justified, regardless of whether the person who holds the belief engaged in the activity of justifying the belief. Alston therefore noted that ‘to turn to justification, the first point is that we will be working with the concept of a subject *S*’s *being justified in believing that p*, rather than with the concept of *S*’s *justifying a belief*.’⁴⁴ However, Almeder argued that being justified is not something that can be separated as a matter of ordinary course from the activity of being able to give reasons when asked the question ‘How do you know?’⁴⁵ This thesis adopts a more general approach to justification. Hence, it holds that factors that are both internal and external to the subject are relevant for justification. In other words, it attempts to determine whether the justification is both propositional (whether commentators have sufficient reasons to believe in a proposition) and doxastic (whether the

⁴² See J Fantl and M McGrath, *Knowledge in an Uncertain World* (Oxford University Press 2009) 141; J Gibbons, *The Norm of Belief* (Oxford University Press 2013) 201; J Nagel, ‘Epistemic Anxiety and Adaptive Invariantism’ (2010) 24 *Philosophical Perspectives* 407, 413-414.

⁴³ See B Myers-Schulz and E Schwitzgebel, ‘Knowing that P without Believing that P’ (2013) 47 *Nous* 371, 372-383; D Rose and J Schaffer, ‘Knowledge Entails Dispositional Belief’ (2013) 166 *Philosophical Studies* 19, 20-48.

⁴⁴ W Alston, *Perceiving God. The Epistemology of Religious Experience* (Cornell University Press 1991) 71. No emphasis added.

⁴⁵ R Almeder, *Harmless Naturalism: The Limits of Science and the Nature of Philosophy* (Open Court 1999) 92.

belief is appropriately held).⁴⁶ Given that the previous levels deal with the external factors and doxastic justification, the third level focuses on the internal factors and propositional justification. Thus, it adopts a heuristic approach and analyses the subjective experiences of four banks in the KSA, two Islamic banks and two conventional banks. The objective is to determine whether features of the experiences of Islamic banks provide sufficient reasons to hold that Islamic banks are more resilient to financial crises than conventional banks.

1.7 Thesis Structure

This thesis is divided into seven chapters, the first being this introduction that highlights the aim, objectives, research questions, and methodologies of the research. The following six chapters consist of the foundational background and substantive analysis of this thesis, focusing on the development, regulation, and resilience of the conventional and Islamic banking systems, the problems faced with the 2007-09 financial crisis in regard to risk management, and the lessons to be learned for future regulatory reform.

Chapter two situates the reader in the global financial environment. It details the evolution of the conventional and Islamic banking systems, including defining key concepts, such as resilience and financial crises. It also briefly examines notable events including the global financial crisis of 2007-09, and the growing interaction between the two systems with increased international trade and development. This essential background information forms the foundation for the substantive analysis. The goal of this Chapter is to map the accurate profile of the Islamic financial institution that was more resilient to the global financial crisis in order to determine whether it matches the profile of institutions that are generally more resilient to financial crises. This Chapter also conducts a critical review of the extant literature to ascertain which institutions are generally more vulnerable. This is followed by an attempt to ascertain which institutions were more vulnerable during the global financial crisis. It analyses a wide range of studies that have compared the impact of the crisis on Islamic and conventional or non-Islamic institutions and synthesizes the findings of these studies to provide evidence to confirm or refute the argument (from a general perspective) that Islamic financial institutions are more resilient to financial crises than conventional or

⁴⁶ See C Wright, 'Warrant for Nothing (And Foundations for Free)?' (2004) 78 *Aristotelian Society Supplementary Volume* 167, 167-212.

non-Islamic institutions. It therefore attempts to ascertain whether there is doxastic justification for this claim.

Chapter three tests the argument that Islamic banks are more resilient to financial crises than conventional banks because they have better risk management strategies. It examines the concept of risk management and different categories of financial and non-financial risks and ascertains their causal relationship with financial crises. It also considers effective ways of managing the risks and assesses the strategies used by Islamic banks to manage the risks. The aim is to determine whether their resilience to financial crises may be attributed to their risk management strategies.

Chapter four explores the theory that financing structures set up within the Shariah-compliant profit and loss sharing (PLS) or profit sharing agreements enable Islamic banks to operate a sounder gearing process, maintain, measure and monitor appropriate credit administration, and ensure better risk control. The analysis is based on the contention that equity-based contracts, namely the *Mudaraba* and *Musharaka*, are the primary modes of financing on the PLS basis, supplemented by fixed-return sales-based and assets-based modes. The Chapter analyses equity-based primary modes of financing and discusses how the mix of risks that emerge from the modes are managed using sales-based and assets-based instruments. Emphasis is placed on the *Murabaha* and *Ijara*. It then submits that the use of the equity-based instruments makes Islamic banks resilient to financial crises.

Chapter five verifies the observation that Islamic banks using PLS modes are more resilient to financial crises by critically assessing their performance in comparison to conventional banks in the unique regulatory environment of the KSA. It analyses the legal and regulatory framework that accommodates Islamic banks and conventional banks, and assesses the measures taken by the policymakers and regulator of the KSA to ensure that regulations take into account specific risks that emanate from the range of Shariah-compliant products and services. Emphasis is placed on Basel standards and approaches. An attempt is made to compare the performance of Islamic banks and conventional banks during financial crises within this unique regulatory environment. The aim is to determine whether a financial crisis such as that of 2007-09 may be triggered by interest-free Islamic banks using PLS modes of financing. Also, a further attempt is made to determine whether the use of these modes of

financing in the United States would have prevented the crisis, and if so, how Islamic banks may also be accommodated within the regulatory framework of the United States.

Chapter six examines the risk management strategies of four banks of the KSA and attempts to determine whether the Islamic banks of the sample manage risk better and are more resilient to financial crises than the conventional banks. Emphasis is placed on compliance risk. It examines the concept of compliance risk and the features and expectations of the compliance function. It shows how the four banks use risk management processes that involve identifying, monitoring, managing and reporting the risks. Given that the annual reports of the banks paint positive pictures of their ability to withstand adverse conditions, an attempt was made to look beyond the annual reports by conducting a survey of the stress tests carried out by the banks. The results of the survey of the stress tests are discussed and analysed.

Finally, chapter seven concludes this report with a brief summary of the findings. It shows how the research aims and objectives were achieved, and research questions answered. It discusses limitations of the study and makes recommendations for further studies.

Chapter 2:

Determining Whether Islamic Banks are More Resilient in the Extant Literature

2.1 Introduction

It has previously been demonstrated that the type of bank, the size and location of the bank, reliance on interbank or cross-border funding are important factors that determine a bank's vulnerability during financial crises.⁴⁷ Some banks are therefore more vulnerable to failure during crises because of the way they are structured or allowed to deploy capital or extend credit to borrowers in the areas in which they are located. However, all financial institutions of the same size or in the same location are not equally vulnerable to failure during financial crises. This Chapter conducts a critical review of the extant literature to ascertain which institutions are generally more vulnerable. This is followed by an attempt to ascertain which institutions were more vulnerable during the global financial crisis between 2007 and 2009. It then analyses a wide range of studies that have compared the impact of the crisis on Islamic and conventional or non-Islamic institutions and synthesises the findings of these studies to provide evidence to confirm or refute the argument that Islamic financial institutions are more resilient to financial crises than conventional or non-Islamic institutions. The objective is to map an accurate profile of the Islamic financial institution that was more resilient to the global financial crisis in order to determine whether it matches the profile of institutions that are generally more resilient to financial crises. The Chapter however begins with an attempt to circumscribe the meanings of the terms 'financial crisis,' 'resilience' and 'Islamic banking'. It discusses some important categories of financial crises, factors that enhance the resilience of financial institutions, fundamentals of Islamic banks and how they are distinguished from conventional banks. The objective is to show what these terms mean within the claim that Islamic banks are more resilient to financial crises than conventional banks.

⁴⁷ See for example, P Lall, 'Resilience of Small Banks Compared with Large Banks: Evidence from the 2007-2013 US Financial Crisis' (2015) 4 *International Journal of Economics, Finance and Management* 14; P McGuire and G von Peter, *The Resilience of Banks' International Operations* (BIS 2016); L Ratnovski and R Huang, 'Why Are Canadian Banks More Resilient?' (2009) IMF Working Paper WP/09/152; M Adalet, 'Were Universal Banks More Vulnerable to Banking Failures? Evidence from the 1931 German Banking Crisis' (2009) Tusiad-Koc University Working Paper 0911. Available at: https://eaf.ku.edu.tr/sites/eaf.ku.edu.tr/files/erf_wp_0911.pdf [16 October 2017] 1.

2.2 What Constitutes a ‘Financial Crisis’?

This term ‘financial crisis’ is broad and generic for it encompasses multidimensional situations in which financial assets lose a substantial part of their nominal value.⁴⁸ It is difficult to characterise the situations using a single indicator. Some financial crises are characterised by mismatches in maturities and major currencies between bank liabilities and assets,⁴⁹ whilst others are characterised by large off-balance sheet exposures in the banking sector.⁵⁰ The difficulty in characterising the situations may be due to the fact that the term ‘crisis’ is itself amorphous and simply describes the culmination of a development that threatens society.⁵¹ Hence, crisis does not pre-exist in society, but it is created in observation structures. This explains why public perception and confidence play a crucial role in sustaining the stability of the financial system.⁵² As such, where the public is optimistic about economic recovery, they are more likely to trust and participate in the financial market, thereby reducing the likelihood of a financial crisis.⁵³

Nonetheless, financial crises may be classified into two broad categories, namely crises that use quantitative definitions; and crises that depend on qualitative analyses.⁵⁴ The first category of crises comprises currency and sudden stop (capital account or balance of payment) crises, while the second group includes debt and banking crisis. The currency crisis results in devaluating the country’s national currency,⁵⁵ while the banking crisis diminishes

⁴⁸ See M Chanakira, ‘The Impact of Financial Crises’ in JL Leon-Manriquez and T Moyo (eds), *The Global Financial and Economic Crisis in the South: Impact and Responses* (CORDESRIA 2015) 189; AK Vaidya, *Globalization: Encyclopedia of Trade, Labor and Politics* (ABC-CLIO 2006) 25; S Claessens and MA Kose, ‘Financial Crises: Explanations, Types, and Implications’ (2013) International Monetary Fund Working Paper, WP/13/28. Available at: <https://www.imf.org/external/pubs/ft/wp/2013/wp1328.pdf> [16 October 2017] 5.

⁴⁹ Currency and maturity mismatches played an important role in the Asian financial crisis in the 1990s. See CM Reinhart and KS Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton University Press 2009).

⁵⁰ This is one of the central causes of the subprime crisis in 2007 and also a major cause of banking crisis in 14 OECD countries. See D Karim, I Liadze, R Barrell and E Davis, ‘Off-balance Sheet Exposures and Banking Crises in OECD Countries’ (2013) 9(4) *Journal of Financial Stability* 673, 673-681.

⁵¹ AJ Chournazidis, ‘The Financial Crisis and the Concept of Risk in the European Union’ (2014) 148 *Procedia – Social and Behavioral Sciences* 315, 316.

⁵² D Singh and JR LaBross, ‘Developing a Framework for Effective Financial Crisis Management’ (2012) 2011 *Journal of Financial Market Trends* 2, 3.

⁵³ JE Scalera and MD Dixon, ‘Crisis of Confidence: The 2008 Global Financial Crisis and Public Trust in the European Central Bank’ (2016) 17 *European Politics and Society* 388, 389-400. See also, TC Earle, ‘Trust, Confidence, and the 2008 Global Financial Crisis’ (2009) 29 *Risk Analysis* 785, 785-792.

⁵⁴ Reinhart CM and Rogoff KS, ‘Is the 2007 US Subprime Crisis So Different? An International Historical Comparison’ (2008) 98 *American Economic Review* 339, 340.

⁵⁵ C Borio and P Lowe, ‘Assessing the Risk of Banking Crises’ (December 2002) *BIS Quarterly Review* 43, 45.

the value of bank assets.⁵⁶ Other crises related to adverse debt dynamics such as sovereign crises may be classified in either category. The sovereign crisis impacts the financial and economic fields of a State when its banks are not able to pay debts.⁵⁷ This may be because of the banks' exposures to government debt, and the inability of the government to support troubled banks.⁵⁸ Thus, other classifications are possible. It must also be noted that they sometimes overlap in types. For example, between 1970 and 2011, both mature and emerging economies were frequently exposed to currency crises that subsequently escalated into banking crises.⁵⁹ Notwithstanding, what is important here is that the crises impact different financial institutions and systems in different ways. This section therefore seeks to ascertain the way in which different types of financial crises discussed above may affect different systems and institutions.

2.2.1 Banking Crisis

A banking crisis can occur when banks make themselves vulnerable through overexposure to specific asset categories, such as equities or real estate.⁶⁰ However, the underlying cause of the crisis is the low interest rate policy applied by the central bank of a specific state which adversely affects the margin and profitability of commercial banks and increases liquidity and credit risks.⁶¹ There may also be a link between the banking crisis and the international current account imbalances. For example when account surpluses in emerging Asian countries matched the deficiency in the United States and other major advanced deficit countries, the latter started borrowing this surplus of savings in their national banks to pay their debts, resulting in a banking crisis in the long run.⁶² As such, account surpluses in emerging market economies may fuel risk-taking in advanced deficit markets and exert significant downward pressure on global interest rates.⁶³ Borio & Lowe point out that many

⁵⁶ M Obstfeld, 'Models of Currency Crises with Self-Fulfilling Features' (1996) 40 *European Economic Review* 1037, 1037-1047.

⁵⁷ Committee on the Global Financial System, 'The Impact of Sovereign Credit Risk on Bank Funding Conditions', CGFS Paper (No 43, 2011) 14, 38.

⁵⁸ *Ibid*, 39.

⁵⁹ Examples include the Asian financial crisis of the 1990s and the global financial crisis of 2007-2009. See A Van Rixtel and G Gesperini, 'Financial Crises and Bank Funding: Recent Experience in the Euro Area' (2013) 406 BIS Working Paper 1, 1.

⁶⁰ B Tricker, *Corporate Governance: Principles, Policies, and Practices* (3rd edn, Oxford University Press 2015) 17.

⁶¹ P De Grauwe, T Mayer & K Lannoo, 'Lessons From The Financial Crisis: New Rules For Central Banks And Credit Rating Agencies?' (2008) 43 *Intereconomics* 256, 256-266.

⁶² *Ibid*

⁶³ R Portes, 'Global Imbalances' in M Dewatripont, X Freixas, and R Portes (eds), *Macroeconomic Stability and Financial Regulation: Key Issues for the G20* (Centre for Economic Policy Research 2009) 19-21.

banking crises after the Asian crisis lowered the quality of bank assets such as interest-bearing loans, as in the case of mortgages.⁶⁴ However, Borio & Disyatat argued that this focus on current accounts is misleading because it reflects the failure to distinguish between financing and saving. The financial crisis was, in their opinion, caused by disruptions in financing channels and not saving or investment flows.⁶⁵ Notwithstanding, they posit that the main cause of financial crises is the failure of the monetary and financial regimes to prevent the build-up of unsustainable credit.⁶⁶

Other commentators have maintained that banking crises have become more common as a result of various imbalances in the way funds are distributed, and decisions made when granting loans.⁶⁷ The lack of consistency in such decisions is believed to create imbalances in distributing funds.⁶⁸ This leads to banking vulnerabilities in funding composition in terms of currency, maturity and the type of funding instrument used.⁶⁹ As van Rixtel and Criado and Borio explain, a financial crisis often creates severe issues with the structure of the financial instruments and the quality of the underlying assets, including mortgage-backed securities (MBS) and asset-backed commercial papers (ABCP).⁷⁰ In addition, van Rixtel and Gasperini note that most academic commentary suggests that innovations in bank funding instruments are a major contributor for the occurrence of global financial crisis, particularly the 2007-09 financial global crisis.⁷¹ These innovations include reduced incentives for lenders, increased loan delinquency rates, securitisation undercutting credit standards, and hidden increases in de facto leverage.⁷² Financial innovations linked to financial market imperfections are also considered to be a major contributor to the real estate and credit booms in the US that led to

⁶⁴ C Borio and P Lowe, 'Assessing the Risk of Banking Crises' (December 2002) BIS Quarterly Review 43.

⁶⁵ C Borio and P Disyatat, 'Global Imbalances and the Financial Crises: Link or Link?' BIS Working Papers No 236. Available at: <https://www.bis.org/publ/work346.pdf> [16 October 2017] 1-3.

⁶⁶ See also, L Alessi and C Detken, 'Identifying Excessive Credit Growth and Leverage' (2017) Journal of Financial Stability, Available at: <http://www.sciencedirect.com/science/article/pii/S1572308917304291> [16 October 2017] 3-4.

⁶⁷ A van Rixtel and G Gesperini, note 55 above, 1.

⁶⁸ Ibid.

⁶⁹ RS Ghosh and AR. Ghosh, 'Structural Vulnerability and Currency Crises' (2002) 02 IMF Working Papers 1, 12-13.

⁷⁰ A van Rixtel and S Criado, 'The Contribution of Structured Finance to the Financial Crisis: An Introductory Overview' in R Kolb (ed) *Lessons from the Financial Crisis: Causes, Consequences, and Our Economic Future* (John Wiley & Sons 2010) 239-246.

C Borio, 'The Financial Turmoil of 2007-2009? A Preliminary Assessment and Some Policy Considerations' (2008) 346 *BIS Working Papers* 1, 13.

⁷¹ A van Rixtel and G Gesperini, note 55 above, 1.

⁷² G Dell'Ariccia and R Marquez, 'Lending Booms and Lending Standards' (2006) 61 *Journal of Finance* 2511-2512.

the global financial crisis of 2007–09.⁷³ Nonetheless, all systems are vulnerable to the crisis caused by innovations in bank funding instruments. This is because different policies in different jurisdictions may reduce incentives for lenders or increase loan delinquency rates and hidden increases in de facto leverage.

When a financial crisis occurs, a number of the loans default, and because the price of loan securities is then low, banks are unable to liquidate these assets without making a loss. This causes a vicious cycle in the operation of the banks in the midst of a crisis. Furthermore, throughout a financial crisis, the price of these types of asset continues to decline, with non-performing loans wearing down the financial strength of the banking sector. Nonetheless, although all systems are vulnerable to banking crises, some systems are more vulnerable than others. Equally, some financial institutions are more vulnerable to failures during banking crises. Financial institutions that are exposed to liquidity and credit risk for example are adversely affected by low interest rate policies, which are among the main causes of banking crises. In the same vein, financial institutions that are prone to excessive risk taking are more likely to be adversely affected by global account imbalances. Even if we agree with Borio and Disyatat that the focus on account imbalances is misleading, it may be contended that financial institutions that have a serious credit exposure (with non-performing loans) are more vulnerable to disruptions in financing channels. It follows that the argument that Islamic banks are more resilient to financial crises may be interpreted as implying that Islamic banks manage liquidity and credit risk better and are less prone to excessive risk taking.

2.2.2 Currency Crisis

A currency crisis, similar to the banking crisis, can also result from the over-reliance of banks on external funding where doubt arises over the ability of the country's central bank to cover the country's fixed foreign exchange rate.⁷⁴ This eventually leads to a decline in the country's currency value.⁷⁵ The currency crisis may damage a country's economy where the decline in value means more units of the country's currency are needed to buy a given amount of

⁷³ E Boz and E Mendoza, 'Financial Innovation, the Discovery of Risk, and the U.S. Credit Crisis' (2010) 10 IMF Working Papers 1, 1.

⁷⁴ GG Kaufman, 'Banking and Currency Crisis and Systemic Risk: A Taxonomy and Review' (2000) 9 *Financial Markets, Institutions & Instruments* 69, 69-131.

⁷⁵ M Obstfeld, 'Models of Currency Crises with Self-Fulfilling Features' (1996) 40 *European Economic Review* 1037, 1037-1047.

goods.⁷⁶ When this happens, investors in the country seek ways to withdraw their money. When the withdrawal results in an exodus of capital and financial assets on a large scale, it is known as capital flight.⁷⁷ After selling their investments in the local currency, investors convert the local currency into foreign currency which in turn further worsens the financial situation.⁷⁸ This occurred during the Southeast Asian Crisis of 1997,⁷⁹ after a large influx in foreign investment led to a rapid economic growth and an increase in Southeast Asia exports. Countries such as Thailand then became heavily reliant on foreign investment from one single country, the US, as their main source of funding.⁸⁰ However, when the US increased its domestic interest rate, the amount of funding going to Thailand decreased, plunging the country's economy into turmoil as it was unable to pay off its foreign debt. The turmoil may therefore be explained by a variety of risks to which financial institutions in Thailand were vulnerable, including currency crisis risk which may result from an exchange rate depreciation. It may also have a great impact on a country's banking system and lead to precipitating a banking crisis.⁸¹

It follows that financial institutions or systems that are over-reliant on external funding are more vulnerable to failure when the interest rates of the external sources are increased thereby reducing external funding. This aligns with the contention above that financial institutions that have a serious credit exposure are more vulnerable to disruptions in financing channels. Apart from the banking crisis and currency crisis, there are other types of financial crises which may not be categorised under both groups. One of such crisis that seriously impacts on financial institutions is the sovereign crisis.

2.2.3 Sovereign Crisis

A sovereign debt crisis, as explained by the Committee on the Global Financial System (CGFS), is the failure of a State to pay its debt which may then lead to economic and

⁷⁶ FG Ozkan and A Sutherland, 'Policy Measures to Avoid A Currency Crisis' (1995) 105 *The Economic Journal* 510, 510-519.

⁷⁷ KJ Forbes and FE Warnock, 'Capital Flow Waves: Surges, Stops, Flight, And Retrenchment' (2012) 88 *Journal of International Economics* 235, 235-251.

⁷⁸ Ibid

⁷⁹ World Bank, *East Asia: The Road to Recovery* (The World Bank 1998) 9-15.

⁸⁰ X Huang, H Zhou and H Zhu, 'Assessing the Systemic Risk of a Heterogeneous Portfolio of Banks during the Recent Financial Crisis' (2012) 8 *Journal of Financial Stability* 193, 193-205.

⁸¹ H Shin, 'Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis' (2009) 23 *Journal of Economic Perspectives* 101, 102.

financial problems for the State.⁸² Such a crisis arises due to a combination of many factors, including very high debt levels, low economic growth in a country generally considered uncompetitive, high labour costs, and high inflation. Essentially, these factors are indicators of low export demand, high current account deficits and low economic growth. In such a situation, conventional banks in the affected country tend to hold substantial government debt securities because they represent lower risk. A good example of government debt securities that attract banks is the bond issued in the European Union (EU) in domestic currency as directed by the Capital Requirements Directive (CRD).⁸³ Given that the 25% limit on asset holdings specified by the CRD does not apply to government bonds issued in the domestic currency,⁸⁴ it follows that in the event of a sovereign debt crisis, a number of banks lose capital when the government is unable to pay its debts.⁸⁵ This has a negative impact on the asset column of the bank's balance sheet, and consequently affects profitability and funding.⁸⁶ Furthermore, the sovereign debt crisis affects the ability of banks to lend money to cover debts because foreign entities and even other countries tend to back away from assisting the institutions due to the debt crisis.⁸⁷ Hence, banks struggle to acquire the credit resources they need as their money in the government is not forthcoming and other financial entities are unwilling to extend a helping hand.⁸⁸ This ultimately reduces the overall ability of the banks to secure funding. As Caruana and Avdjiev point out, a sovereign debt crisis influences not only the banks' access to funding, but also the cost of funding,⁸⁹ inducing further negative effects including the inability of banks to fulfil their obligations,⁹⁰ and reducing the funding benefits from implicit and explicit government guarantees.

It may then be contended that financial institutions that hold substantial government debt securities are more vulnerable to failure during a sovereign debt crisis. This is because they are more likely to lose capital when the government defaults. Also, banks with too much debt are generally more vulnerable in an uncompetitive market with low economic growth, and

⁸² Ibid.

⁸³ Capital Requirements Regulation and Directive—CRR/CRD IV, Directive 2013/36/EU. Available at: http://ec.europa.eu/finance/bank/regcapital/legislation-in-force/index_en.htm#maincontentSec1 [14 October 2017].

⁸⁴ H Zarrouk, 'Does Financial Crisis Reduce Islamic Banks' Performance? Evidence From GCC Countries' (2012) 1 *Journal of Islamic Finance and Business Research* 1, 1-16.

⁸⁵ PR Lane, 'The European Sovereign Debt Crisis' (2012) 26 *Journal of Economic Perspectives* 49, 49-67.

⁸⁶ Ibid

⁸⁷ A van Rixtel and G Gesperini, above no 55.

⁸⁸ Ibid

⁸⁹ J Caruana and S Avdjiev, 'Sovereign Creditworthiness and Financial Stability: An International Perspective' (2012) 16 *Financial Stability Review* 71, 73.

⁹⁰ A van Rixtel and G Gesperini, above not 55.

high labour costs and inflation. However, in systems where banks hold substantial government debt securities, the negative impact of a financial crisis that takes the form of a sovereign debt crisis is more severe on banks. In such systems, the banks that hold substantial government securities may be said to be less resilient to crises.

Nonetheless, from the above, it may be contended that any financial crisis, whether it is a banking, currency, or sovereign crisis, has a direct negative impact on financial and economic levels of any State. Debts will mount, assets will be liquidated, the foreign currency exchange will become vulnerable, and inflation will dramatically increase along with low productivity and high unemployment levels. This phenomenon is what is referred to ‘financial crisis’ in this study. Since all financial institutions are not equally vulnerable to failure during these crises, it may be argued that some institutions are more resilient than others. As noted above, the institutions that are more vulnerable are those exposed to liquidity and credit risk, prone to excessive risk taking, over-reliant on external funding, and hold substantial government debt securities. However, it must be noted that the nature of the regulatory environment also determines the financial institution’s vulnerability to failure. This is because in a jurisdiction where institutions are allowed to sell their assets and return to target leverage, their vulnerability to crises is substantially reduced.⁹¹ Thus, in some regulatory environments, exposure to sovereign debt does not necessarily make the institution more vulnerable, whereas in other jurisdictions, reliance on external funding may actually make an institution more resilient. Thus, the question of resilience depends on the circumstances of each case. In the same vein, it will be shown that the legal or compliance risk is the most important risk in assessing the resilience of banks. As such, assessing the resilience of different banks requires comparing the way banks within the same regulatory environment manage risks (including legal or compliance risk). In light of the above delineation of the term ‘financial crisis’, it is important to note that focus will generally be on the ‘global financial crisis’ that lasted from 2007 to 2009. Hence, the resilience of Islamic and conventional banks will be determined in light of how they were affected by this financial crisis. The next section further delineates what is referred to as the 2007-09 global financial crisis in this study.⁹²

⁹¹ G Robin, A Landier & D Thesmar, ‘Vulnerable Banks’ (2017) *Journal of Financial Economics*. Available at: https://dash.harvard.edu/bitstream/handle/1/13426863/greenwood%2Clandier%2Cthesmar_vulnerable%20banks.pdf?sequence=1 [16 October 2017] 1-2.

⁹² The start and end dates of the crisis have been the subject of controversy. Given that the debate is beyond the scope of this study, the chronology adopted here is that of the Official National Bureau of Economic Research. See RA Iley & MK Lewis, *Global Finance After the Crisis* (Edward Elgar 2013) 12-14.

2.2.4 The 2007-09 Global Financial Crisis

During what has been described as the ‘worst financial crisis since the Great Depression of the early 1930s,’⁹³ banks experienced major vulnerabilities in their funding models, in both funding costs and the funding market. This resulted mainly from mismatches between the liabilities and assets held by large internationally active banks, which subsequently rendered lenders unable to meet their financial obligations.⁹⁴ Kalemli-Ozcan notes that investment-oriented banks and other financial institutions were forced to leverage their funding structure through short-term wholesale funding via mechanisms such as the commercial paper and repo (repurchase agreement) markets.⁹⁵ This unfavourable market situation stemmed from banks receiving less money than they would have received without the crisis. This resulted ultimately in an unfavourable funding market, with strong asset growth supported only by lower levels of equity/capital. In banking, capital is the source of funding and thus the driving force of their activities.⁹⁶ Without capital, banks cannot sustain operations and must consequently leave the market. Banks will therefore do whatever is necessary to secure funding, and desperation may force them to sell their assets at a loss simply to gather enough funds to run the institution. If they lack foreign assets to sell, they must obtain external assistance at any cost, and external investors will seek high rewards for what they consider a risky venture.⁹⁷ Bank funding aims to raise equity levels to gain more assets that eventually bring in profits, with the equity acting as a cushion to prevent the bank from incurring losses.

Among the most important causes of the 2007–09 global financial crisis are excessive lending by banks over an extended period,⁹⁸ securitisation problems, imprudent mortgage lending, market-to-market accounting, the housing bubble,⁹⁹ rating agencies, a failure in risk management, excessive short-term incentives, a global financial imbalance, deregulatory legislation, off-balance sheet financing, human frailty, lack of transparency, complex financial instruments, financial innovation, and the government-mandated subprime

⁹³ AV Thakor, ‘The Financial Crisis of 2007-2009: Why Did It Happen and What Did We Learn?’ (2015) 4 *Review of Corporate Finance Studies* 155, 156.

⁹⁴ Committee on the Global Financial System, *The Functioning and Resilience of Cross-border Funding Markets* (BIS 2010) 11-12.

⁹⁵ S Kalemli-Ozcan, B Sorensen & S Yesiltas, ‘Leverage across Firms, Banks, and Countries’ (2012) 88 *Journal of International Economics* 284, 284-298.

⁹⁶ B Scholtens and D van Wensveen, ‘A Critique on the Theory of Financial Intermediation’ (2000) 24 *Journal of Banking and Finance* 1234, 1243-1251.

⁹⁷ T Nadauld and S Sherlund, ‘The Impact of Securitization on the Expansion of Subprime Credit’ (2013) 107 *Journal of Financial Economics* 454, 454-476.

⁹⁸ Tony Ciro, *The Global Financial Crisis: Triggers, Responses and Aftermath* (Ashgate 2012) 152.

⁹⁹ Nicholas Ryder, *The Financial Crisis and White Collar Crime: The Perfect Storm?* (Edward Elgar 2014) 4-5.

lending.¹⁰⁰ The US housing boom had resulted in a high demand for the subprime mortgage market. Subprime borrowers (notably individuals without assets, income or employment) were offered mortgages by subprime lenders who believed there would be an influx of interest and thus profits. Of course, many subprime borrowers welcomed this move with open arms and rushed to apply for these mortgages.¹⁰¹ However, all too soon, market circumstances changed, predominantly owing to the Federal Reserve raising interest rates. The summer of 2007 witnessed notable tensions in the US subprime mortgage markets. Too many loans had been distributed to those unable to repay them, and lenders began defaulting on their payments. However, because these mortgages had undergone securitisation, legal claims over them lay not with the banks but with third parties. Securitisation is a financial innovation that allows banks to transform illiquid assets (such as mortgages) into securities products which can be sold to investors who receive an income stream from the long-term repayment of underlying loans. These securities were created not only with creditworthy mortgages but also sub-prime mortgages. Accordingly, when sub-prime borrowers started to default in the US from the beginning of 2007, this resulted in the collapse of the mortgage backed-securities market. Inter-bank lending then contracted to prevent further liabilities. Market uncertainty became rife, with many banks reluctant to risk further reduction in their capital reserves by providing loans to other banks, or loaning only at very high rates, producing a dramatic decline in interbank lending.¹⁰² With subprime borrowers unable to repay their loans, subprime lenders experienced massive losses, and from 2007 at least one subprime lender filed for bankruptcy each month.¹⁰³

With the onset of the collapse of the banking industry, it was clear that the market could not solve the subprime mortgage issue on its own, and the problem began to spread into the international scene.¹⁰⁴ The British bank, Northern Rock, for example, was dependent on the interbank market; and as this experienced a decline, it sought funding assistance from the Bank of England due to the liquidity problems it was facing. By then, many central banks and States had begun crisis talks.¹⁰⁵ These discussions between different States led to a

¹⁰⁰ M Jickling, *Causes of the Financial Crisis* (2009). Available at: http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1605&context=key_workplace [20 October 2017].

¹⁰¹ T Nadauld and S Sherlund, above note 93.

¹⁰² M Cihak and H Hesse, 'Islamic Banks and Financial Stability: An Empirical Analysis' (2010) 38 *The Journal of Financial Services Research* 95, 95–113.

¹⁰³ MG Crouhy, RA Jarrow & SM Turnbull, 'The Subprime Credit Crisis Of 2007' (2008) 16 *The Journal of Derivatives* 81, 81–110.

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

unanimous agreement to offer liquidity to troubled financial institutions to revive the interbank market.¹⁰⁶ Thus, although US banks were affected through their short-term wholesale funding, as Adrian & Shin note,¹⁰⁷ the problem spread to banks in the UK because they too depended on short-term wholesale funding.¹⁰⁸ With rising solvency concerns, bank shares were falling worldwide, forcing international banks to seek local sources of financing in the countries where they operated.¹⁰⁹

As such, the financial institutions that were vulnerable to failure during the global financial crisis were those exposed to liquidity and credit risk due to over-reliance on short-term wholesale funding, viz., foreign deposits and foreign funds. Also vulnerable were financial institutions that were prone to excessive risk taking such as those that issued subprime loans with a much higher risk of default. These troubled institutions were then unable to sell their assets or obtain liquidity from local sources in order to return to target leverage. However, although financial institutions that were exposed to liquidity and credit risk or prone to excessive risk taking, over-reliant on external funding, and held substantial government debt securities were more vulnerable to failure during the financial crisis, it does not necessarily follow that the institutions that were less exposed to these risks were more resilient to the crisis. This is because in many jurisdictions, all banks were adversely affected by the crisis. As noted above, in some countries, market uncertainty became rife, with many banks reluctant to risk further reduction in their capital reserves by providing loans to other banks, or loaning only at very high rates, producing a dramatic decline in interbank lending.

Nonetheless, this section has sought to delineate the terms of financial crisis and global financial crisis as used in this study. This sets the theoretical ground for determining whether the argument that Islamic banks are more resilient to financial crises is sufficiently justified in the existing literature. In the same vein, the next step is to determine what is meant by resilience in the argument. Thus, the next section seeks to delineate the concept of resilience. It attempts to determine what commentators generally refer to as resilient to financial crises, and why it is important to increase the resilience of financial system.

106 VV Acharya and O Merrouche, 'Precautionary Hoarding of Liquidity and Interbank Markets: Evidence from the Subprime Crisis' (2012) 17 *Review of Finance* 1, 30.

107 T Adrian and HS Shin, 'Money, Liquidity, and Monetary Policy' (2009) 360 *FRB of New York Staff Report* 1, 11

108 H Shin, 'Reflections on Northern Rock: The bank run that heralded the global financial crisis' (2009) 23 *Journal of Economic Perspectives* 101, 101-119.

109 Committee on the Global Financial System, *Funding Patterns and Liquidity Management of Internationally Active Banks* (BIS 2010) 21-22.

2.3 What Constitutes ‘Resilience to Financial Crises’?

Commentators have always paid close attention to the relationship between bank risks and business model characteristics. Prior to the 2007–09 crisis, many studies focused on the relationship between bank risk and key factors such as capital,¹¹⁰ corporate governance,¹¹¹ financial markets,¹¹² diversification¹¹³ and operating efficiency.¹¹⁴ However, many studies completed after the 2007–09 financial crisis have centred on understanding bank performance using stock market information. Peni and Vahamaa¹¹⁵ and Ellul and Yerramilli¹¹⁶ for example discuss internal risk control and the corporate governance of banks during the crisis. Beck et al¹¹⁷ and Beltratti and Stulz¹¹⁸ on their part analysed how banks with high Tier I capital (a core measure of overall financial strength from a regulator’s perspective, consisting primarily of disclosed reserves and common stock) and a greater loan-to-asset ratio survived the early stages of the crisis, and found that higher returns during the crisis were linked to more liquid assets and a larger deposit base. As will be shown below, there is much empirical evidence on how specific aspects of bank business models and risk management strategies influenced performance during the crisis. Thus, various business models and their association with bank risk make certain banks more resilient to financial crises. The 2007-09 financial crisis alerted regulators across the globe to the importance of enhancing the resilience of financial institutions within their respective jurisdictions in order to protect local depositors and preserve the soundness of the financial system.¹¹⁹ In this light, many studies have proposed

¹¹⁰ DC Wheelock and PW Wilson, ‘Why Do Banks Disappear? The Determinants of U.S. Bank Failures and Acquisitions’ (2000) 82 *Review of Economics and Statistics* 127, 127-138.

¹¹¹ L Laeven & F Valencia, ‘Systemic Banking Crises: A New Database’ (2008) 08/224 *IMF Working Papers* 1, 1.

¹¹² A Boot and AV Thakor, ‘The Accelerating Integration of Banks and Markets and its Implications for Regulation’ in A Berger, P Molyneux and J Wilson (eds), *The Oxford Handbook of Banking* (Oxford University Press 2010) 77.

¹¹³ KJ Stiroh, ‘Diversification in Banking: Is Non-interest Income the Answer?’ (2004) 36 *Journal of Money, Credit, and Banking* 853, 853-882.

¹¹⁴ SKwan and RA Eisenbeis, ‘Bank Risk, Capitalization, and Operating Efficiency’ (1997) 12 *Journal of Financial Services Research* 117, 117-131.

¹¹⁵ E Peni, S Smith and S Vähämaa, ‘Corporate Governance and Bank Performance during the Financial Crisis’ (2010) Proceedings of the 46th Annual Meeting of the Eastern Finance Association 1, 7.

¹¹⁶ A Ellul and V Yerramilli, ‘Stronger Risk Controls, Lower Risk: Evidence from U.S. Bank Holding Companies’ (2010) *NBER Working Paper Series 16178* 1, 3.

¹¹⁷ T Beck, A Demirgüç-Kunt & O Merrouche, ‘Islamic vs. Conventional Banking Business Model’ (2013) 37 *Journal of Banking and Finance* 433, 434.

¹¹⁸ A Beltratti and R Stulz, ‘The Credit Crisis around the Globe: Why Did Some Banks Perform Better?’ (2012) 105 *Journal of Financial Economics* 11, 11.

¹¹⁹ Committee on the Global Financial System, note 90 above, 22-23.

regulatory initiatives or standards that may improve existing regulatory approaches.¹²⁰ The proposals are based on the proportions of the various types of asset that ought to be held by banks, the distribution of debt and equity that constitutes the banks' finance, how transactions are financed, and the strategies used to generate income. This study captures the key findings of some major studies and attempts to map the profile of the financial institution that is resilient to financial crisis.

2.3.1 The Profile of a Resilient Financial Institution

2.3.1.1 Asset structure

It has been shown that bigger banks have access to a greater quantity and range of resources they can use to generate greater investment returns compared to smaller banks.¹²¹ According to Tarashev et al.,¹²² Drehman and Tarashev,¹²³ and Huang,¹²⁴ the size of a bank can be a crucial determinant of its risk. In this regard, securitisation is very important because it helps banks offload loans from the asset side to finance their investments. Banks experienced rapid growth in off-balance sheet financing in the years preceding the crisis as a direct result of the massive expansion of the securitisation market. As Marques-Ibanez and Scheicher,¹²⁵ and Shin¹²⁶ explain, the rapid expansion of the securitisation market changed the business models of the banks, causing them to alter the incentives to hedge and take new risks. Securitisation may therefore turn liquid claims into marketable securities, allowing banks to offload their credit exposure, thereby lowering the regulatory pressure. Through securitisation, banks can diversify their credit risk both by sector and geographical region. Banks that were active in the securitisation market were found to have better capitalisation, higher profitability and lower insolvency risk.¹²⁷ Furthermore, while securitisation can produce some static reduction

¹²⁰ See chapter 3, section 3.3.

¹²¹ A Demirgüç-Kunt and H Huizinga, 'Bank Activity and Funding Strategies: The Impact on Risk and Returns' (2011) 98 *Journal of Financial Economics* 626, 626.

¹²² N Tarashev, C Borio and K Tsatsaronis, 'The Systemic Importance of Financial Institutions' (2009) *Bank for International Settlements Quarterly Review* 17, 18.

¹²³ M Drehmann and N Tarashev, 'Systemic Importance: Some Simple Indicators' (2011) *Bank for International Settlements Quarterly Review* 25, 26.

¹²⁴ R Huang and L Ratnovski, 'The Dark Side of Bank Wholesale Funding' (2011) 20 *Journal of Financial Intermediation* 248, 248-263.

¹²⁵ D Marques-Ibanez and M Scheicher, 'Securitization: Instruments and Implications' in A Berger, P Molyneux and J Wilson (eds), *The Oxford Handbook of Banking* (Oxford University Press 2010) Chapter 24.

¹²⁶ HS Shin, 'Securitisation and Financial Stability' (2009) 119 *Economic Journal* 309, 309-332.

¹²⁷ A Cebenoyan and P Strahan, 'Risk Management, Capital Structure and Lending at Banks' (2004) 28 *Journal of Banking and Finance* 19, 19.

in risk, it may also lead to taking on new risk.¹²⁸ For example, according to Nijskens and Wagner,¹²⁹ Keys,¹³⁰ and Mian & Sufi,¹³¹ securitisation often results in increased bank leverage and looser lending rates, which becomes systematically riskier. Nonetheless, a controlled amortised structure gives investors a more predictable repayment schedule.

2.3.1.2 Capital structure

Freixas and Rochet¹³² note that the literature shows contradictory effects of capital requirements on bank risk. If a bank has higher capital reserves, it has a stronger buffer to withstand losses. More capital means less leverage, which in turn reduces risk-shifting incentives towards excessively risky projects. Thus, banks with higher capital levels are incentivised to screen borrowers (by assessing their history to determine their repayment capability), mainly because a larger volume of lending increases overall risk. Such screening, however, offsets some of the risk resulting from the higher volume of lending.¹³³ Because banks with high levels of capital are more likely to invest in riskier investments or in large numbers of different investments, thus increasing their chance of experiencing defaults and suffering losses. Hence, they direct additional effort into screening borrowers to prevent this from materialising. However, increasing leverage may reduce the likelihood of agency conflict, because, as Diamond and Rajan argue, debt holders want to become more efficient, and therefore intensify the pressure on their managers.¹³⁴ According to Berger and Bouwman, the relationship between bank capital and risk can also be positive due to the regulators, because banks with more capital have a greater capacity to absorb risk.¹³⁵ Nonetheless, generally speaking, the literature indicates a greater chance that a bank's high-quality capital will increase during times of crisis, mainly owing to increased caution when making loans, such as by completing additional checks and risk assessments and utilising the many risk-

¹²⁸ D Wu, J Yang and H Hong, 'Securitization and Banks' Equity Risk' (2010) 39 *Journal of Financial Services Research* 95, 95-117.

¹²⁹ R Nijskens and W Wagner, 'Credit Risk Transfer Activities and Systemic Risk: How Banks became Less Risky Individually but Posed Greater Risks to the Financial System at the Same Time' (2011) 35 *Journal of Banking and Finance* 1391, 1391-1398.

¹³⁰ B Keys, T Mukherje, A Seru and V Vig, 'Did Securitization Lead to Lax Screening? Evidence from Subprime Loans' (2010) 125 *Quarterly Journal of Economics* 307, 307-362.

¹³¹ A Mian and A Sufi, 'The Consequences of Mortgage Credit Expansion: Evidence from the U.S. Mortgage Default Crisis' (2011) 124 *Quarterly Journal of Economics* 1449, 1449-1496.

¹³² X Freixas and J Rochet, *Microeconomics of Banking* (MIT Press 1998).

¹³³ J D Coval and AV Thakor, 'Financial Intermediation as a Beliefs-bridge between Optimists and Pessimists' (2005) 75 *Journal of Financial Economics* 535, 535.

¹³⁴ D Diamond and G Rajan, 'Liquidity Risk, Liquidity Creation, and Financial Fragility: A Theory of Banking' (2001) 109 *Journal of Political Economy* 287, 287.

¹³⁵ A Berger and C Bouwman, *How does Capital Affect Bank Performance during Financial Crises?* (Wharton Financial Institutions Center 2010) 122.

related measures available, as seen during the debt crisis of 1982, which saw banks behave more cautiously in their lending activities.¹³⁶

2.3.1.3 Funding structure

Since the development of financial innovations and the deregulation of the banking system, banks increasingly depend on the financial markets for their funding.¹³⁷ They borrow intensively from wholesale markets through instruments such as commercial papers, repurchase agreements and mortgage bonds. As Shleifer and Vishny¹³⁸ explain, retail deposits in banks are an alternative source of funding that have proved the most stable and efficient source during a financial crisis, as they are assured by the government and linked with the depositor's liquidity needs, with predictable withdrawals at an aggregate level.¹³⁹ Importantly, retail depositors receive transaction services that are related to high switching costs as a result of the 'stickiness' of deposits.¹⁴⁰ In this vein, flexibility for depositors wishing to adapt to the changes in market funding is greater in the wholesale market than in the retail market.

The weight of evidence in the literature supports the benefit to banks of using market financing. For example, banks are able to raise large funds swiftly at a relatively low cost in the interbank market. Krishnan,¹⁴¹ Flanney and Sorescu,¹⁴² and Calomiris and Kahn¹⁴³ also argue that financial market investors are more sophisticated than depositors, and that the financial markets therefore provide more market discipline. Nonetheless, wholesale funding has its drawbacks, as shown during the financial crisis, predominantly owing to cost-efficient monitoring that is not always thorough. This, in turn, gives the impression of a lack of

¹³⁶ I Warde, *Islamic Finance in the Global Economy* (Edinburgh University Press, 2000) 96.

¹³⁷ A Abduh, 'The Impact of Crisis and Macroeconomic Variables towards Islamic Banking Deposits' (2011) 8 *American Journal of Applied Sciences* 1378, 1378-1383.

¹³⁸ A Shleifer and R W Vishny, 'Unstable Banking' (2009) 97 *Journal of Financial Economics* 306, 306-318.

¹³⁹ *Ibid.*

¹⁴⁰ M Kim, D Kliger and B Vale, 'Estimating Switching Costs: The Case of Banking' (2012) 12 *Journal of Financial Intermediation* 25, 25-56.

¹⁴¹ C Krishnan, P Ritchken and J Thomson, 'Monitoring and Controlling Bank Risk: Does Risky Debt Help?' (2005) 60 *Journal of Finance* 343, 343-377.

¹⁴² J Flanney and M Sorescu, 'Evidence of Bank Market Discipline in Subordinated Debenture Yields: 1983-1991' (1996) 51 *Journal of Finance* 1347, 1347.

¹⁴³ C Calomiris and C Kahn, 'The Role of Demandable Debt in Structuring Optimal Banking Arrangements' (1991) 18 *American Economic Review* 497, 497.

transparency and security, raising public concerns about losing their money, which can spark an unexpected rush of withdrawals, causing a critical liquidity risk.¹⁴⁴

2.3.1.4 Income structure

Prior to the 2007–09 financial crisis, a rapid growth in credit occurred as a consequence of deregulation.¹⁴⁵ This led to a high level of geographical expansion and a sharp increase in housing prices.¹⁴⁶ The increase in turn caused a rise in collateral values fuelled by the strong credit growth.¹⁴⁷ This explains why it has been observed that banking crises tend to be preceded by periods of excessive lending growth.¹⁴⁸ The aggregate changes in lending can be affected by structural changes such as intense banking competition and changes in macroeconomic variables. As Ruckes,¹⁴⁹ and Dell’Ariccia & Marquez¹⁵⁰ note, banks can issue new lending opportunities by expanding their geographical market, loosening credit standards and gaining market shares. In the same vein, Keeton,¹⁵¹ Laeven and Majnoni¹⁵² and Foos et al.¹⁵³ argue that microeconomic variables play a role in expanding banks’ lending opportunities where the loan growth of large international banks represents bank risk.

Additional sources of revenue are available to banks as a result of the expansion of non-interest income, such as commission, brokerage fees or trading investment banking. This results in a globally diversified income source for banks.¹⁵⁴ Such diversified income sources help banks to create an overall stability in their general income.¹⁵⁵ However, it is arguable whether heavy reliance on non-interest income reduces the overall risks faced by the banks.

¹⁴⁴ R Huang and L Ratnovski, ‘The Dark Side of Bank Wholesale Funding’ (2011) 20 *Journal of Financial Intermediation* 248, 248-263.

¹⁴⁵ See MK Brunnermeier, ‘Deciphering the Liquidity and Credit Crunch 2007-2008’ (2009) 23 *Journal of Economic Perspectives* 77, 78-100.

¹⁴⁶ See also L Niewdana, *Money and Justice* (Routledge 2015) 25, who noted that deregulation made corporate reporting ‘blur the difference between reality and fantasy.’

¹⁴⁷ A Abduh, ‘The Impact of Crisis and Macroeconomic Variables Towards Islamic Banking Deposits’ (2011) 8 *American Journal of Applied Sciences* 1378, 1378-1383.

¹⁴⁸ CM Reinhart & K S Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton University Press 2009).

¹⁴⁹ M E Ruckes, ‘Bank Competition and Credit Standards’ (2004) 17 *Review of Financial Studies* 1073, 1073-1102.

¹⁵⁰ G Dell’Ariccia G & R Marquez, ‘Lending Booms and Lending Standards’ (2006) 61 *Journal of Finance* 2511, 2511.

¹⁵¹ W Keeton, ‘Does Faster Loan Growth Lead to Higher Loan Losses’ (1999) 2 *Bank of Kansas City, Economic Review* 57, 57-75.

¹⁵² L Laeven & G Majnoni, ‘Loan Loss Provisioning and Economic Slowdowns: Too Much, Too Tate?’ (2007) 12 *Journal of Financial Intermediation* 178, 178-197.

¹⁵³ D Foos, L Norden & M Weber, ‘Loan Growth and Riskiness of Banks’ (2010) 34 *Journal of Banking and Finance* 2929, 2929.

¹⁵⁴ K J Stiroh, ‘Diversification in Banking: Is Non-interest Income the Answer?’ (2004) 36 *Journal of Money, Credit, and Banking* 853, 853-882.

¹⁵⁵ Ibid.

Compared to interest income, non-interest income tends to be more volatile. In times of financial crises, traditional income and revenue sources can decline together with non-interest revenue sources. According to Altunb, non-interest income such as fees and brokerage charges can show a greater decline than traditional interest income.¹⁵⁶ It can therefore be argued that a diversified portfolio is financially beneficial, although only for specific minor risks, not large systematic risk. Hence, DeYoung and Roland,¹⁵⁷ note that the growing reliance on non-interest revenue sources has not reduced the volatility of bank earnings. However, De Jonghe argues that non-interest income is not linked to a decline in systematic risk for banks, based on stock market returns.¹⁵⁸

It is shown above that retail deposits in banks proved the most stable and efficient source of funding during the financial crisis because they are assured by the government and linked with the depositor's liquidity needs, and with predictable withdrawals at an aggregate level. Also, banks that were more active in the securitisation market were found to have better capitalisation, higher profitability, and lower insolvency risk. Globally diversified income sources helped other banks to create an overall stability in their general income. In the same vein, banks with higher capital reserves had a stronger buffer to withstand losses, thereby demonstrating that more capital means less leverage, which in turn reduces risk-shifting incentives towards excessively risky projects. These are the characteristics of a resilient financial institution.

Nonetheless, it remains difficult to map the accurate profile of the financial institution that was more resilient to the 2007-09 global financial crisis. This is because the above conclusion may be summarised as follows: banks with more capital have a greater capacity to absorb risk. However, as shown above, such banks were more likely to invest in riskier investments or in large numbers of different investments, which in certain cases significantly increased their chances of experiencing defaults and suffering losses. The banks were then compelled to direct additional effort into screening borrowers. Also, in times of a financial crisis, traditional income and revenue sources may decline together with non-interest revenue sources, implying that heavy reliance on non-interest income does not necessarily reduce the

¹⁵⁶ A Abduh, 'The Impact of Crisis and Macroeconomic Variables towards Islamic Banking Deposits' (2011) 8 *American Journal of Applied Sciences* 1378, 1378-1383.

¹⁵⁷ R deYoung and P Roland, 'Product Mix and Earnings Volatility at Commercial Banks: Evidence from a Degree of Total Leverage Model' (2008) 10 *Journal of Financial Intermediation* 54, 54.

¹⁵⁸ O de Jonghe, 'Back to the Basics in Banking? A Micro-analysis of Banking System Stability' (2010) 19 *Journal of Financial Intermediation* 387, 387.

overall risks faced by financial institutions. Thus, it is not simply a question of a bank having more capital to absorb risk but the bank being able to effectively manage risk.

Notwithstanding, the analysis above crystallises why regulators and policymakers should place emphasis on risks concentrated in the most levered banks and the way they manage the risks. It also reveals important regulatory and supervisory challenges with regard to ensuring that financial institutions should not be overexposed to liquidity and credit risk, and over-reliant on external funding. Given that Islamic financial institutions operate within the Shariah regulatory framework that requires the sharing of risk and essentially shuns toxic assets and derivatives, it is shown below that many commentators have argued that Islamic financial institutions are more resilient to financial crises than conventional or non-Islamic institutions. An attempt is made below to synthesise a wide range of studies that provide evidence that confirms or refutes this argument. However, it begins by determining what constitutes the term ‘Islamic banks’ in the contention that Islamic banks are more resilient to financial crises than conventional banks. Thus, it will also seek to critically assess the way in which Islamic banking is differentiated from conventional banking in the extant literature.

2.4 What Constitutes ‘Islamic Banking’?

It is generally uncertain why ‘Western banking’¹⁵⁹ is often referred to as conventional banking. This is all the more confusing given that the concept of banking originated in the Middle East,¹⁶⁰ which today is mostly Muslim. Notwithstanding, the term ‘conventional’ is often used to distinguish between the traditional banking system that involves deposits and interest-based loan services and Islamic banking that involves the provision of unusual or exotic products and services based on the principles of the Shariah.¹⁶¹ The basic concepts of Islamic banking therefore differ from those of conventional banking, which commentators such as Jobst and Sole,¹⁶² Sole,¹⁶³ Qorchi,¹⁶⁴ Siddiqi,¹⁶⁵ and Hassan¹⁶⁶ have striven to show in

¹⁵⁹ Beck, A Demircuc-Kunt and O Merrouche, note 113 above.

¹⁶⁰ See N Luhmann, *Risk: A Sociological Theory* (Transaction Publishers 2005) 181; R Rajesh & T Sivagnanasithi, *Banking Theory: Law and Practice* (Tata McGraw-Hill 2009) 1-2.

¹⁶¹ CA Soumare, *The Principles of Islamic Banking* (Xlibris 2008) 31.

¹⁶² J Sole and A Jobst, ‘Operative Principles of Islamic Derivatives: Towards a Coherent Theory’ (2012) 12(63) IMF Working Papers 1, 3.

¹⁶³ J Sole, ‘Introducing Islamic Banks into Conventional Banking Systems’ (2007) 07(175) IMF Working Papers 1, 2.

¹⁶⁴ M Qorchi, ‘Islamic Finance Gears Up’ (2005) 42 Finance and Development 4, 5.

¹⁶⁵ M Siddiqi, R, *Bank Interest and the Rationale of Its Prohibition* (Islamic Research and Training Institute, Islamic Development Bank 2004) 2.

their attempts to define Islamic banking. Hence, it is also referred to as Shariah-compliant banking, and is defined by Hassan as ‘the provision and use of financial services and products that conform to Islamic religion practices and law.’¹⁶⁷ The General Secretariat of the Organisation of Islamic Conference (OIC) on its part defines the Islamic bank as ‘a financial institution whose status, rules and procedures expressly state its commitment to the principle of Islamic Shariah and to the banning of the receipt and payment of interest on any of its operations.’¹⁶⁸

Islamic banks are therefore unconventional because they are governed under Islamic law which is based on fairness, equity and justice in all banking transactions.¹⁶⁹ It follows that many of the concepts of Islamic banks are very different from those of conventional banks. Under Islamic law, interest, referred to as *riba*, is prohibited and regarded as usury, which is not in accord with the Islamic concept of equity. Mehboob defines usury as ‘the obtaining of more money in return from the loan than the principal amount due.’¹⁷⁰ The prohibition of *riba* may be the most significant difference between Islamic banks and conventional banks.¹⁷¹ Zeineb and Mensi maintain that interest is the main cause of price increases and the creation of monopolies within society as it encourages the concentration of wealth while damaging social justice and equity.¹⁷² Instead, Islamic banks focus more on profit-loss sharing (PLS) arrangements. This is another significant difference between Islamic and conventional banking. The PLS concept is recognised as a way of sharing profits and insuring against loss.¹⁷³ Such an arrangement means that the bank does not charge its clients interest; instead, it engages in asset transactions using the client’s capital, and then shares the profits with the client. This reflects the Islamic value of social justice and social equity.

¹⁶⁶ K Hassan, *Textbook on Islamic Banking* (Islamic Economics Research Bureau 2003) 87.

¹⁶⁷ Ibid.

¹⁶⁸ G B Zeineb and S Mensi, ‘Does the PLS Paradigm Spur the Islamic Banks vs Conventional Banks Soundness Case of the Global Financial Crisis?’ (2014) 2 *Journal of Economics and Development Studies* 177, 178-192.

¹⁶⁹ M Hanif and AM Iqbal, ‘Inside-Out: Perception of Key Finance Professionals About Theory and Practice of Islamic Banking’ (2012) 4 *International Journal of Humanities and Social Sciences* 198, 205-206.

¹⁷⁰ H Mehboob, ‘An Explanation of the Rationale behind the Prohibition of Riba in the Doctrine of Three Religions with Special Reference to Islam’ (2010). Available at: http://www.econ.nagoyacu.ac.jp/~oikono/oikono/vol47_34/pdf/vol42_2/mehboob.p [15 May 2015] 1.

¹⁷¹ M Lewis, ‘Accentuating the Positive: Governance of Islamic Investment Funds’ (2010) 1 *Journal of Islamic Accounting and Business Research* 42, 43-59.

¹⁷² Ibid 55.

¹⁷³ I Warde, above no 132, 199.

As Iqbal and Mirakhor explain, the PLS agreement also reflects the Islamic values of cooperation, solidarity, fairness, justice and honesty.¹⁷⁴ Therefore, while prohibiting interest-based transactions it encourages business that generates legitimate and fair profits. As Khoutem and Nedra argue, PLS enables Islamic banks to provide better mobilisation of savings and savings rates, thus better mitigating risk through resolving information asymmetry.¹⁷⁵ This encourages the integration of new projects where financial transactions underlie the activities of a productive economy. Iqbal and Chapra also argue that PLS ensures macroeconomic stability.¹⁷⁶ Notably, non-profit-loss sharing agreements based on *riba* are subject to repetitive crises and losses, while Islamic banks can be considered ‘anti-crisis’ due to their profit-loss sharing agreements. Ali, Kia and Darrat confirm that PLS plays a crucial role in maintaining the net worth of banks under varying macroeconomic conditions and is pivotal in helping banks to avoid balance sheet deterioration, significantly enhancing their overall solidity.¹⁷⁷ This is one of the main reasons why some commentators hold that Islamic banks were more resilient than conventional banks throughout the global financial crisis.¹⁷⁸ Nonetheless, where such a statement is made, it may be understood to imply that banking that is based on the principles of the Shariah is more resistant to shock than banking that involves deposits and interest-based loan services. The distinction between Islamic and conventional banking goes further than the nature of the deposits and services. The existing literature is rich in terms of distinguishing between both banking systems. An attempt is made in the next section to summarise the distinctions.

2.4.1 The Differences between Islamic and Conventional Banking

In addition to some of the differences discussed above, it is important note that unlike conventional banks, Islamic banks are more likely to be asset-based and more focused on risk sharing.¹⁷⁹ Conventional banks are generally based on a high level of debt and allow the transfer of risk. Moreover, conventional banks collect a predetermined rate of return for their

¹⁷⁴ Z Iqbal & A Mirakhor, *An Introduction to Islamic Finance* (John Wiley & Sons 2011) 18.

¹⁷⁵ BJ Khoutem & BA Nedra, ‘Islamic Participative Financial Intermediation and Economic Growth’ (2012) 8 *Journal of Islamic Economics, Banking and Finance* 45, 45-59.

¹⁷⁶ Z Iqbal, *Islamic Financial Systems* (Finance and Development 1997) 3.

¹⁷⁷ SS Ali, ‘Financial Distress and Bank Failure: Lessons from Closure from ihlas finans in Turkey’ (2007) 142 *Islamic Economic Studies* 21, 85.

¹⁷⁸ Ibid.

¹⁷⁹ M Hasan and J Dridi, ‘The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study’ (2010) IMF Working Paper WP/10/201 1, 60.

investments; whereas Islamic banks normally share their profits and losses with their customers or investors, and do not have a guaranteed return on their investments.¹⁸⁰

Also, the Islamic banking sector prohibits *gharar* and *maysir*. Gait & Worthington describe *gharar* as ‘any contract for sale or purchase that includes uncertainty in genus, species, quantity of the object, price, time of payment in deferred sales, existence of object, and identity of object.’¹⁸¹ In the same vein, they define *maysir* as ‘the act of betting on the realisation of an event, based on subjective and future expectations, i.e. [a] high degree of asymmetric information.’¹⁸² As such, these are regarded as ‘gambling or games of chance.’¹⁸³ Ahmed notes that without *gharar* and *maysir*, Islamic banks have no opportunity for speculative behaviour, and this explains why Islamic banks were more stable than conventional banks during the global economic crisis.¹⁸⁴ Table II below summarises the differences between Islamic and conventional banks captured in the literature.

Table II: Overview of the differences between these two banking systems

Conventional Banking	Islamic Banking
➤ The notion of ‘time value of money’ and the associated risk determine how money is priced. ¹⁸⁵	➤ Money is not priced because it is not considered to be a commodity, product or service. It also cannot be resorted to for price borrowing or financing (i.e. interest).
➤ Financial assets are the main focus of transactions.	➤ Real assets are the main focus of transactions.

¹⁸⁰ F Ouerghi, ‘Are Islamic Banks More Resilient to Global Financial Crisis than Conventional Banks?’ (2011) 4 *Asian Economic and Financial Review* 941, 941-955.

¹⁸¹ A H Gait and A C Worthington, ‘A Primer on Islamic Finance: Definitions, Sources, Principles and Methods’ (2007) 7 *School of Accounting and Finance Working Paper Series* 1, 1-27.

¹⁸² Ibid.

¹⁸³ I Warde, above note 132, 859.

¹⁸⁴ H Ahmed, *A Microeconomic Model of an Islamic Bank* (Islamic Research and Training Institute 2002) 59.

¹⁸⁵ The ‘time value of money’ refers to the notion that money taken at the present time is worth more than it will be in the future due to its potential earning capacity. See P Abedifa, M Philip & T Amine, ‘Risk in Islamic Banking’ (2013) *Review of Finance* 2035, 2036.

<ul style="list-style-type: none"> ➤ In the case of money loans, a fixed interest rate considered as the financial institution's liability is offered to the party. 	<ul style="list-style-type: none"> ➤ Enormous importance is attributed to the conditions of share of profits and losses among the financial institution and the holders of investment accounts, with investment accounts considered not as debt but as quasi equity.
<ul style="list-style-type: none"> ➤ Defaulting may attract extra costs, such as fines and compounded interest. 	<ul style="list-style-type: none"> ➤ No extra costs can be imposed by Islamic Financial Institutions (IFIs). Fines are given to charity and occasionally reimbursement is provided if the accounts are settled early.
<ul style="list-style-type: none"> ➤ The financial institution adopts the role of creditor while the client is the debtor. 	<ul style="list-style-type: none"> ➤ IFIs play the role of investor, partner, trader, buyer and seller, lessor and lessee in relation to their clients.
<ul style="list-style-type: none"> ➤ Deposit guarantee is an obligation of standard banks. 	<ul style="list-style-type: none"> ➤ Deposits are guaranteed by IFIs solely for current accounts.
<ul style="list-style-type: none"> ➤ The financial institutions' liquidity management and investment practices sometimes remain 	<ul style="list-style-type: none"> ➤ IFIs ensure that their activities are transparent to investment account holders who also participate in

unknown to depositors, although Basel III addresses this issue as shown in Chapter 6.	projects using their money.
➤ Some level of risk is attached to most banking transactions.	➤ Practices and transactions that are speculative regarding outcome and/or implementation or delivery timing are strictly prohibited.
➤ The nature of clients' business is not important, provided that it is not illegal.	➤ IFIs do not undertake transactions with businesses contravening Islamic precepts (e.g. gambling, cigarette or alcoholic beverage production, etc.).
➤ Standard financial institutions do not engage in Zakat. ¹⁸⁶	➤ Aside from undertaking Zakat payment, IFIs also serve as Zakat collection centres.
➤ The priority is provision of loans and recovery with compounding interest.	➤ The priority is participation in partnership organisations.

In light of the above, it may be contended that there are clear differences between Islamic and conventional banking systems, and the argument that Islamic banks are more resilient to financial crises is based on the notion that the above features of Islamic banking increases the resilience of a bank. Thus, regulators and supervisors in jurisdictions that host only conventional banks may enhance the resilience of these banks by adopting and enforcing standards that are Shariah-compliant. Given the delineation of what constitutes a financial

¹⁸⁶ Zakat may be said to refer to the process where a wealthy Muslim person gives a percentage of his income to help those in need for it.

crisis, the mapping of the features of the financial institution that is more resilient to financial crises, the next section critically examines studies that have concluded that Islamic banks are more resilient. It seeks to determine whether their conclusions are justified. The analysis considers the methodologies used in these studies, as well as the context in which Islamic and conventional banks were compared or contrasted.

2.5 Are Islamic Banks More Resilient?

The literature provides considerable empirical evidence regarding the resilience and stability of Islamic banking, as well as the factors that enhance the economic safety, stability and robustness of Islamic banks in comparison to conventional banks. Many studies hold that during the 2007-09 financial crisis specifically, Islamic banks proved to be more resistant than conventional banks as the former were able to achieve higher growth rates in loans and assets, and their equity vulnerability was fairly limited compared to that of conventional banks. One of the first studies to examine the solidity of Islamic versus conventional banks during the 2007-09 global financial crisis was conducted by Cihak and Hesse.¹⁸⁷ They found that Islamic banks in eighteen countries generally demonstrated greater solidity than conventional banks. This finding closely reflected the results of the study conducted by that Hasan and Dridi which revealed that Islamic banks experienced higher growth in loans and assets than conventional banks during the financial crisis.¹⁸⁸ They noted that Islamic banks had only limited exposure to the adverse impact of the financial crisis, although they became progressively weaker in 2009 than conventional banks.¹⁸⁹

From a broader perspective, Shafique, Faheem & Abdullah observed that most banks throughout the world were badly affected by the global financial crisis, including Islamic banks. However, ultimately, he concluded that Islamic banks performed better financially and faced lower risks due to their interest-free nature.¹⁹⁰ Subsequently, Boumediene and Caby¹⁹¹ also found that Islamic banks were more resilient during the 2007-09 financial crisis,

¹⁸⁷ M Cihak and H Hesse, 'Islamic Banks and Financial Stability: An Empirical Analysis' (2010) 38 *Financ Serv Res* 95, 111.

¹⁸⁸ M Hasan and J Dridi, note 175, 60.

¹⁸⁹ Ibid.

¹⁹⁰ A Shafique, MA Faheem & I Abdullah, 'Impact of Global Financial Crises on the Islamic Banking System: Analysis of Islamic Financial Systems Crunch 2008' (2012) 1 *Arabian Journal of Business and Management Review* 124, 124-134.

¹⁹¹ A Boumediene and J Caby, 'The Stability of Islamic Banks during the Subprime Crisis' (2009). Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1524775 [15 October 2017] 16-18.

although they were not well protected from the negative impact of the crisis' aftermath. Hence, like Hasan and Dridi, they found that Islamic banks were more resistant to the initial financial shock. They examined the operations of Islamic and conventional banks in different Muslim countries including Turkey, United Arab Emirates (UAE), Saudi Arabia, Malaysia, Qatar, Kuwait, Jordan and Bahrain, and reported that Islamic banks were affected differently from conventional banks in 2008, showing stronger resilience during the crisis period from 2007 to 2009 due to their lower leverage, higher solvency, smaller investment portfolios and particularly their adherence to Shariah principles.¹⁹²

Their performance progressively became worse than the performance of conventional banks as the crisis subsided. Thus, it may be contended that conventional banks perform better than Islamic banks during periods of economic growth. However, Islamic banks perform better than conventional banks during financial crises. Other important studies have sought to establish the link between Islamic banking and resilience to financial crises. Tabash and Dhankar¹⁹³ investigated bank stability in the KSA between 2005 and 2010, and revealed that Islamic banks were less exposed to liquidity risk because they held more liquid assets than conventional banks. They concluded that the limited scope for investment among Islamic banks could explain their higher liquidity ratio, which showed no significant difference before, during or after the financial crisis. Islamic banks reliably held more short-term funds and high deposit percentages to meet sudden withdrawals. Islamic banks were also more equity financed and dependent on the PLS relationship, whereas conventional banks were highly dependent on a debt-credit relationship. There was also no significant difference in the capital adequacy of Islamic banks before, during or after the financial crisis, because of their asset-backed financing and distinctive Islamic principles.¹⁹⁴ Aktas analysed bank stability in Turkey during the global economic crisis using a trend analysis on a yearly basis for the 2006–2011 period, and noted that in terms of liquidity, capital adequacy and profitability, Islamic banks were more stable than conventional banks, even in 2008.¹⁹⁵

¹⁹² Hasan and J Dridi, note 175.

¹⁹³ MI Tabash and RS Dhankar, 'The Impact of Global Financial Crisis on the Stability of Islamic Banks: Empirical Evidence' (2014) 2 *Journal of Islamic Banking and Finance* 367, 386-387.

¹⁹⁴ Ibid.

¹⁹⁵ M Aktas, 'Stability of the Participation Banking Sector Against the Economic Crisis in Turkey' (2013) 3 *International Journal of Economic and Financial Issues* 180, 189.

Nonetheless, many studies have not adduced such clear-cut findings. The study conducted by Parashar and Venketesh¹⁹⁶ for example had mixed results to the effect that during the crisis conventional banks suffered considerably more from poor liquidity and average returns on assets, whereas Islamic banks suffered more with poor average returns on equity, leverage and capital ratios. They segregated performance by isolated factors. However, when looking at the situation as a whole, they also concluded that the Islamic banks performed better overall between 2006 and 2009. In contrast, Imam and Kpodar¹⁹⁷ observed that Islamic banks were neither better nor worse but rather complementary to conventional banks. They then argued that banks can remain stable during a financial crisis if their country has prudential regulations to ensure bank soundness during a period of financial uncertainty. Hence, the resilience of a bank depends more on the regulatory environment in which the bank is located than on the nature of the banking system adopted. Contrary to the above studies, Turk on his part found that Islamic banks are generally less stable and more vulnerable in uncertain financial situations because they are less competitive than conventional banks.¹⁹⁸ He made an argument that was similar to that put forward by Imam and Kpodar that banks are in fact on a similar footing worldwide, and what is important is the regulatory environment. In the same vein, Kassim and Majid hold that both types of banks were equally vulnerable to the 2007-09 financial crisis.¹⁹⁹ Also, Smolo and Mirakhor concluded that both conventional and Islamic banks were vulnerable during the financial crisis, although the impact on Islamic banks was more limited.²⁰⁰ Hassan, Mohamed & Bader compared cost, revenue and profit efficiencies during the financial crisis and found no significant difference between Islamic and conventional banks using a sample of forty banks in eleven OIC countries.²⁰¹

¹⁹⁶ SP Parashar and J Venkatesh, 'How Did Islamic Banks Do During Global Financial Crisis' (2010) 5 *Banks and Bank Systems* 54, 54-62.

¹⁹⁷ P Imam and K Kpodar, 'Islamic Banking: How Has It Diffused?' (2010) 10 IMF Working Papers 1, 3.

¹⁹⁸ AR Turk, 'On the Implications of Market Power in Banking: Evidence from Developing Countries' (2010) 34 *Journal of Banking & Finance* 765, 765-775.

¹⁹⁹ SH Kassim and M SA Majid, 'Impact of Financial Shocks on Islamic banks: Malaysian evidence during 1997 and 2007 financial crises' (2010) 3 *International Journal of Islamic and Middle Eastern Finance and Management* 291, 291-305.

²⁰⁰ E Smolo and A Mirakhor, 'The Global Financial Crisis and its Implications for the Islamic Financial Industry' (2010) 3 *International Journal of Islamic and Middle Eastern Finance and Management* 372, 372-385.

²⁰¹ T Hassan, S Mohamed and MKI Bader, 'Efficiency of Conventional versus Islamic Banks: Evidence from the Middle East' (2009) 2 *Middle Eastern Finance and Management* 46, 63-64.

Despite the above, many commentators still hold that Islamic banks are more resilient because of their nature. Siraj and Pillai²⁰² note that Islamic banks in the GCC region fared much better between 2005 and 2010 than conventional banks in the same region. They argued that the performance of the Islamic banks may be linked to the fact that they were more equity financed, and thus, their performance indicators, including capital adequacy, liquidity and profitability, were less affected by the global financial crisis from 2007. Abdulle and Kassim²⁰³ sought to determine how the global financial crisis affected Malaysian banks between 2006 and 2010. They assessed indicators such as credit risk, liquidity and profitability before, during and after the financial crisis, and found that Islamic banks had greater liquidity but less liquidity risk exposure than conventional banks during the crisis. Also, Rafiuddin and Alam examined banks in the UAE between 2005 and 2009 and observed that Islamic banks had lower risk and higher liquidity than conventional banks.²⁰⁴ However, unlike other studies, they found that the conventional banks were more profitable. They also noted a higher trend in registering Islamic than conventional banks after the 2008 meltdown. The findings of this study stand out because they show that conventional banks were more profitable before, during and after the crisis. Hence, although conventional banks were more adversely affected by the crisis, they maintained higher levels of profitability. This goes to show that there is not necessarily a causal link between performance during the crisis and resilience. Thus, the fact that a bank was not as adversely affected as other banks does not imply that the former is more resilient to financial crises.

It must also be noted that some studies such as that conducted by Sehrish et al in Pakistan between 2007 and 2011 found that Islamic banks were less efficient in expense management as well as risk management in regard to loans compared to conventional banks.²⁰⁵ Also, Hidayat and Abdhullah analysed the impact of the economic crisis on the financial

²⁰² KK Siraj and PS Pillai, 'Comparative Study on Performance of Islamic Banks and Conventional Banks in GCC Region' (2012) 2 *Journal of Applied Finance & Banking* 123, 158-160.

²⁰³ M Abdulle and S Kassim, 'Impact of Global Financial Crisis on the Performance of Islamic and Conventional Banks: Empirical Evidence from Malaysia' (2012) 8 *Journal of Islamic Economics, Banking and Finance* 9, 10.

²⁰⁴ A Rafiuddin and Z Alam, 'Islamic Banks and Conventional Banks in the QATAR Before and After the Recession' (2012) 1 *International Journal of Financial Management* 50, 50-58.

²⁰⁵ S Sehrish et al, 'Financial Performance Analysis of Islamic Banks and Conventional Banks in Pakistan: A Comparative Study' (2012) 4 *Interdisciplinary Journal of Contemporary Research Business* 186, 197-198.

performance of Islamic banks in Bahrain using a panel regression model, and noted no significant impact on these banks during the crisis period.²⁰⁶

The majority of the studies cited above concluded that Islamic banks are more resilient to financial crisis than conventional banks. However, they submit diverse reasons why Islamic banks performed better during the 2007-09 global financial crisis. These include lower risk due to their interest-free nature, lower leverage, higher solvency, higher liquidity ratio due to smaller investment portfolios, less exposure to liquidity risk because they hold more liquid assets, more short-term funds and higher deposit percentages to meet sudden withdrawals, and their adherence to Shariah principles. However, it is difficult to determine what specific features of Islamic financial institutions may explain under all normal circumstances their resilience to financial crises compared to conventional institutions. In other words, it is difficult to generalise the findings of these studies given that they relate to the specific experiences of the Islamic and conventional banks examined. Hence, some of the studies found that Islamic banks had only limited exposure to the adverse impact of the financial crisis in 2008, and became progressively weaker than conventional banks in 2009, while other studies found that Islamic banks were neither better nor worse than conventional banks. Then one study concluded that Islamic banks are less efficient in expense management as well as risk management in regard to loans compared to conventional banks.

The studies also employed different methodologies. Among the key studies, Cihak and Hesse used the Z-score (standard deviation from the mean determining the closeness to insolvency) as a primary dependent variable to measure individual bank risk and soundness; Boumediene and Caby also used the Z-score to measure the level of stability of 12 Islamic banks and 71 conventional banks in Indonesia; Imam and Kpodar used econometric estimation techniques to model the way Islamic banking diffuses; Hassan, Mohamed and Bader used the Stochastic Frontier Approach to measure and compare the cost and profit efficiency of 37 conventional banks and 43 Islamic banks in OIC countries; and Abduh, Omar and Duasa used the cointegration test and vector error correction model to ascertain the relationship between macroeconomic variables and financial crises. It is frustrating that these studies generally failed to show the implications of the chosen methodologies, the variables involved, and how

²⁰⁶ SE Hidayat and A Abdullah, 'Does Financial Crisis Impact on Bahrain Islamic Banking Performance? A Panel Regression Analysis' (2011) 4 *International Journal of Economics and Finance* 79, 86-87.

the findings may be transferable to other contexts in order to justify the generalisable claim that Islamic banks are more resilient to financial crises.

It is also difficult to generalise the findings of these studies because they reflect in different ways the effects of different rules and regulations in different regulatory environments. In the UAE for example, Islamic banks had lower risk and higher liquidity than conventional banks; in Pakistan, Islamic banks were less efficient in expense management but also less risky in managing loans; in Bahrain, there was no significant impact on Islamic banks; in Turkey, Islamic banks were more stable in terms of liquidity, capital adequacy, and profitability; and in the KSA, Islamic banks were less exposed to liquidity risk because they held more liquid assets than conventional banks. It is uncertain whether the use of the z-score indicator to measure the level of stability of Islamic banks in the UAE will yield the same results as the study conducted by Boumediene and Caby in Indonesia.

As such, it may be contended that the various prudential regulations of these countries made a significant contribution to the findings of the diverse studies. These regulations determine how the financial institutions operate and manage risks, and therefore ensure their safety and soundness. However, although the abovementioned countries are largely Muslim countries, their regulations are not based on the principles of the Shariah or even variations of the principles. This is quite problematic owing to the fact that the reports discussing many of the studies concluded with a generalisable claim that Islamic banks are more resilient to financial crises. The studies largely focus on the performance of Islamic banks before, during and after the 2007-09 financial crisis and assumed that since Islamic banks generally performed better during the crisis, it may be concluded that they are more resilient. However, they did not show how the principles of the Shariah are causally linked to performance of financial institutions. Thus, it is not necessary to seek to determine which variation of the Shariah in any of the countries studied is the most effective in enhancing the resilience of banks. In the same vein, it is frustrating that these studies placed emphasis on the differences between Islamic and conventional banks, and yet failed to establish a theoretical link between principles of the Shariah and resilience to financial crises. It is shown above that banks with more retail deposits are resilient because these deposits constitute a stable and efficient source of funding during a financial crisis since they are assured by the government and linked with the depositor's liquidity needs. Also, banks that are more active in the securitisation market are more resilient because of better capitalisation, higher profitability,

and lower insolvency risk. However, it is also shown that reliance on the government may be detrimental during a sovereign crisis and non-interest income may not necessarily reduce the risks faced by a bank if there is no good risk management strategy. It follows that the above studies ought to have shown that adherence to the principles of the Shariah ensures more retail deposits and securitisation and better risk management. In other words, the contention that Islamic banks are more resilient ought to be based on the demonstration of a cogent theoretical link between adherence to the principles of the Shariah and more capital and better risk management.

2.6 Conclusion

This Chapter conducted a critical review of the existing literature in order to determine whether the generalizable claim that Islamic banks are more resilient to financial crises than conventional banks is justified. It began by seeking to determine the meanings given to the terms ‘financial crisis,’ ‘resilience’ and ‘Islamic banking’. It notes that the term financial crisis is broad and generic for it encompasses multidimensional situations in which financial assets lose a substantial part of their nominal value. Nonetheless, it is classified into two broad categories, namely crises that use quantitative definitions; and crises that depend on qualitative analyses. The first category of crises comprises currency and sudden stop (capital account or balance of payment) crises, while the second group includes debt and banking crisis. Also, other crises related to adverse debt dynamics such as sovereign crises may be classified in either category. Thus, it was noted that the term ‘financial crisis’ in this context refers to any category of crisis that has a direct negative impact on financial and economic levels of any State: debts mount, assets are liquidated, the foreign currency exchange becomes vulnerable, and inflation dramatically increases along with low productivity and high unemployment levels. The focus however was generally on the ‘global financial crisis’ that lasted from 2007 to 2009, and the resilience of Islamic and conventional banks was determined in light of how they were affected by this financial crisis.

With regard to the question of resilience, it was shown that banks with more retail deposits had a more stable and efficient source of funding during the financial crisis because they are assured by the government and linked with the depositor’s liquidity needs, and with predictable withdrawals at an aggregate level. Also, banks that were more active in the securitisation market and banks that had a more diversified source of income were found to

have better capitalisation, higher profitability, and lower insolvency risk. Nonetheless, the most important element was the banks' ability to manage risk. This crystallises why regulators and policymakers should place emphasis on risks concentrated in the most levered banks and the way they manage the risks.

It was then shown that Islamic banking is generally held to involve the provision of exotic or unconventional products and services based on the principles of the Shariah. Although the principles are not standardized across Muslim countries in regard to what should constitute Shariah-compliant banking, there are general rules that apply in all Islamic jurisdictions such as the rules that prohibit *riba* (interest), *gharar* (speculation) and *maysir* (gambling) amongst others, and the rules that govern the use of PLS arrangements to provide better mobilisation of savings and savings rates and mitigate risk.

It was then noted that all financial institutions, whether Islamic or conventional, are not equally vulnerable to failure during any of the categories of financial crises. Many studies demonstrated that the institutions that are more vulnerable are those exposed to liquidity and credit risk due to over-reliance on short-term wholesale funding, viz., foreign deposits and foreign funds. Other studies showed that also vulnerable are financial institutions that are prone to excessive risk taking, such as those that issued subprime loans with a much higher risk of default. These troubled institutions were then unable to sell their assets or obtain liquidity from local sources in order to return to target leverage. The different reasons for the vulnerability of certain institutions and the resilience of others imply that it is difficult to map the accurate profile of the Islamic financial institution that was more resilient to the global financial crisis in order to determine whether it matches the profile of institutions that are generally more resilient to financial crises. This is because different Islamic banks in different regulatory environments were affected in different ways. Thus, the commentators who concluded with the generalisable claim that Islamic banks are more resilient to financial crises did not establish a cogent theoretical link between adherence to the principles of the Shariah and resilience. Many showed that the principles of the Shariah limits exposure and may therefore ensure that the Islamic bank is not as adversely affected as conventional banks during financial crises. However, this thesis shows that there is no consistent application of such principles to limit exposure across Islamic jurisdictions.

It is noted above that regulators and policymakers should place emphasis on risks concentrated in the most levered banks, and the way they manage the risks. Given that Islamic financial institutions operate within the Shariah regulatory framework that requires the sharing of risk and essentially shuns toxic assets and derivatives, there are good reasons to assume that Islamic financial institutions ought to be more resilient to financial crises than conventional institutions. The findings of the majority of the studies cited above confirm this assumption. However, as noted above, they submit diverse reasons making it difficult to ascertain the specific features of Islamic financial institutions that explain their resilience to financial crises compared to conventional institutions. It remains that the vulnerability of the financial institution and system is a function of the risk management strategies adopted. Thus, the next Chapter analyses the risks involved in both conventional and Islamic banking and seeks to ascertain whether Islamic banks have more effective management strategies that enhances their resilience to financial crises.

Chapter 3

Assessing the Risk Management Strategies of Islamic Banks

3.1 Introduction

In Chapter 2, it was submitted that a bank's resilience is a function of how it manages risk within its regulatory environment. The implication of this is that the argument that Islamic banks are more resilient to financial crises than conventional banks is premised on the contention that Islamic banks have more effective risk management strategies. This Chapter tests this argument. It begins by briefly explaining the concept of risk management. It then discusses different categories of financial and non-financial risk and ascertains their causal relationship with financial crises. Furthermore, it considers effective ways of managing risk and assessing the general strategies used by Islamic banks to manage risks. The objective is to determine whether the resilience of Islamic banks to financial crises may be attributed to their risk management strategies.

3.2 The Concept of Risk Management

Risk is a broad concept with no precise definition.²⁰⁷ However, it is often used to describe the probability of an unforeseen or unplanned event, leading to a negative outcome which has a detrimental effect on an investment or business.²⁰⁸ The negative outcome may include financial loss, damage to reputation or legal penalties.²⁰⁹ Risk management is therefore an important part of strategic management, because an organisation cannot define its objectives or develop an effective strategy without a mechanism for identifying and mitigating the relevant risks.²¹⁰ Nonetheless, the history of the in-depth study of the concept is relatively recent.²¹¹ Crockford noted that no academic texts were produced on the topic of risk

²⁰⁷ G Fisher, T Nguyen, and C Tiu, 'Risk Budgeting' in HK Baker and G Filbeck (eds), *Investment Risk Management* (Oxford University Press 2014) 18; CS Tapiero, *Risk and Financial Management: Mathematical and Computational Methods* (John Wiley & Sons 2004) 23-24; J Bessis, *Risk Management in Banking* (4th edn, Wiley 2015) 2-3.

²⁰⁸ For a comparison of definitions, see ER Utz, *Modelling and Measurement Methods of Operational Risk in Banking* (Herbert Utz Verlag 2006) 8-9; K Ramakrishna, *Essentials of Project Management* (PHI 2010) 150.

²⁰⁹ GS Oldfield and AM Santomero, 'Risk Management in Financial Institutions' (1997) *Sloan Management Review* 39, 39.

²¹⁰ M Loosemore, J Raftery, C Reilly and D Higgon, *Risk Management in Projects* (2nd edn, Taylor & Francis 2006) 44; FR Kaen, 'Risk Management, Corporate Governance and Public Corporation' in M Frenkel, U Hommel and M Rudolf (eds), *Risk Management: Challenge and Opportunity* (2nd edn, Springer 2005) 434.

²¹¹ See G Dionne, 'Risk Management: History, Definition and Critique' (2013) CIRRELT-2013-17. Available at: <https://www.cirreлт.ca/DocumentsTravail/CIRRELT-2013-17.pdf> [09 December 2017] 1; K Zachmann,

management before 1955 and universities did not offer courses on the subject before this date.²¹² The first major works published on the topic were by Mehr and Hedges,²¹³ and Heins and Williams.²¹⁴ However, these authors explored pure risk management and market insurance,²¹⁵ but excluded financial risk.²¹⁶ However, financial risk management, as an overall concept, has since attracted significant attention and expanded as a result.²¹⁷

After the Second World War, many large-scale organisations with diversified portfolios began to consider protecting themselves against risk by utilising risk management strategies. Hence, risk management was deemed to be an effective alternative to market insurance.²¹⁸ Risk management was devised as a form of self-insurance and applied to reduce the potential losses resulting from risky business transactions. Banks therefore developed self-protective strategies, including the creation of liquid reserves to help them recover from accidents or unexpected market fluctuations.²¹⁹ Attention was particularly directed towards certain key areas, including credit risk and market risk. The following decade witnessed high market volatility, which correspondingly motivated most large US investment banking entities to establish and assign a supervisory role to their risk management departments.²²⁰ Accordingly, whereas the pre-war era saw markets utilise various kinds of insurance to protect their financial systems against risk, post-war, the price of insurance coverage drastically increased, thereby motivating organisations to seek alternative financial risk management tools, such as derivatives.²²¹ These are securities with prices that are derived from or dependent on underlying assets such as stocks, currencies, interest rates and bonds.²²² The values of the derivatives are determined by fluctuations in the underlying assets. Derivatives were originally used to achieve balanced exchanged rates for commodities that were traded

‘Risk in Historical Perspective: Concepts, Contexts, and Conjunctions’ in C Kluppelberg et al (eds), *Risk – A Multidisciplinary Introduction* (Springer 2014) 7-18.

²¹² GN Crockford, ‘The Bibliography and History of Risk Management: Some Preliminary Observations’ (1982) 7 *The Geneva Papers on Risk and Insurance* 169, 170.

²¹³ RI Mehr and BA Hedges, *Risk Management in the Business Enterprise* (Irwin 1963).

²¹⁴ CA Heins and RM Williams, *Risk Management and Insurance* (McGraw-Hill 1964).

²¹⁵ See HR Bobbitt, ‘Reviewed Work: Risk Management and Insurance by C. Arthur Williams, Jr., Richard M. Heins’ (1965) 20 *The Journal of Finance* 554, 554-556.

²¹⁶ See G Dionne, note 208, 1.

²¹⁷ J Bessis, *Risk Management in Banking* (John Wiley and Sons 2010).

²¹⁸ G Dionne, note 208 above, 1-2.

²¹⁹ *Ibid*

²²⁰ A Demirgüç-Kunt and H Huizinga, note 117, 626–650.

²²¹ *Ibid*

²²² J Madura, *Financial Markets and Institutions* (12th edn, Cengage Learning 2018) 7; W Arrata, A Bernales and V Couder, ‘The Effects of Derivatives on Underlying Financial Markets: Equity Options, Commodity Futures and Credit Default Swaps’ in M Balling and Ernest Gnan (eds), *Fifty Years of Money and Finance: Lessons and Challenges* (Larcier 2013) 445.

internationally.²²³ Given that different currencies had different values, derivatives enabled them to account for the differences. However, they were increasingly used for a wide variety of transactions with different objectives. They were used to insure against risks on assets or for speculation in betting on the future prices of assets, or for hedging. As different forms of security, derivatives are associated with different types of risk, including underlying asset, expiration and counterparty.

In the 1970s and 1980s, the use of derivatives to manage both insurable and non-insurable risks developed quickly, because they facilitated financial innovation and increased market resilience to crises.²²⁴ However, they posed remarkable challenges to policymakers and regulators, who were unable to determine whether derivative transactions were traded in a way that conformed to law and equity, and were supervised in such a way as to ensure that they did not expose traders to risk factors. The increased use of derivatives therefore required more sophisticated regulations, capable of curbing excessive risk-taking, but without dissuading financial innovation. As such, given that some commentators have established a link between derivative transactions and the insolvencies or near collapse of Barings Bank, Lehman Brothers, Enron, and Long-term Capital Management,²²⁵ it may be argued that the necessary regulations were not in place, at least prior to the financial crisis of 2007-09. Enron, for example, mainly handled derivative contracts in over-the-counter markets or via dealer networks. However, its derivative transactions were largely unregulated.²²⁶ There was in fact very little information on the profitability of transactions, as there were no reporting requirements. Moreover, in 2008, the US government provided a financial package of \$150 billion to the American International Group, in order to prevent the company from filing for bankruptcy.²²⁷ The company was therefore exempted from posting collateral on most of its derivative transactions. These events naturally raised concerns about the regulation of trading derivatives.

²²³ LM Bhole and J Mahakud, *Financial Institutions and Markets: Structure, Growth and Institutions* (Tata McGraw Hill 2009) 778-780.

²²⁴ A Demirgüç-Kunt and H Huizinga, note 117 above.

²²⁵ M Chui, 'Derivatives Markets, Products and Participants: An Overview' (2011) IFC Bulletin No 35. Available at: <https://www.bis.org/ifc/publ/ifcb35a.pdf> [20 November 2017] 1, 10-11. See also, RM Stulz, 'Financial Derivatives: Lessons from the Subprime Crisis' (2009) *The Milken Institute Review* 58, 67-70.

²²⁶ A Brunet and M Shafe, 'Beyond Enron: Regulation in Energy Derivatives Trading' (2006-2007) 27 *Northwestern Journal of International Law and Business* 665, 674.

²²⁷ RW Kolb, *The Financial Crisis of Our Time* (Oxford University Press 2010) 122-124; BE Gup, 'Financial Crises and Government Responses: Lessons Learned' in RE Wright (ed), *Bailouts: Public Money, Private Profit* (Columbia University Press 2009) 58.

In 2010, Andrew Sheng, Chairman of the Hong Kong Securities & Futures Commission, noted that the region's financial regulatory structure was designed for normal events, based on the assumption that the Central Bank could effectively function as the lender of last resort.²²⁸ However, the Commission did not take into account spikes in interest rates during solvency or liquidity crises, where the Central Bank did not have sufficient liquidity to satisfy the demands of all the banks. This caused interest rates to rise even further in the 1980s, leading to market panic, when it was feared that the banking system - the depository of public savings - may be insolvent. Sheng thus concluded that during financial crises, it is difficult to distinguish between market and credit risk, given that the liquidity crisis transmits across the regional and international network to become a solvency crisis.²²⁹

It must be noted that risk management is not synonymous with resilience. Risk management is discussed here as an important part of strategic management that can enable an organisation to strengthen its resilience. It is shown in Chapter 2 that resilience in this context means the ability of financial institutions to withstand shocks or significant stresses during financial crises. It is a concept that has emerged as a synthesis of ideas from different disciplinary traditions²³⁰ and evolved into policy and practice in the financial sector. Even within this sector, it is still a complex concept with several determinants that vary according to the context and interact with one another to weaken or strengthen an institution.²³¹ In this thesis, it is viewed as an outcome. It exists on a continuum that may change over time as a function of the size of banks' retail deposits or efficiency of the source of funding. It was also shown that during financial crises, some banks are more resilient because they are assured by the government and linked with the depositors' liquidity needs and predictable withdrawals at an aggregate level. Other banks are more resilient because they are more active in the securitisation market and have a more diversified source of income with better capitalisation, higher profitability, and lower insolvency risk. However, it was submitted that the most important element is the banks' ability to manage risk.

²²⁸ ALT Sheng, 'The Importance of Risk Management' (2010) Federal Reserve Bank of Boston. Available at: file:///C:/Users/ntsan/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/cf44_21.pdf [19 November 2017] 238-239.

²²⁹ Ibid, 241.

²³⁰ See T Mitchell and K Harris, 'Background Note: Resilience: A Risk Management Approach' (2012) Overseas Development Institute. Available at: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7552.pdf> [20 November 2018] 1-2. See also, SB Manyena, 'The Concept of Resilience Revisited' (2006) 30(4) Disasters Journal 433, 433-450.

²³¹ For an analysis of the tools used to measure resiliency at the level of organisations, see M Sabatino, 'Economic Crisis and Resilience: Resilient Capacity and Competitiveness of the Enterprises' (2016) 69(5) Journal of Business Research 1924, 1924-1927.

Thus, regulators and policymakers ought to place emphasis on risks concentrated in the most levered banks and the way the latter manage these risks. This means that the most important regulatory and supervisory challenges involve the formulation and implementation of effective strategies to ensure that financial institutions are not overexposed to liquidity and credit risk, and over-reliant on external funding. As such, although effective risk management is not tantamount to resiliency, it may guarantee such an outcome. The discussion of risk management in this section is therefore limited to ways in which the resilience of banks and the financial system may be strengthened using a mechanism for identifying and managing a banks' exposure to financial risks.²³²

3.2.1 The Internal Risk Management Models Used

Regulatory and supervisory authorities must identify the potential sources of risk in the financial markets, how they are managed at banking level, and how they interact with external forces. An international architecture cannot manage the systemic risks accompanying the transactions of every financial institution and determine whether there have been substantial changes in credit volume and asset prices or severe disruptions in financial intermediation or the supply of financing at the level of each institution. Given that the latter has first-hand knowledge of the scale of its balance sheet problems and its leverage ratio, it is foremost tasked with adopting an effective risk management strategy to reduce its vulnerability to financial crises. It therefore follows that a link may be established between resilience to financial crises and risk management. Nonetheless, risk management is also a very broad concept that describes a process of identifying, assessing and mitigating or eliminating exposure to loss. Each institution has a risk management model based on how its managers foresee risks, assess impact and define suitable responses. Thus, some institutions have better risk management models than others.²³³ Brown et al show that the development of an effective model is a complex and error-prone process, and banks must ensure that sound

²³² Regarding the contention that strengthening the resilience of the banking system requires an improvement of risk management, see BCBS, *Strengthening the Resilience of the Banking Sector* (BIS 2009) 1. This explains why Pillar 2 of the Basel II Accord provides a framework for dealing with residual risk or risk that remains after the risk controls have mitigated or eliminated the inherent risks. See also, G Voinea and SG Anton, 'Lessons from the Current Financial Crisis: A Risk Management Approach' (2009) 1(3) *Review of Economic and Business Studies* 139, 143-146.

²³³ For the history of the use of risk management models, see J Phillipe, 'Risk Management Lessons from Long-Term Capital Management' (2000) 6 *European Financial Management* 277, 277-300.

modelling includes comprehensive procedures for model validation, which takes into account the risk inherent in the model adopted.²³⁴ Thus, banks that manage risks better are those that have a *model risk* management framework that is similar to the frameworks that they use to manage other risks to which they are exposed.²³⁵

Two of the most widely used models include RiskMetrics and CreditMetrics, which focus on market risk and credit risk, respectively.²³⁶ The RiskMetrics variance model was first introduced by JP Morgan in 1992 as its internal risk management methodology.²³⁷ There was little standardisation in the market at the time and this model became the benchmark for measuring financial risk.²³⁸ It is based on two assumptions: first, the returns on risk factors are normally distributed; and secondly, the volatilities of risk factors are best measured using the moving average of past returns that is exponentially weighted. It comprises three approaches for modelling financial risk factors,²³⁹ namely the covariance approach, the historical simulation, and the Monte Carlo simulation.²⁴⁰ However, Steen et al used daily data for more than 20 years and backtested this model for 19 different commodities and one major commodity index and found that it does not capture the true empirical return distribution that depends on the changing volatility.²⁴¹ Also, it does not take into account time-varying volatility. Thus, they concluded that it is problematic for low and very high quantiles and less appropriate than the quantile regression (QR) model that involves estimating a linear QR using volatility as an input.²⁴²

²³⁴ J Brown, B McGourty and T Shuerman, 'Model Risk and the Great Financial Crisis: The Rise of Modern Model Risk Management' (2015) Wharton Financial Institutions Center. Available at: <https://fic.wharton.upenn.edu/wp-content/uploads/2016/11/15-01.pdf> [09 December 2017].

²³⁵ See also, JY Uppal and SR Mudakkar, 'Challenges in the Application of Extreme Value Theory in Emerging Markets: A Case Study of Pakistan' in JA Batten and MF Wagner, *Risk Management Post Financial Crisis: A Period of Monetary Easing* (Emerald 2014) 419.

²³⁶ See J Bessis, *Risk Management in Banking* (Wiley 2015) 292-293; M Bellalah, *Derivatives, Risk Management and Value* (World Scientific 2010) 919-920.

²³⁷ J Mina and JY Xiao, Return to RiskMetrics: The Evolution of a Standard (RiskMetrics Group 2001) 1-2.

²³⁸ Ibid. See also, J Berkowitz and J O'Brien, 'How Accurate Are Value-at-Risk Models at Commercial Banks?' (2002) 57 *Journal of Finance* 1093, 1094.

²³⁹ This technique is used to determine the aggregate risk in a portfolio. See Mark J Machina and Michael Rothschild, *The New Palgrave: A Dictionary of Economics* (vol 4, Macmillan 1987) 201-206.

²⁴⁰ These approaches are used to estimate the value at risk (VaR). For a comparative analysis, see Aswarth Damodaran, *Strategic Risk Taking: A Framework for Risk Management* (Wharton School Publishing 2008) 217-219.

²⁴¹ M Steen, S Westgaard and O Gjølberg, 'Commodity Value-at-Risk Modeling: Comparing RiskMetrics: Historic Simulation and Quantile Regression' (2015) 9 *Journal of Risk Validation* 49, 76.

²⁴² Ibid. For an overview of the QR model, see C Alexander, *Market Risk Analysis* (Vol 4, Wiley 2009).

The CreditMetrics model was also introduced by JP Morgan in 1997, and in a period of two years, it was used by most major banks as part of their credit risk management.²⁴³ It involves analysing and managing credit risk of investment instruments portfolio. It therefore analyses the entire portfolio on the basis of the assessment of the credit risk of individual instruments, taking into account the cross-correlation of bonds.²⁴⁴ However, this model is based on external ratings, and rating agents have maintained that external ratings are not accurate measures of default, but rather a tentative ranking of one entity to another, which does not vary with changing economic conditions.²⁴⁵ Also, the ratings are used by banks under the Basel approach for allocating capital since the Basel Accord Amendment on market risk.²⁴⁶ Thus, given that the ratings do not change with fluctuating market conditions, the capital allocated does not.²⁴⁷

Their application is centred on measuring portfolio risks by directing attention towards discrepancies and utilising ‘value at risk’ (VaR) as a means of quantifying aggregate portfolio risk.²⁴⁸ RiskMetrics was developed for use in the private sector; interlinking improvements in financial techniques and advancements in technology. The above model has assisted firms in assessing VaR, which measures any expected loss and retrospectively allocates existing capital across a business.²⁴⁹ Conversely, Credit Metrics is a model that allows businesses to measure current risk and forecast any future risk.

Current and future risks are each measured in a specific way. For instance, future risk is evaluated through the statistical analysis of current or potential risk exposure. However, current risk can be measured using either transaction or portfolio methods. The transaction method calculates the potential exposure of each of the organisation’s transactions, multiplied by the maturity or level of potential exposure to risk, all in relation to the market risk. Conversely, the portfolio method involves calculating the potential risk exposure of a firm’s

²⁴³ K Boris, I Weissova and A Siekelova, ‘Quantification of Credit Risk with the Use of CreditMetrics’ (2015) 26 *Procedia Economics and Finance* 311, 311-312.

²⁴⁴ P Adamko, T Klietnik and M Birtus, ‘History of Credit Risk Models’ (2014) 61 *Advances in Education Research* 148, 149-151.

²⁴⁵ DE Allen and RJ Powell, ‘Credit Risk Management Methodologies’ (2011) *Proceedings of the 19th International Congress on Modelling and Simulation* 1464, 1467-1468.

²⁴⁶ R Kiesel, W Peraudin and AP Taylor, ‘Credit and Interest Rate Risk’ in MAH Dempster (ed), *Risk Management: Value at Risk and Beyond* (Cambridge University Press 2002) 129.

²⁴⁷ DE Allen and RJ Powell, note 239 above, 1468.

²⁴⁸ DE Allen and RJ Powell, ‘Transitional Credit Modelling and its Relationship to Market at Value at Risk: An Australian Sectoral Perspective’ (2009) 49 *Accounting and Finance* 425, 426.

²⁴⁹ J Bessis, note 28 above, 292-293.

transactions in a group, which is similar to computing VaR as a means of measuring market risk.²⁵⁰

In light of the disparity between the various applications of risk management models, as well as in the results obtained, the main challenge for policymakers is to create uniform standards of risk management, which may then be enforced by regulators. Several attempts have been made in different jurisdictions and some of the standards enforced in many Islamic countries are assessed below. However, policymakers must take into account the various types of risk emerging from financial markets. Equally, the regulator should ensure that the enforcement of uniform standards prevents risks from accumulating and escalating to national and global level. However, this may only be possible if policymakers and regulators can identify the different categories of risk arising and are aware that these can destabilise the corresponding financial system. It follows that in order to support the idea of Islamic financial institutions having better risk management models, it must be established that Islamic regulators (internal and external) can identify the various categories of risk emerging from the Islamic financial markets and subsequently compel Islamic banks to mitigate or eliminate them. The next section briefly discusses different categories of financial and non-financial risks and seeks to determine the causal relationship between these and financial crises, as well as effective ways of managing such risks. It then examines how Islamic banks manage these risks and determines whether their resilience to financial crises may be attributed to their risk management strategies.

3.3 The Management of Financial Risks

3.3.1 Credit Risk

Credit risk is a pervasive risk that arises when a bank borrower, counterparty or obligor fails to meet its obligations under the agreed terms.²⁵¹ It is therefore associated with lending activities, wherein loans remain partially or completely unpaid. Credit risk arises from a decline in the credit standing of the counterparty.²⁵² Thus, borrower risk may be treated as a form of credit risk. Borrower risk can be described as the potential failure of a bank

²⁵⁰ See J Josefek and R Kauffman, 'Dark Pockets and Decision Support: The Information Technology Value Cycle in Efficient Markets' (1997) 7 *Electronic Markets* 36, 36-42.

²⁵¹ M Glantz and J Mun, *The Banker's Handbook on Credit Risk: Implementing Basel II* (Elsevier 2008) 2.

²⁵² A Kimber, *Credit Risk: From Transaction to Portfolio Management* (Butterworth-Heinemann 2004) 219.

counterparty or lender to fulfil obligations and responsibilities that directly relate to the agreed stipulations.²⁵³ Credit risk management is concerned with ensuring that risk-adjusted return rates, as highlighted by the bank, are maximised by ensuring that exposure to credit risk is maintained within and across acceptable parameters.²⁵⁴ As such, it is essential for credit risk, as well as any risks recognised as part of credit transactions, to be managed by the bank and across its entire portfolio.²⁵⁵ Furthermore, it is important for banks to direct further attention towards the links between credit risk and other types of risk. In this regard, credit risk management is noted as a critical aspect of any comprehensive risk management system and is therefore imperative for the long-term success of any banking business.²⁵⁶

Banks generally manage credit risk by establishing and maintaining credit exposure through the use of a risk-adjusted rate of return, in line with acceptable parameters.²⁵⁷ This means that banks implement stringent measures prior to issuing loans, such as assessing an individual's credit risk, as a means of identifying their own exposure to the risk of default, by evaluating a number of relevant factors. They will also set repayment requirements to ensure that the loan is repaid as quickly as possible, but within limits. This means that monthly repayments will be fixed high enough to repay the loan as quickly as possible, but not so high as to deter the borrower's progress.²⁵⁸

The core strategy adopted by banks to manage credit risk, as established in Basel I and subsequently in Pillar 1 of Basel II,²⁵⁹ is to ensure that the bank has adequate levels of capital. This is established by adhering to capital adequacy requirements.²⁶⁰ These control measures ensure that the bank has the money to support its operations. In practice, it is not common for banks to dispense all their money as loans. They often dispense only a predetermined percentage. This will be subject to change, depending on the bank's capital figures. Capital adequacy regulation enhances the safety of the banking sector by giving banks the incentive

²⁵³ P Strahan, 'Borrower Risk and the Price and Nonprice Terms of Bank Loans' (1999) FRB of New York Staff Report 90.

²⁵⁴ See D Duffie and K Singleton, *Credit Risk* (Princeton 2003).

²⁵⁵ Ibid.

²⁵⁶ P Glasserman and L Jingyi, 'Importance Sampling for Portfolio Credit Risk' (2005) *Management Science*, 1643-1656.

²⁵⁷ I Macerinskiene, L Ivaskeviciute and G Railien, 'The Financial Crisis Impact on Credit Risk Management in Commercial Banks' (2014) 7 *KSI Transactions on Knowledge Society* 5, 8.

²⁵⁸ H Mehran and AV Thakor, 'Bank Capital and Value in the Cross-section' (2011) 24 *Review of Financial Studies* 1019, 1020.

²⁵⁹ BCBS, *International Convergence of Capital Measurement and Capital Standards: A Revised Framework Comprehensive Version* (BCBS 2006). Available at: <https://www.bis.org/publ/bcbs128.pdf> [16 March 2018] 12-51.

²⁶⁰ Section 40 provides for the calculation of the total minimum capital requirements for operational, market and credit risk.

to engage in active risk management.²⁶¹ They may for example hedge their exposure to risk, if it is acceptable under the local laws, in order to mitigate downside risks.²⁶² Thus, although capital adequacy does not necessarily have a significant impact on the bank's profitability,²⁶³ it establishes a floor on bank risk. The requirements provide a cushion that enables banks to absorb loss given that they prescribe that bank lending may only be supported by adequate levels of capital. Thus, capital adequacy requirements provide a form of assurance to regulators that banks with adequate levels of capital are able to withstand loss caused by defaulting borrowers. The requirements therefore alter the bank's credit standards, as well as counterparty credit risk. To manage credit risk, banks must operate a sound gearing process; establish the credit-risk environment; maintain, measure and monitor appropriate credit administration, and ensure adequate credit risk control.²⁶⁴

Default or unsuccessful performance causes risk of loss, otherwise known as default risk,²⁶⁵ which is also a form of credit risk. In the past, the emphasis on this type of risk could be explained as loans constituting a major source of profit and therefore, implicitly, a major source of loss for financial institutions. It also follows that banks that fail to maintain, measure or monitor appropriate credit administration and ensure adequate credit risk control, are likely to suffer serious losses. Moreover, where the banking system cannot absorb the credit losses that accumulate, its weaknesses are transmitted to the entire financial system and real economy.²⁶⁶ However, this is only possible where systemic risk regulators fail to adapt to evolution in the financial system or to supervise the system adequately. Interestingly, prior to the financial crisis of 2007-09, the efforts of most banks in Europe and the US were geared towards compliance with the requirements of Basel I and II. In order to optimise risk management processes, they needed to ensure that capital allocation would be more risk-sensitive and that it would quantify credit, market and operational risk with data and formal techniques; improve disclosure requirements to enable participants in the market to assess the

²⁶¹ T Pausch and P Welze, 'Credit Risk and the Role of Capital Adequacy Regulation' (2002) University of Augsburg. Available at: <https://pdfs.semanticscholar.org/bd70/779ae79687453d4d665d16ff1da2c3d7b298.pdf> [19 March 2018] 14.

²⁶² WA Kaal and DA Oesterle, 'Hedge Fund Regulation' in K Baker and G Filbeck (eds), *Hedge Funds: Structure, Strategies and Performance* (Oxford University Press 2017) 373.

²⁶³ WA Kaal and DA Oesterle, 'Hedge Fund Regulation' in K Baker and G Filbeck (eds), *Hedge Funds: Structure, Strategies and Performance* (Oxford University Press 2017) 373.

²⁶⁴ H Mehran and AV Thakor, note 252 above.

²⁶⁵ European Islamic Investment Bank (2010a), *Product Programme: DualCurrency Murabaha*, February 2010.

²⁶⁶ I Macerinskiene, L Ivaskeviciute and G Railien, note 23 above, 7.

adequacy of the banks, and align regulatory and economic capital more closely, so as to narrow the scope for regulatory arbitrage.²⁶⁷

Basel II prescribes two approaches for measuring credit risk: the Standardised Approach (STD) and the Internal Ratings-Based Approach (IRB). The STD requires measuring risk in a standardised manner. It includes two approaches, namely linking the bank's risk weight to the sovereign rating of the country in which the bank is incorporated and ensuring that the risk weight corresponds to the bank's credit rating.²⁶⁸ The Basel framework initially prescribed the use of external ratings to determine the risk weights of the bank's exposures.²⁶⁹ In light of the fact that external ratings are problematic as shown above, the Basel Committee recommends removing the references to external credit ratings and sovereign of incorporation.²⁷⁰ Hence, the STD will require the exposures of banks to be risk-weighted by reference to a look-up table that outlines a range of risk weights. The Committee believes that this revised approach is suitably reflects the extent of the riskiness of exposures.²⁷¹

With regard to IRB, given its reliance on internal risk assessment, it can only be used with the approval of the regulator.²⁷² This approval is based on whether a bank's risk-rating system meets the minimum criteria established; indicating that even the sophisticated credit risk management systems, which existed prior to the financial crisis of 2007-09, could not prevent losses or the transmission of weaknesses to the entire financial system. However, these risk management systems were subsequently overhauled with improved regulations following the crisis. Moreover, a new international regulatory framework was proposed in the Basel III Accord.²⁷³ These regulations were largely based on the requirement for more capital, higher

²⁶⁷ See Basel Committee on Banking Supervision (BCBS), *International Convergence of Capital Measurement and Capital Standards: A Revised Framework* (BIS 2006) Part 2. See also E Kane, 'Missing Elements in US Financial Reform: A Kubler Ross Interpretation of the Inadequacy of the Dodd-Frank Act' (2012) 36 *Journal of Banking and Finance* 654, 654-661.

²⁶⁸ BCBS, *Basel III: Finalising Post-Crisis Reforms* (BCBS 2017). Available at: <https://www.bis.org/bcbs/publ/d424.pdf> [19 March 2018] 3.

²⁶⁹ See BCBS, *International Convergence of Capital Measurement and Capital Standards* (BCBS 2006). Available at: <https://www.bis.org/publ/bcbs128.pdf> [19 March 2018].

²⁷⁰ BCBS, *Revision to the Standardised Approach for Credit Risk* (BCBS 2015). Available at: <https://www.bis.org/bcbs/publ/d307.pdf> [19 March 2018] 5.

²⁷¹ BCBS, note 235 above, 138.

²⁷² Ibid, 53. See also A Benzin, S Truck and TS Rachev, 'Approaches to Credit Risk in New Basel Capital Record' (2003). Available at: https://statistik.econ.kit.edu/download/doc_secure1/benzin_trueck.pdf [19 November 2017] 15-18.

²⁷³ See BCBS, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (BIS 2010) 2-6.

quality capital, and more balanced liquidity.²⁷⁴ Nonetheless, it remains uncertain whether these reforms have effectively improved the resilience of the participating financial institutions.²⁷⁵

Among the tactics increasingly adopted by financial institutions to keep track of credit risk and attempt to alleviate it are restrictions on countries; counterparties and excessive exposure; diversification; covenants; delegations; extrinsic and intrinsic ratings, and watch lists or undertakings requiring close surveillance. Nevertheless, the probability of default is shrouded in uncertainty, making it difficult to anticipate. This means that precise measurements of credit risk cannot be calculated in advance. The qualitative and quantitative risk features presented by customers, such as operating experience; management prowess; quality of assets; ratios of leverage and liquidity; earnings, and debt service, are integrated on the basis of credit applications known as credit-scoring models.²⁷⁶ Nonetheless, there may be some uncertainty concerning whether regulators have the requisite sophistication to ensure that financial institutions use the above tactics to identify and mitigate credit risks.

Given that Islamic financial institutions are concerned with investments and partnerships, rather than lending,²⁷⁷ it may be argued that they are not confronted with the same risks as conventional banks. Thus, Islamic regulators are less likely to overlook the accumulation of credit risk in the system. However, Islamic banks face special credit risks, including *Mudaraba* investments and *Murabaha* transactions,²⁷⁸ with Islamic banks allocating more financing and loans, thus increasing their exposure to such risk.²⁷⁹ Banks generally face credit risk in their relationship with debtors. As noted above, the risk is related to the ability of the debtor to repay at the agreed time for repayment and in accordance with the conditions specified in the agreement. The risk of default is inherent in almost all operations of conventional banks given that their relationship with all individuals or businesses they transact with is that of debtor and creditor. Islamic banks on the other hand invest in common projects with customers rather than issue direct loans. However, these modes of financing

²⁷⁴ Ibid, 12-26.

²⁷⁵ The implementation of Basel standards (including these models) in the KSA is discussed in greater detail in Chapter 5.

²⁷⁶ I Akkizidis and SK Khandelwal, *Financial Risk Management for Islamic Banking and Finance* (Palgrave Macmillan 2007).

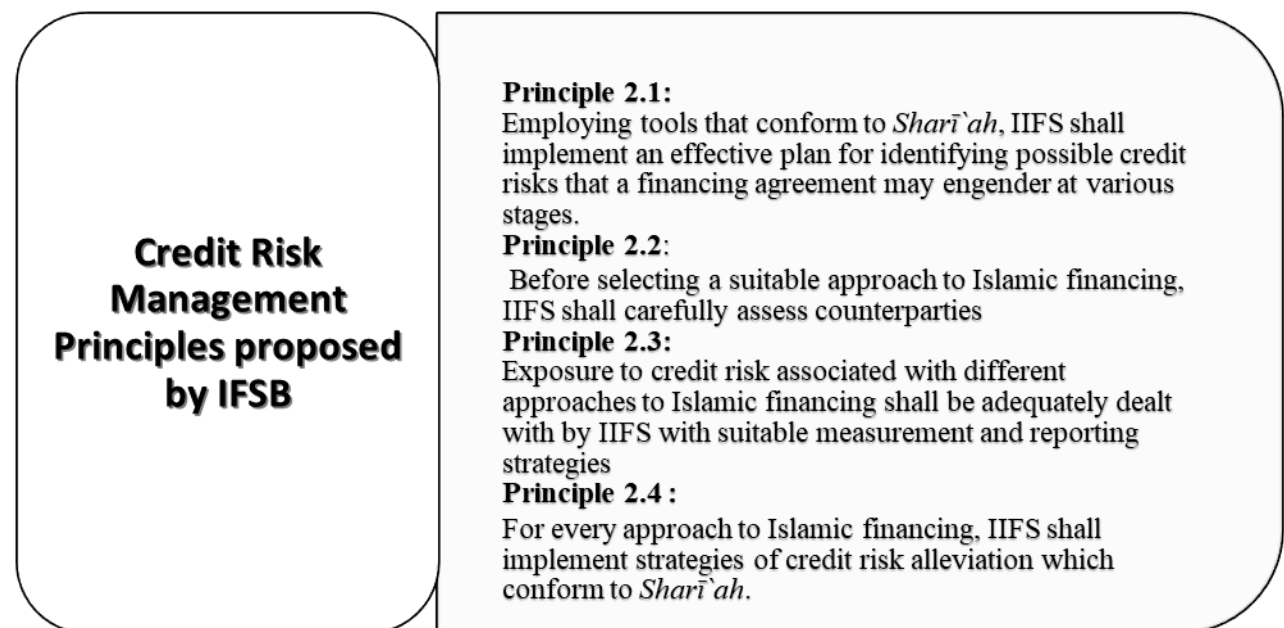
²⁷⁷ Z Iqbal and M Abbas, *An Introduction to Islamic Finance: Theory and Practice* (John Wiley & Sons 2007) 229-231.

²⁷⁸ These transactions are discussed in detail in Chapter 4.

²⁷⁹ R Ariss 'Competitive Conditions in Islamic and Conventional Banking: A Global Perspective' (2010) *Review of Financial Economics* 101, 101-108.

also carry credit risk.²⁸⁰ The *Murabaha* and *Istisna* for example may be considered sales with delayed payment that may generate debts in the banks' accounts. Also, the commodity debt from Salam involves credit risk. This is because it is a contract in which the bank makes payment in advance for the goods to be delivered at a future date. The customer is not expected to give anything in the nature of money in exchange for the advance payment. Thus, the payment is a form of debt security that is linked with the price of the specified commodity. However, the bank does not necessarily deal with the producers of the commodities and does not charge interest. Thus, the default risk is much higher than in commodity-backed bonds that conventional banks obtain from producers. Then the funds given by banks through the *Murabaha* and *Musharaka* carry credit risk given that the entrepreneur must guarantee the capital, which translates into a debt liability. Where the capital is used in a deferred sale, the bank that provides the capital faces an indirect credit risk that pertains to the likelihood of the counterparties defaulting. As a result, Islamic banks should have relevant credit-scoring models and unique methods of measuring credit risks, which may be assessed by Islamic regulators. Building on the characteristics of credit risk encountered by Islamic financial institutions, the Islamic Financial Services Board (IFSB) has proposed a set of guidelines, which are shown in Box 3.1, below.

Box III.1: Principles of Credit Risk



²⁸⁰ See MA Elgari, 'Credit Risk in Islamic Banking and Finance' (2003) 10 Islamic Economic Studies 1, 8-9.

In light of Principle 2.3, illustrated above, the exposure to credit risk will depend on the Islamic financing structure adopted by the bank. Nonetheless, it must be noted that various financing structures carry relatively low credit risk, because the assets of Islamic banks are generally of a debt nature, following sale-based financing; while deposits are on a profit and loss-sharing basis. This means that Islamic banks may simply shift the risk of debt default to investment depositors. Moreover, the profit and loss-sharing agreement provides a buffer against systemic failure²⁸¹ and it is easier for supervisory authorities to assess whether Islamic banks are viable and can fulfil their financial commitments to creditors. In the same vein, it is easier to determine whether an Islamic bank's operations are likely to trigger instability in, or even the collapse of, the entire banking system. The credit risk posed by Islamic banks is assessed according to their participation in the credit-line operation of a foreign agency, including a lending agency; the establishment of correspondent banking relationships in international markets; equity investment by a foreign lending agency or investor, and participation in a bank rehabilitation programme.

As such, apart from the fact that Islamic regulators do not prescribe how Islamic business should be conducted, there is very little difference in approach compared to non-Islamic regulators; just like conventional regulators, Islamic regulators maintain prudent oversight and assess the risk composition of financial institutions' assets, taking into account minimum capital requirements.²⁸² Thus, Islamic banks are less likely to trigger instability through the accumulation of credit risk, because the various financing structures that they use carry lower credit risk, rather than because they use better credit risk management techniques. This explains why they are likely to pose systemic credit risks through their participation in the credit-line operation of a foreign lending or other type of foreign agency; the establishment of correspondent banking relationships in international markets, or equity investment by a foreign lending agency or investor. The regulator's task is consequently easier, since it is limited to assessing the risks emerging from these transactions. However, it is uncertain whether the same may be said of other financial risks.

²⁸¹ J How et al, 'Islamic Financing and Bank Risks: The Case of Malaysia' (2005) Thunderbird International Business Review 75, 79.

²⁸² This is discussed in greater detail in Chapter 4.

3.3.1 Portfolio Risk

Every financial instrument represents an element of a bank's overall portfolio. It is important to analyse and ascertain the degree of risk of each portfolio, because it is risky for a bank to invest all of its capital by lending to everyday customers.²⁸³ The day-to-day customers are represented as the regular, frequent customers visiting a bank.²⁸⁴ However, there is a need for banks to ensure that their portfolios and the risk associated with them are diversified, so as to minimise any losses arising from an adverse event. It is crucial to safeguard the bank, its activities and its customers, with priority being given to the minimisation of risk.²⁸⁵ Portfolio risk may either be a market or idiosyncratic risk.²⁸⁶ The following section focuses on the management of market risk by Islamic banks.

3.3.1.1. Market Risk

Market risk, also known as undiversifiable risk, is related to price, equity or interest rate fluctuations in the general market, while idiosyncratic risk, also known as diversifiable risk, is a company-specific risk.²⁸⁷ Examples of the latter include a sudden poor earnings forecast or report, strikes, and a drop in sales. Systematic market risk arises from changes in the prices of all instruments, because of movements in macroeconomic variables. To calculate market risks and make better lending decisions, banks normally use risk-adjusted return on capital (RAROC); a technique that factors risk into the evaluation and calculation of financial return.²⁸⁸ This tool is widely applicable, from individual loans to trading positions and even entire lines of ventures.

The basic concept of RAROC is that higher risk in an investment means a higher chance of incurring loss, thus negatively affecting a firm by reducing the available equity or capital. Hence, adjustments must be made to ensure that high-risk ventures generate sufficient profit to achieve an appropriate risk-profit balance. RAROC makes this adjustment by ensuring that

²⁸³ Stiroh, K. J., 'Diversification in Banking: Is Non-interest Income the Answer?' (2004) 36 *Journal of Money, Credit, and Banking* 853–882.

²⁸⁴ Kevin Stiroh, 'Diversification in banking: Is noninterest income the answer? (2004)' *Journal of Money, Credit, and Banking* 853–882.

²⁸⁵ H Van Greuning, and S Brajovic-Bratanovic, *Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management* (World Bank Publications 2009).

²⁸⁶ AO Petters and X Dong, *An Introduction to Mathematical Finance with Applications* (Springer 2016) 151.

²⁸⁷ Ibid.

²⁸⁸ Ibid.

high-risk projects receive a higher capital return.²⁸⁹ Accordingly, a riskier venture needs to be able to generate an almost guaranteed profit; achieving a similar rate of return on equity to that of a less risky venture. In implementing RAROC, the capital figure received by a product is manipulated to equal the biggest loss likely to be incurred by the product over a certain period. In cases involving individual instruments, the capital figure is estimated by establishing the expected change in market value based on market factors, such as fluctuations in currency and interest rates. Such changes are derived from historical data and anticipated through sound judgment and experience.

As risk calculations consider asset price volatility,²⁹⁰ banks use VaR to manage market risk by estimating potential loss incurred by adverse movement in the market.²⁹¹ VaR in this context is derived from the Basel Committee's 1996 Market Risk Amendment and is calculated to determine the amount of capital that a bank should hold, in order to safeguard itself against exposure to market risk.²⁹² VaR is a financial technique that enables banks to measure their risk of future loss under stable market conditions and over a specified period.²⁹³ There are many methods used to measure VaR, including the Variance-Covariance method and the Monte Carlo method.²⁹⁴ The Variance-Covariance technique is the safest and quickest to implement, relying on different assumptions according to market data. However, it is risky, since the measurement relies on a linear approximation of the portfolio. In contrast, the Monte-Carlo technique is time-consuming, but more reliable, since it allows flexibility in integrating private and market information.

Referring to its characteristics, market risk must be managed and examined on an ongoing basis.²⁹⁵ Financial institutions may adopt different approaches to market risk management and measurement, but the majority impose restrictions and establish triggers for portfolios, separate transactions, departments and traders.²⁹⁶ Additionally, for the routine regulation of risks associated with banking and trading books, financial institutions rely on a number of tools, such as mark-to-market, stop-loss provisions, gap analysis, back-testing, and stress-

²⁸⁹ H Mehran and A V Thakor, note 252 above, 1019-1067.

²⁹⁰ Ibid.

²⁹¹ Ibid.

²⁹² Ibid.

²⁹³ S Benninga, and Z Wiener, 'Value-at-risk (VaR)' (1998) 32 *matrix*: s33.

²⁹⁴ Ibid.

²⁹⁵ J Caouette, E Altman, and N Paul, *Managing Credit risk: The Next Great Financial Challenge* (John Wiley & Sons 1998).

²⁹⁶ A Bangia, et al, *Modelling Liquidity Risk, With Implications for Traditional Market Risk Measurement and Management: Risk Management: The State of the Art* (Springer 2001) 3-13.

testing. Stress-testing, in particular, has been used with increasing frequency to anticipate expected losses.²⁹⁷ Meanwhile, mark-to-market trading is underpinned by factor sensitivities and VaR.²⁹⁸ The latter is an especially popular approach to methodical measurement and the assessment of market risk.²⁹⁹ A relatively new instrument of risk management, VaR provides an estimate for a specific time interval regarding a company's potential losses or gains.³⁰⁰ Furthermore, it reduces the financial risk linked with portfolios to a numerical estimate, namely, the value of any losses that might occur in a series of potential events and within a defined time period.³⁰¹

Market risk can be managed more effectively, if VaR is applied in conjunction with other instruments, like Expected Shortfall (ES), which is a universal instrument that enjoys a global unique evaluation of portfolio risks.³⁰² Hence, a model should only be implemented after a thorough evaluation of data input. Furthermore, market risk management benefits from countless derivative products of considerable complexity, which are available on the standard market and can be used to hedge positions.

The identification and mitigation of market risk is very important, because a change in the market risk of one sector may be triggered by a change in another, thus affecting the composition of the market. Zalewska examined the market risk of the banking, utilities and industrial sectors both before and after the global financial crisis of 2007-09 and found a positive relationship between increased market risk in the industrial sector during the crisis and the market risk of the banking sector before it.³⁰³ In six of the most developed countries that experienced a banking crisis due to systemic risks,³⁰⁴ there was a sharp increase in the industrial sector's market risk. Zalewska also noted that the Central Banks of these countries cooperated to regulate international finance, while the prices or returns of several companies within these markets were regulated. Grout and Zalewska had previously established a

²⁹⁷ F Longin, 'From Value at Risk to Stress Testing: The Extreme Value Approach' (2000) *Journal of Banking & Finance* 1097, 1097-1130.

²⁹⁸ M Garman, 'System and Method for Determination of Incremental Value at Risk for Securities Trading' (1998) U.S. Patent No. 5,819,237.

²⁹⁹ Ibid

³⁰⁰ T Linsmeier and N Pearson, 'Value at Risk' (2000) *Financial Analysts Journal* 47-67.

³⁰¹ Ibid

³⁰² C Acerbi and T Dirk, 'Expected Shortfall: A Natural Coherent Alternative to Value at Risk' (2002) *Economic Notes*, 379-388.

³⁰³ A Zalewska, 'Stock Market Risk in the Financial Crisis' (2014). University of Bath. Available at: <http://sbfm.org.br/artigos-aceitos-15sbfm/investimentos/4868.pdf> [18 November 2017] 1, 18-19.

³⁰⁴ These include the US, UK, Germany, Spain, Netherlands, and Belgium. Other developed countries faced a marginal systemic crisis, such as France, Italy, Sweden and Switzerland; while there was no systemic crisis in Japan, Canada, and Japan. See, *ibid*, 3.

similar composition effect with regard to the dotcom bubble,³⁰⁵ also finding that changes in regulation affected internationally diversified portfolios. As such, despite the fact that supervisory authorities cooperate to regulate companies' prices and returns, systemic risks may still emerge, insofar as changes in one sector will affect the composition of the market.

With regard to Islamic banking, fluctuations in the values of marketable or leasable assets, such as the *Sukuk*, may create market risk. Additionally, the volatility of the market value of assets, such as *Salam* or *Murabaha* assets, which are purchased to be delivered after a given period, may generate serious and systemic market and agency risks.³⁰⁶ Given that Islamic banks are compelled to comply with *Shariah* principles, they are forbidden from using risk management tools, such as hedging and credit derivatives. Additionally, the fact that Islamic regulations are not standardised increases uncertainty, and this may actually increase the level of market risk confronted by Islamic banks. Nonetheless, Chakroun, Sebai and Gallali analysed the effect of market risks on the stability of both the Islamic and conventional banking industries and found that although the financing structures of conventional banks create more systemic risks, the dynamic conditional beta of both systems³⁰⁷ follows the same trend.³⁰⁸ Hence, both Islamic and conventional banks react in the same way to the market and are both sensitive to market risk.

As such, although Islamic banks face the same market risk as conventional banks, they are restricted by *Shariah* rules with regard to the risk management tools that they may employ.³⁰⁹ This undermines the contention that Islamic banks are more resilient to financial crises, because of the way in which they manage risk in their respective regulatory contexts. Moreover, the fact that Islamic regulations are not standardised implies that Islamic regulators rely on specific interpretations of *Shariah* principles. This is discussed further in Chapter 4 and in itself increases the level of risk. With regard to managing market risk, IFSB Principle 4.1 provides a specific approach, depicted in Box 3.2 below.

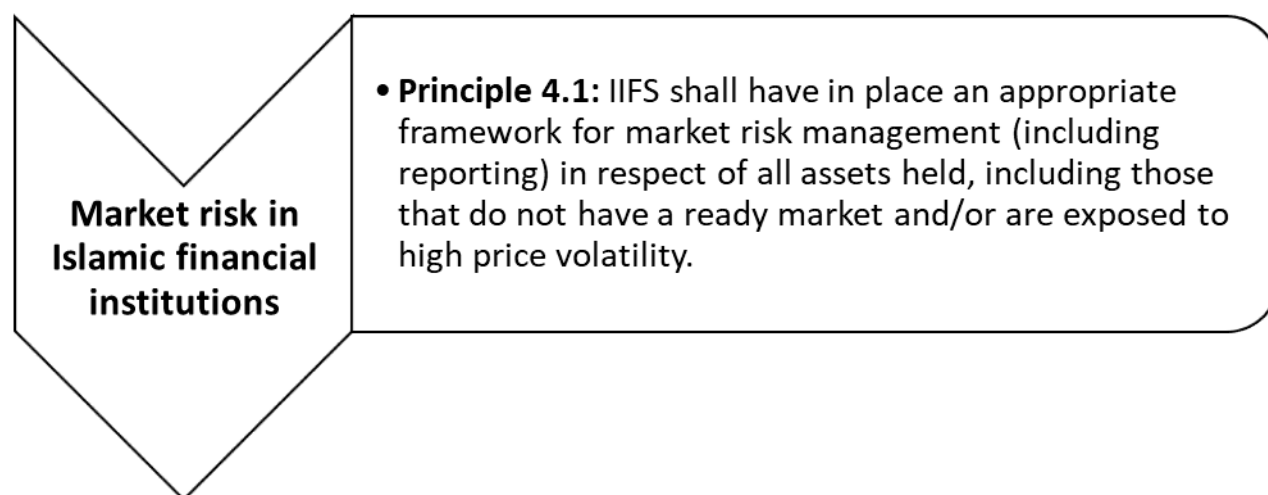
³⁰⁵ PA Grout and A Zalewska, 'The Impact of Regulation on Market Risk' (2006) 80 *Journal of Financial Economics* 149, 182-183.

³⁰⁶ See FN Mismanab and MI Bhatti, 'Risks Exposure in Islamic Banks: A Case Study of Bank Islam Malaysia (BIMB)' Universiti Teknologi MARA, Malaysia. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan049142.pdf> [19 November 2017] 2, 12.

³⁰⁷ The dynamic conditional beta is a mechanism for estimating regressions or the relationship among variables such as time and output.

³⁰⁸ MA Chakroun, S Sebai and MI Gallali, 'Market Risk in Islamic and Conventional Banks' (2012) 5 *International Journal of Business and Commerce* 66, 74.

³⁰⁹ For example, they cannot use derivatives since these are often *Shariah* noncompliant, and they can only use Islamic tools to hedge the benchmark rate risk. This is discussed further in Chapter 4.



As noted above, the financing structures used by Islamic banks, as well as fluctuations in the values of marketable or leasable assets, create market risk that banks need to identify and mitigate. However, due to restrictions on the instruments that they can deploy to manage risk, Islamic banks are confronted with greater challenges in terms of market risk management. Nonetheless, such restrictions are eased by the fact that the *Gharar* interdiction circumscribes the extent to which Islamic banks can trade, thus reducing the scale of the risks that they face. Furthermore, the approach prescribed by IFSB Principle 4.1 is generic and does not address the unique difficulties faced by Islamic banks, which arise from the restrictions imposed by *Shariah*. Given that there is a causal link between systemic market risk and financial crises, it is difficult, in light of the above analysis, to contend that Islamic banks are less likely to be adversely affected by financial crises, based on them having an appropriate market risk management framework. In the same vein, it is difficult to argue that Islamic banks are more resilient to crises, due to them having adequate supervision and regulation. This is because they lack risk management strategies that are tailored towards Islamic banking, to the extent that it may be submitted that Islamic banks have unique strategies for mitigating risks more effectively. They appear to rely on the same strategies as conventional banks, insofar as the strategies are *Shariah*-compliant.

3.3.2 Interest Rate Risk (IRR)

The evaluation of interest rate risk (IRR) is a significant consideration for banks, as well as for regulators.³¹⁰ It is faced by all banks but increased sharply during the financial crisis of 2007-09.³¹¹ IRR may generally be considered as potential changes to interest rates, which can in turn reduce bank's earnings and thus decrease their overall net worth. This is why IRR is positively correlated with bank risk.³¹²

IRR manifests itself in a number of different ways; the most common of these is revealed when reviewing the bank's assets, such as loans, which may mature at a different rate from the bank's liabilities.³¹³ IRR is known to have significant potential to negatively impact earnings and net worth. Therefore there is the belief that a bank can optimally eliminate its risk by ensuring that all of its liabilities and assets mature at the same time.³¹⁴ However, such an approach would mean that banking institutions earn less profit without the presence of such risks.³¹⁵ Banks can earn profit by shouldering IRR, while satisfying customers' demands for loans and deposits.³¹⁶ The challenges in this regard are centred on measuring IRR and managing such risk, so that the compensation received is appropriate to the risks incurred.³¹⁷ IRR may arise when the value of an investment changes as a result of a shift in the absolute interest rate spread between two rates. This is caused by a mismatch in the maturities of the liabilities and assets, which banks can manage by capturing the risk and repricing mismatches. According to Ruckes, this can be measured either from the perspective of earnings, or in terms of economic value.³¹⁸

³¹⁰ L Angbazo, 'Commercial Bank Net Interest Margins, Default Risk, Interest-rate Risk, and Off-balance Sheet Banking' (1997) *Journal of Banking & Finance* 55-87.

³¹¹ J Begenau, M Piazzesi and M Schneider, 'Banks' Risk Exposures' (2015) Stanford University. Available at: <https://web.stanford.edu/~piazzesi/banks.pdf> [18 November 2017] 3.

³¹² G Dell'Ariccia, L Laeven and R Marquez, 'Real Interest Rates, Leverage, and Bank Risk-taking' (2014) 149 *Journal of Economic Theory* 65, 66.

³¹³ F Song and AV Thakor, 'Relationship Banking, Fragility, and the Asset-liability Matching Problem' (2007) 20 *Review of Financial Studies* 2129, 2129-2177.

³¹⁴ A Christie, 'The Stochastic Behavior of Common Stock Variances: Value, Leverage and Interest Rate Effects' (1982) *Journal of Financial Economics* 407, 407-432.

³¹⁵ J Fields and E Venezian, 'Interest Rates and Profit Cycles: A Disaggregated Approach' (1989) *Journal of Risk and Insurance* 312, 312-319.

³¹⁶ Kalok Chan, et al, 'An Empirical Comparison of Alternative Models of the Short-term Interest Rate' (1992) *The Journal of Finance*, 1209, 1209-1227.

³¹⁷ A Christie, note 308 above.

³¹⁸ ME Ruckes, 'Bank Competition and Credit Standards' (2004) 17 *Review of Financial Studies* 1073-1102.

Although it has been established that monetary policy is related to financial stability,³¹⁹ there is limited empirical support for the contention that low interest rates constitute a root cause of financial crisis.³²⁰ Nonetheless, IRR may contribute to the build-up of a financial crisis, because reduced interest rates enhance asset and collateral values and impact on the probability of default estimated by banks.³²¹ This then motivates risk-taking. Low interest rates also motivate banks to invest in high-margin and high-risk areas, possibly leading to a low proportion of safe assets in banks' asset portfolios. This explains why, shortly before the financial crisis of 2007-09, lower interest rates and lower bank lending standards were noted, with an emphasis on borrowers with lower credit quality.³²² Nonetheless, the problem seems to be the banks' reaction to low interest rates, rather than how the latter affect other market forces, without any input from banks. In other words, if banks avoid engaging in excessive risk-taking, due to low interest rates, there will be no causal link between the latter and a financial crisis. This is why the Basel Committee on Banking Supervision (BCBS) has proposed principles to guide banks' IRR management, with banks being obligated to ensure senior management oversight of IRR exposure.³²³

Despite the fact that low interest rates do not play a directly significant role in financial crises, as shown above, it may be argued that, theoretically, it is unlikely for a crisis related to IRR to be triggered by Islamic financial institutions. This is because *Shariah* prohibits *Riba*, or the charging of interest, while debt is only permitted when it relates to real transactions and is not used for speculative purposes. Moreover, the relationship between the bank (lender) and the customer (borrower or investor) is seen as a partnership, where the former has a continued stake, or where both parties have mutual interests in the transaction. This implies that risk-shifting is considered as gambling. Hence, default risk may not be shifted. It is also difficult for regulators to deduce that banks are motivated to engage in excessive risk-taking, due to low interest rates. Islamic regulators are consequently in a much better position, since risk is communicated to all stakeholders in transactions undertaken by Islamic banks.

³¹⁹ S Oosterloo and J deHaan, 'Central Banks and Financial Stability: A Survey' (2004) 1 *Journal of Financial Stability* 257, 257-273.

³²⁰ G Dell'Ariccia, L Laeven and R Marquez, note 306 above, 66.

³²¹ *Ibid.*

³²² A Maddaloni and JL Peydro, 'Bank Risk-Taking, Securitization, Supervision and Low Interest Rates: Evidence from the Euro Area and the US Lending Standards' (2010) 24 *Review of Financial Studies* 2121, 2121-2165.

³²³ BCBS, *Principles for the Management and Supervision of Interest Rate Risk* (BCBS 2004).

Notwithstanding the above, given that low interest rates do not play a significant direct role in financial crises, it may be difficult to support the argument that the very low or non-existent IRR in Islamic transactions demonstrates that Islamic banks have better risk management tools. IRR is not included in the Islamic risk management framework or the frameworks created by Islamic regulators to monitor and protect the interests of investors.

3.3.3. Liquidity Risk

Liquidity risk is the risk of an investment lacking marketability, so that it cannot be sold or bought quickly enough to minimise loss.³²⁴ The main causes of liquidity risk are an unexpected need for capital and a lack of confidence. For example, if customers withdraw higher amounts of cash than normal, a bank may face liquidity issues in meeting its obligations. Therefore, the main aim of a liquidity risk management strategy is to avoid negative net liquid assets, where asset and liability management (ALM) forms a key part of liquidity risk management in banking.³²⁵ The BCBS introduced a new liquidity standard protocol in 2010, devising the Basel III Liquidity Coverage Ratio and the Net Stable Funding Ratio, implemented as a framework to ensure funding liquidity. Another technique applied by banks is to prevent liquidity problems by holding liquid assets, such as cash.³²⁶ This is possible when the bank offers a specific firm a long-term loan, with the firm also being obliged to pay a security deposit in advance.³²⁷ Such a technique is efficient for preventing liquidity risks. However, it allows depositors to take charge of the bank, as they are entitled to withdraw their cash at any time.³²⁸

When a financial institution cannot harmonise the maturity of assets and liabilities, or more specifically, when it cannot satisfy its liabilities, due to insufficient liquidity for regular operations, a liquidity risk emerges. This type of risk is the outcome of funding or asset

³²⁴ A Viral, and L Heje Pedersen, 'Asset Pricing with Liquidity Risk' (2005) *Journal of Financial Economics* 375, 375-410.

³²⁵ S Kwan and R A Eisenbeis, 'Bank Risk, Capitalization, and Operating Efficiency' (1997) 12 *Journal of Financial Services Research* 117, 117-131.

³²⁶ See K Alexander, 'Selected Aspects of International Regulation and Policy' in N Andenas and G Diepenbrock, *Regulating and Supervising European Financial Markets: More Risks than Achievements* (Springer 2016) 224-225; O Marianne, *Uncertainties and Risk Assessment in Trade Relations* (IGI Global 2018) Chapter 13. The implementation of Basel III standards in an Islamic jurisdiction is discussed in Chapter 5.

³²⁷ C Bouwman, 'Liquidity: How Banks Create It and How It Should be Regulated' (2013).

³²⁸ Ibid

liquidity risks associated with an inability to secure cash at an acceptable cost from loans or asset sales, respectively. However, adequately organised cash-flow requirements and the securing of new sources of funding in the event of cash deficiency can help contain the funding risk; whereas diversifying assets and imposing restrictions on specific illiquid products can alleviate asset liquidity risk.³²⁹

Liquidity risk is therefore an outcome of the disparity between the two sides of the balance sheet, which either results in excess liquidity or a deficiency in cash.³³⁰ During the financial crisis of 2007-09, concerns about this outcome became prominent. This is because the primary source of stress for banks' funding conditions was the market's illiquidity for wholesale funding,³³¹ whereby banks were unable to raise liquid asset buffers to overcome low market liquidity. Thus, banks that are exposed to liquidity risk are likely to sharply contract their supply of credit during a financial crisis.³³² The liquidity pressure is then transferred to other banks' balance sheets through drawdowns and displaced new lending. A good example is the British bank, Northern Rock. During the early 2000s, in order to fund mortgages and other long-term commitments, it relied unduly on short-term funding from the interbank lending market.³³³ With the onset of the global financial crisis towards the end of the decade, the bank was unable to generate income from its loans and also obtain financing. The bank eventually failed due to a bank run caused by news that it was seeking help from the government.³³⁴

What is surprising is that prior to the 2007-09 financial crisis, banks and supervisory authorities alike failed to anticipate the shocks to liquidity. Given that these shocks were incurred by actions that were external to the banks implies that both the banks and supervisory authorities used incorrect variables to capture exposure to liquidity risk.³³⁵

³²⁹ T Khan and H Ahmed, 'Risk Management: An Analysis of Issues in Islamic Financial Industry' (2001) Occasional Paper 5, Islamic Development Bank

³³⁰ F Muhammad, A Khizer and S Shama, 'Liquidity Risk Management: A Comparative Study between Conventional and Islamic Banks of Pakistan' (2011) *Interdisciplinary Journal of Research in Business* 35, 35-44.

³³¹ T Adrian and HS Shin, 'Money, Liquidity and Monetary Policy' (2009) 99 *American Economic Review* 600, 600-605.

³³² ET Gatev, T Schuermann and P Strahan, 'How Do Banks Manage Liquidity Risk? Evidence from the Equity and Deposit Markets in the Fall of 1998' (2007) *The Risks of Financial Institutions* 105, 105.

³³³ RC Michie, *British Banking: Continuity and Change from 1694 to the Present* (Oxford University Press 2006) 211.

³³⁴ House of Commons, *The Run on the Rock* (Vol 1, 5th Report of Session, TSO 2007-2008 TSO) 5.

³³⁵ Adonis Antoniadou, 'Liquidity Risk and the Credit Crunch of 2007-2008: Evidence from Micro-Level Data on Mortgage Loan Applications' (2014) BIS Working Papers No 473. Available at: <https://www.bis.org/publ/work473.pdf> [19 November 2017] 11-12.

Hence, some banks issued loans from money market funds, rather than from deposits, and when the money market funding dried up, they were unable to match their assets and liabilities. This explains why the Basel III Accord requires banks to observe both the Liquidity Coverage Ratio and the Net Stable Funding Ratio, so that they maintain high-quality liquid assets to sufficiently cover their total net cash outflow over a period of 30 days, while the available amount of stable funding exceeds the required amount of stable funding over a period of 12 months of extended stress.³³⁶

It is interesting that liquidity risk factors are the same for both conventional and Islamic banks. This is because they both operate by obtaining funding from short-term deposits to finance long-term loans, meaning that they must adopt liquidity risk management strategies to ensure that they meet expected and unexpected cash needs at reasonable cost. Unlike IRR, which Islamic banks seldom encounter due to the prohibition of interest, liquidity risk is a more serious issue for Islamic banks than for conventional banks. This is because Islamic banks cannot use interest-based financial instruments that are designed for liquidity risk management including discount windows from the Central Bank, lender of last resort facilities, the secondary market for debt instruments, or the intra-bank market. Islamic banks are consequently unable to raise funds quickly from the market when required. This is exacerbated by the fact that they face additional liquidity risks from certain Islamic instruments, such as *Mudarabaha* or *Bay' al Salam*, which may only be traded at par value, in order to avoid opening the doors of interest. Accordingly, given the restrictions imposed by *Shariah*, Islamic banks need to be innovative and ingenious in developing *Shariah*-compliant liquidity risk management strategies.

Such strategies may, for example, take into account the fact that Return on Equity (ROE) in Islamic banking is correlated with Return on Assets (ROA), whereas in conventional banking these are independent of each other.³³⁷ By definition, ROE is the percentage of profitability that an organisation generates in relation to the money invested by investors, whereas ROA refers to the profitability of a specific organisation in reference to its total assets, efficiently allocated by the management.³³⁸ As such, liquidity stress in Islamic financial institutions must be managed on a trust basis between the institutions' management, partners, members and stakeholders. It must also be managed externally through the regulator,

³³⁶ BCBS, Basel III: The Net Stable Funding Ratio (BCBS 2014). Available at: <https://www.bis.org/bcbs/publ/d295.pdf> [19 March 2018] para 5.

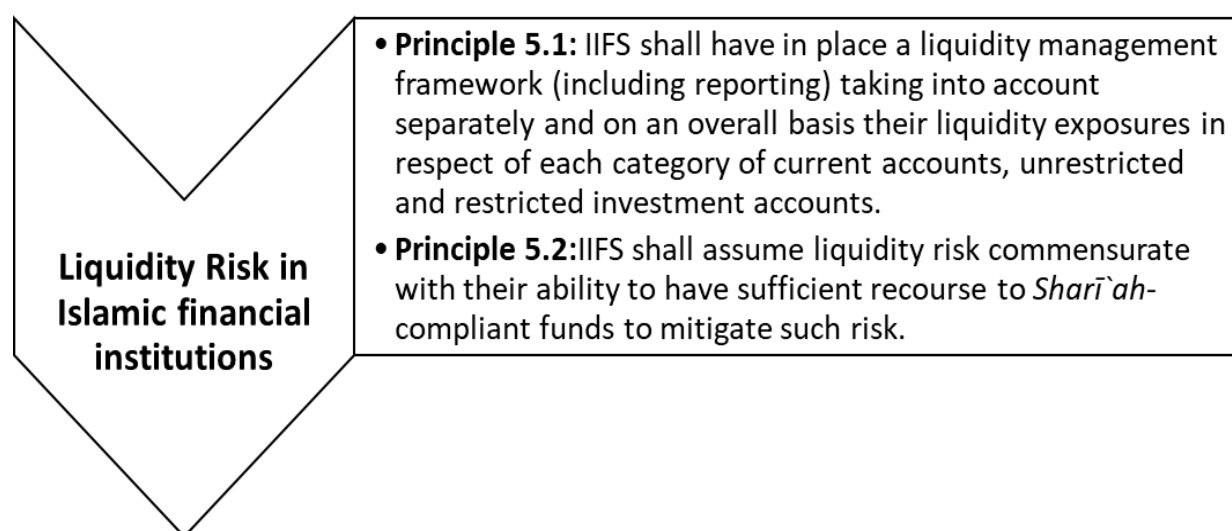
³³⁷ Ibid.

³³⁸ RT Ariss, note 273, 102.

whereby the responsibility for liquidity risk management must be assumed by the bank and all its stakeholders.³³⁹

Principles 5.1 and 5.2 of the IFSB guide to Islamic financial institutions are illustrated in Box III.3, below.

Box III.3: Liquidity Risk Management Principles Provided by the IFSB



The IFSB places an emphasis on compliance with *Shariah*. As shown above, this in turn imposes serious limitations on Islamic banks. Moreover, it creates additional liquidity risks, given that certain Islamic instruments, such as *Mudaraba* or *Bay' al Salam*, may only be traded at par value. As such, Islamic banks are simply required to retain an adequate amount of liquidity to guard against insolvency. The IFSB has for example addressed the structure and contents of products and services offered by Islamic banks and issued capital adequacy standards including a detailed guidance for these institutions.³⁴⁰ It recommends the total eligible capital for Islamic banks to the sum of the Core Capital (common equity, retained earnings and reserves) and Additional Capital (Shariah-compliant instruments and reserves).³⁴¹ The Core Capital is similar to the Tier 1 Capital under the Basel Accord, while the Additional Capital is similar to Tier 2 Capital. The IFSB states that the sum of the Core Capital and Additional Capital shall not be less than 8% of the total risk-weighted assets at all times. This is the same capital adequacy measure recommended by the Basel II Accord.³⁴²

³³⁹ R Ismal, 'Shariah Issues in Liquidity Risk Management: A Survey' (2008) 12 Review of Islamic Economics 45, 45-67.

³⁴⁰ See IFSB, Revised Capital Adequacy Standard for Institutions Offering Islamic Financial Services (ISFB 2012). Available at: <http://ifsb.org/docs/IFSB%20ED-15%20Revised%20Capital%20Adequacy%20Final%20%2801-11-2012%29.pdf> [19 March 2018] 1.

³⁴¹ Ibid, 6.

³⁴² See BCBS, note 330 above, para 40.

The publication of the IFSB standards has been supplemented by several publications related to the calculation of capital adequacy.³⁴³ However, they are largely based on Pillar 1 of Basel II with some modifications to cater for the specificities of Islamic finance. For example, the IFSB's standards on disclosure to promote transparency and discipline in the market are stricter.

Islamic banks may also purchase instruments from the Central Bank or government,³⁴⁴ provided that the instruments are not interest-based. Thus, the IFSB requires Islamic regulators to periodically monitor Islamic banks, in order to ensure that they maintain the necessary levels of liquidity.³⁴⁵ It thus follows that the argument in support of Islamic banks being more resilient than conventional banks to financial crises is difficult to justify on the basis of Islamic banks applying better liquidity risk management strategies. The restrictions imposed by *Shariah* actually make it more difficult for Islamic banks to manage their liquidity risks. This is because the avenues available to Islamic banks for maintaining adequate liquidity to preserve their insolvency are limited. Meanwhile, establishing a relationship of trust between their management, partners, members and stakeholders will not help Islamic banks retain high-quality liquid assets to sufficiently cover their total net cash outflow, or to ensure that the available amount of stable funding exceeds the required amount of stable funding over a given period of extended stress.

It is important to note that the causal link between risk management and financial crises is not limited to financial risk or the categories discussed above. Exposure to non-financial risk may equally trigger a financial crisis.³⁴⁶ Hence, the effective management of non-financial risk can render a financial institution resilient to financial crises. The next section emphasises a key non-financial risk, namely operational risk, and examines the relationship between this, the risks discussed above, and financial crises. It then attempts to determine whether Islamic banks have more effective strategies for managing non-financial risk.

³⁴³ See IFSB, note 334 above, 1-2.

³⁴⁴ Ibid, 63.

³⁴⁵ IFSB, *Guiding Principles of Risk Management for Institutions (Other than Insurance Institutions) Offering Only Islamic Financial Services* (IFSB 2005) 20.

³⁴⁶ LB Andersen, D Hager, S Maberg, MB Naess and M Tungland, 'The Financial Crisis in an Operational Risk Management Context – A Review of Causes and Influencing Factors' (2012) 105 *Reliability Engineering & System Safety* 3, 3.

3.4 The Management of Non-Financial Risk

The main non-financial risks encountered by Islamic banks are operational risks. These arise due to inadequate internal processes, strategies and systems, which cause internal system failure. A breakdown in corporate governance and internal controls, resulting in performance failure, fraud and mistakes, is considered as an operational risk caused by human error. Given that it emerges from failed internal processes, it includes various factors, such as staff-related risks and risks pertaining to legal, political, IT and regulatory domains, as well as human error. Meanwhile, transactional processes involve error- or fraud-related risks, with financial, image or operational damages also potentially induced as a result of support activities, such as human resource management and IT. Accordingly, internal control procedures need to be implemented across transactional and support activities. Operational risk may also be witnessed in relation to management activities, including project management and decision-making. However, management activities are far more difficult and sometimes awkward to handle in the context of an operational risk framework, when it is considered that making decisions under conditions of uncertainty, without comprehensive information, is a management concern. Nonetheless, risks may be mitigated through the adoption of decision-making and robust project management processes.

Although it may be argued that reputational risk is sufficiently important to merit attention in its own right, it remains a form of operational risk.³⁴⁷ Thus, where a bank loses the public's trust, it can have an impact on other banks, especially in the case of a relatively recent industry, like Islamic finance.³⁴⁸ One striking example of this was the negative publicity generated by the collapse of the Bank of Credit and Commerce International (BCCI) in 1991 and the Al-Baraka Bank's withdrawal from the UK market in 1993.³⁴⁹ This seriously affected customers' trust in Islamic financial institutions, and the Islamic Bank of Britain (IBB) has since struggled to repair the damage to the reputation of Islamic banking in general.³⁵⁰ However, banks may alleviate reputational risk by cooperating with other financial institutions, standardising contracts and procedures, conducting self-assessment, promoting

³⁴⁷ Cf M Sarstedt, W Petra, MT, 'Measuring Reputation in Global Markets—A Comparison of Reputation Measures' Convergent and Criterion Validities' (2013) 3 Journal of World Business 329, 329-339.

³⁴⁸ K Naser, A Al Salem, N Rana, 'Customers Awareness and Satisfaction of Islamic Banking Products and Services: Evidence from the Kuwait Finance House (Note 1)' (2013) International Journal of Marketing Studies.

³⁴⁹ R Wilson, 'Challenges and Opportunities for Islamic Banking and Finance in the West: The United Kingdom Experience' (1999) Thunderbird International Business Review 421,421-444.

³⁵⁰ W Mansour, et al, 'Islamic Banking and Customers' Preferences: The Case of the UK' (2010) Qualitative Research in Financial Markets 185, 185-199.

client awareness, and initiating industry affiliations.³⁵¹ It therefore follows that although reputational risk is an important topic in itself, it may be causally linked to financial crises as an operational risk, since it relates to performance failure, fraud and errors.

3.4.1 Legal, Compliance and Operational Risk

Legal and compliance risk may be said to constitute a form of operational risk.³⁵² These risks arise from the law governing the jurisdiction in which the bank operates. For example, since Islamic banks are associated with *Shariah* law, legal risk is incurred by the fact that this law is more prone to change and has high volatility, due to different interpretations of the Quran and Sunnah by the relevant religious leaders.³⁵³ Moreover, Islamic financial institutions are generally obliged to rely on interpretations of *Shariah* by local religious leaders; members of their *Shariah* boards; local regulations, and their requirements when preparing documentation, due to the absence of standardised contract formats for various financial tools. In the same vein, legal risk emerges from Islamic contracts, given the lack of litigation mechanisms for dealing with issues related to contract enforcement by the counterparty.³⁵⁴ Thus, contracts must be formulated in such a way that potential disagreements are minimised, with the applicable law being clearly specified, so as to alleviate legal risk. However, Chapter 6 illustrates how in KSA, the financial and non-financial risks discussed above, including operational risk, are all forms of legal or compliance risk. This is because the regulators have imposed specific obligations to manage these risks and the failure to do so may result in sanctions.

From a general perspective, it may nevertheless be argued that all risks, apart from market, credit and liquidity risks, fall into the category of operational risk, since these are essentially types of governance risk. From an international perspective for example, operational risk has been defined by the BCBS, as the risk of loss arising from external circumstances, or when

³⁵¹ Z Chen, A Morrison, WJ Wilhelm, 'Investment Bank Reputation and "Star" Cultures' (2014) *Review of Corporate Finance Studies* 129, 129-153.

S Marcus, and T Gantumur, 'Economic Implications of Further Harmonisation of Electronic Communications Regulation in the EU' (2015) Available at SSRN 2624617.

³⁵² H Van Greuning and Zamir Iqbal above note 355.

³⁵³ PR Wood QC (Hon), *International Legal Risk for Banks and Corporates* (Allen & Overy Global Law 2014).

³⁵⁴ T Khan and H Ahmed, 'Risk Management: An Analysis of Issues in Islamic Financial Industry' (2001) Occasional Paper 5, Islamic Development Bank.

internal operations, people or systems are managed ineffectively.³⁵⁵ It includes fiduciary risk and transparency risk, which require elaborate practices and systems of risk management to alleviate them. Nonetheless, operational risk generally becomes more pronounced as operational activities expand in scope and size.³⁵⁶ That said, it is demonstrated in Chapter 6 that where the law imposes an obligation to manage a certain type of risk, the latter becomes a legal or compliance risk. This is because the failure to fulfil the obligation attracts legal sanctions.

Due to the fact that it only becomes obvious upon occurrence of a critical situation, such as a financial crisis, operational risk presents significant measurement and management challenges.³⁵⁷ Notwithstanding this, a consensus is yet to be reached regarding a standard framework of operational risk, which is compatible with all organisations, due to the variety of practices that this type of risk entails. Internal audit ratings, quality self-evaluation, operational risk indicators or Key Risk Indicators (KRIs) (for example, volume, turnover, or error rate), and fluctuations in income and losses are just some of the data analysed by financial institutions. As such, Islamic banks equally face operational risk, given that their employees or managers sometimes fail to conduct business or fulfil contractual obligations in accordance with *Shariah* principles.³⁵⁸ A fiduciary risk also emerges in instances where the Islamic bank is unlikely to be fully compliant with a contract's *Shariah* obligations. Here, the absence of standardised reporting and accounting in Islamic financial institutions leads to transparency risk.³⁵⁹ The question that follows is whether Islamic banks have better operational risk management systems, which render them more resilient than conventional banks to financial crises.

According to a study by Shafique et al., there is no difference in operational risk features between Islamic and conventional banks, as they are all prone to the same kinds of risk.³⁶⁰ However, Shafique et al. emphasise that operational risk occurs more frequently in Islamic banking, due to a number of reasons, such as the cancellation of *Mudarabah* and *Istisna'*

³⁵⁵ BCBS, note 330 above, paras 67-69.

³⁵⁶ I Akkizidis and SK Khandelwal, *Financial Risk Management for Islamic Banking and Finance* (Palgrave Macmillan 2007).

³⁵⁷ Ibid.

³⁵⁸ Sabri Mohammad, 'Liquidity Risk Management in Islamic Banks: A Survey' (2013) 1 *Afro Eurasian Studies* 215, 221.

³⁵⁹ Ibid.

³⁶⁰ O Shafique, H Nazik and H Taimoor, 'Differences in the Risk Management Practices of Islamic versus Conventional Financial Institutions in Pakistan: An Empirical Study' (2013) *The Journal of Risk Finance* 179, 193-196.

contracts, problems arising internally in the control system, breakdowns in back office operations, technology risks, and risk in the Islamic legal environment as a whole, which comprises *Shariah* law.³⁶¹ Abdullah, Shahimi and Ismail evaluated the key issues in the management of operational risk in a sample of Malaysian Islamic banks and found that although it is significant, due to unique contractual features relating to *Shariah*, the core principles of Basel II may be applied to these institutions.³⁶² Thus, it is also important to establish stricter eligibility criteria for capital in Islamic banks. However, the above authors note that it is important for the unique characteristics of Islamic banks be taken into account, when implementing the core principles of Basel II.³⁶³

Izhar examined exposure to operational risk in Islamic banks in general and found that due to their relatively small size, the sophisticated methods of measuring operational risk-based capital, which are found in the Basel II framework, are not adapted to *Shariah* principles.³⁶⁴ Moreover, he advises that it is important to collect a significant amount of loss data. The Basel II framework outlines many approaches but provides that the Basic Indicator Approach is the standard approach under which banks should be required to hold capital equal to a fixed percentage of 15% of the average annual gross income.³⁶⁵ Banks using the approach must hold capital for operational risk equal to the average over the previous three years of a fixed percentage of positive annual gross income. When calculating the average, the figures for any year in which the annual gross income is negative or zero are excluded from both the denominator and numerator.³⁶⁶ However, in December 2017, the BCBS published a new standard approach for measuring minimum operational risk capital requirements to replace the existing approaches in the Basel II framework.³⁶⁷ The new standard approach is based on the Business Indicator, Business Indicator Component, and the Internal Loss Multiplier. The operational risk capital requirement is the product of the Business Indicator Component and the Internal Loss Multiplier. Where the bank's Business Indicator is less than 1 billion euros, the capital calculation is not affected by the internal loss data, and the operational risk capital is equal to the Business Indicator Component.

³⁶¹ V Greuning, and Z Iqbal, *Risk Analysis for Islamic Banks* (World Bank Publications 2008) 192.

³⁶² M Abdullah et al, 'Operational Risk in Islamic Banks: Examination of Issues' (2011) 3 *Qualitative Research in Financial Markets* 131, 131, 150.

³⁶³ *Ibid.*

³⁶⁴ H Izhar, 'Identifying Operational Risk Exposures in Islamic Banking' (2010) 3 *Kyoto Bulletin of Islamic Area Studies* 17, 47.

³⁶⁵ BCBS, note 330, paras 644-683.

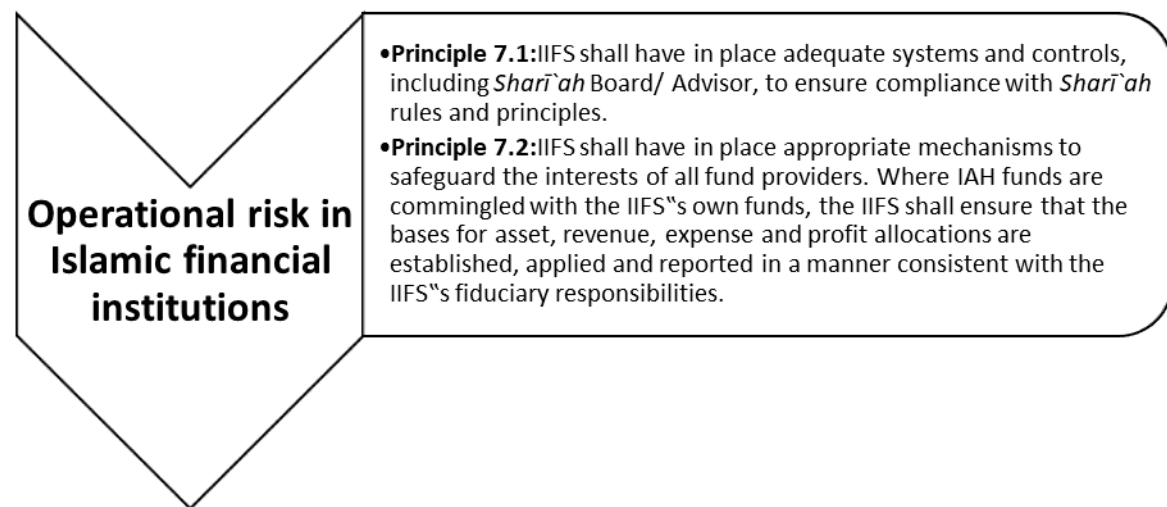
³⁶⁶ *Ibid.*

³⁶⁷ BCBS, note 330, 128-129.

Lastly, Wahyudi et al.³⁶⁸ examined the definition and scope of operational risk in Islamic banks but failed to identify a unique risk management strategy aligned with Islamic banking.

The IFSB has outlined principles to guide Islamic financial institutions in designing appropriate management strategies. These are presented in Box 3.4, below.

Box III.4: Operational Risk Management Principles Provided by the IFSB



As noted above, operational risk is particularly prominent in Islamic financial institutions. Indeed, Islamic managers have been reported as attributing the highest importance to operational risk, after mark-up risk.³⁶⁹ Moreover, greater significance is accorded to operational risk in deferred sales contracts, such as *Salam* and *Istisna* and even with regard to *Shariah* compliance in contracts, for example, *Murabaha* and *Ijarah*. IFSB Principles 7.1 and 7.2 require systems and controls to be established, including *Shariah* boards or advisors to ensure *Shariah* compliance. However, they do not propose mechanisms for applying regulated pressure, associated with capital buffers that will positively affect the way in which Islamic banks adjust their levels of capital and operational risk. It may therefore be important to develop a regulatory framework that will reflect the core principles of Basel II and Basel III. A resilient bank should have similar standards taking into account the complexity and implementation challenges posed by *Shariah* rules. As such, although there is a causal link between operational risk and financial crises, Islamic banks are not

³⁶⁸ I Wahyudi et al, 'Operational Risk in Islamic Banking' in *Risk Management for Islamic Banks: Recent Developments from Asia and the Middle East* (John Wiley & Sons 2015) Chapter 7.

³⁶⁹ GS Oldfield and AM Santomero, 'Risk Management in Financial Institutions' (1997) Sloan Management Review 39.

found to have superior operational risk management systems that render them more resilient than conventional banks to financial crises.

3.5 Conclusion

A causal link between financial crises and risk management is illustrated above. However, risk management is also a very broad concept, which describes a process of identifying, assessing and mitigating or eliminating exposure to loss. Thus, each organisation has a risk management model that is based on how the managers of that organisation identify risks, assess impact and define suitable responses. It implies that some organisations manage risks better than others. With regard to policymakers, the main challenge is to create uniform standards of risk management, which may then be enforced by the regulators. This may only be possible, however, if the various categories of risk emerging from the financial market can be identified. As such, the argument that Islamic financial institutions have better risk management models must be premised on the evidence of Islamic regulators (both internal and external) being capable of identifying the different categories of risk emerging from the Islamic financial markets, and their willingness to compel Islamic banks to mitigate or eliminate them.

Islamic banks are faced with special credit risk, including *Mudarabah* investments and *Murabaha* transactions. They also allocate higher financing and loans, thus increasing their exposure to this risk. Moreover, they face bigger challenges in relation to market risk management, given that they are required to comply with *Shariah* principles. Furthermore, they are unable to use risk management tools, such as hedging and credit derivatives. Aside from this, liquidity risk is more serious for Islamic banks than for conventional banks, due to the prohibition of interest. Hence, Islamic banks cannot use interest-based financial instruments that are designed for liquidity risk management. Besides, they are unable to raise funds quickly from the market when necessary, or to address additional liquidity risks from Islamic instruments, such as *Mudaraba* or *Bay' al Salam*, which may only be traded at par value. They are equally faced with operational risk, since their employees or managers sometimes fail to conduct business or fulfil contractual obligations in accordance with *Shariah* principles. A fiduciary risk then emerges in instances where Islamic banks are unlikely to comply in full, with a contract's *Shariah* obligations, while the absence of

standardised reporting and accounting in Islamic financial institutions leads to transparency risk.

Despite the above risks, Islamic banks do not operate a sounder gearing process, establish a better credit-risk environment, maintain, measure and monitor appropriate credit administration, or ensure better risk control than their conventional counterparts. Neither is there any evidence that Islamic regulators have established stricter eligibility criteria for capital in Islamic banks. Moreover, there are no custom-made credit-scoring models or unique methods of measuring credit risks, which may be assessed by Islamic regulators. For routine risk regulation associated with Islamic banking and trading books, Islamic regulators therefore rely on tools such as mark-to-market, stop-loss provisions, gap analysis, back-testing, and stress-testing, which resemble those used to monitor and assess conventional banks. As such, apart from the fact that the Islamic regulator does not prescribe how Islamic business should be conducted, there is barely any difference in approach from that of non-Islamic regulators.

It may consequently be submitted that Islamic banks are less likely to trigger instability through the accumulation of risk, because the financing structures that they use carry lower risks, rather than because they implement better risk management techniques. Likewise, their financing structures carry relatively low credit risk, because the assets of Islamic banks are generally of a debt nature, following sale-based financing, while deposits are on a profit and loss-sharing basis. This means that Islamic banks may simply shift the risk of debt default to investment depositors. Equally, restrictions are eased by the fact that the *Gharar* interdiction circumscribes the extent and amount of trading by Islamic banks, thus reducing the level of risk that they encounter. Further to the above, Islamic banks deal in investments and partnerships, rather than lending, making it is easier for supervisory authorities to assess whether Islamic banks are viable and can fulfil their financial commitments to creditors. Lastly, it was noted in this chapter that in theory, it is unlikely for a crisis related to IRR to be triggered by Islamic financial institutions. This is because *Shariah* prohibits *Riba* (the charging of interest) and debt is only permitted when it relates to actual transactions and is not used for speculative purposes.

It may therefore be contended that Islamic banks are resilient to financial crises, but not as a result of their risk management strategies. They are able to withstand shocks or significant stresses during financial crises because they are less prone to withdrawals during panics and

their lending decisions are not sensitive to deposits. Also, intermediation is asset-based rather than debt-based. Theoretically, this should allow for risk sharing rather than the transfer of risk, thereby limiting the importance of risk management. It may then be argued that the resilience is rather due to Islamic banking being essentially based on profit and loss-sharing partnerships, which reduce the overall risk faced by such financial institutions. Also, the fact that Islamic banks do not finance instruments such as derivatives that have significant inherent risks reduces the overall risk faced by these banks. Nonetheless, this does not imply that Islamic banks are necessarily more resilient to financial shocks and stresses than conventional banks. This is what this thesis seeks to ascertain. Thus far, although it has been established that Islamic banks are resilient, it has not been shown that they are generally more resilient than conventional banks. In this light, the next Chapter critically examines the profit and loss sharing partnership and seeks to determine how it enhances the resilience of Islamic banks, and whether it enables these banks to show stronger resilience than conventional banks during financial crises.

Chapter 4:

Financing on a Profit and Loss-Sharing (PLS) Basis

4.1 Introduction

It is noted in Chapter 3 that there is no evidence that Islamic banks operate a sounder gearing process, maintain, measure and monitor appropriate credit administration, and ensure better risk control than conventional banking?. However, it was submitted that Islamic banks are less likely to trigger instability through the accumulation of risks because the financing structures they use carry lower risks. It was then suggested that the financing structures are those set up within the Shariah-compliant profit and loss sharing (PLS) or profit sharing agreements. This Chapter explores this theory. The investigation is based on the contention that equity-based contracts, namely the *Mudarabah* and *Musharakah*, are the primary modes of financing on the PLS basis,³⁷⁰ supplemented by fixed-return sales-based and assets-based modes. The latter may be used to manage the risks that emerge from the former. This Chapter begins with a brief analysis of the equity-based primary modes of financing and discusses how the mix of risks that emerge from the modes are managed using sales-based and assets-based instruments. Emphasis is placed on the *Murabaha* and *Ijara*. It is then argued that the use of the equity-based instruments makes Islamic banks more resilient to financial crises. However, serious regulatory challenges posed by the instruments are outlined. Thus, in conclusion, it is submitted that banking that is essentially based on equity-based PLS schemes as delineated here reduces the overall risk confronted by financial institutions.

4.2 Equity-Based Modes

4.2.1 The *Mudarabah*

Ibn Rushd of the Maliki School described the *Mudarabah* as follows:

the giving of wealth by one person to another so that he may trade with it (in return) for a defined ratio of the profit that the worker (amil) earns, that is, a part that is agreed upon by both as a third, fourth, or half.³⁷¹

³⁷⁰ NM Sapuana, 'An Evolution of Mudarabah Contract: A Viewpoint from Classical and Contemporary Islamic Scholars' (2016) 35 *Procedia Economics and Finance* 349, 350; U Chapra, *The Future of Economics: An Islamic Perspective* (The Islamic Foundation 2000) 274.

³⁷¹ Ibid. See also, NM Sapuana, 'An Evolution of Mudarabah Contract: A Viewpoint from Classical and Contemporary Islamic Scholars' (2016) 35 *Procedia Economics and Finance* 349, 351.

In the same vein, Al-Sarakhsi, a Hanafi scholar of the 11th century, stated that people have a need for *Mudarabah* contracts for the following reasons:

for the owner of the capital may not find his way to profitable trading activity and the person who may find his way to such an activity may not have the capital. And profit cannot be attained except by means of both of these, that is, capital and trading activity. By permitting this contract, the goal of both is attained.³⁷²

The *Mudarabah* is a risk-sharing venture, whereby one party, known as the *Rabbul-Maal*, provides capital to the counterparty, the *Mudarib*, for the purpose of investing in a commercial enterprise.³⁷³ This mode is also sometimes referred to as the *Qirad*, *Muqaradah* or *Muamalah*,³⁷⁴ with the *Mudarib* being akin to a general or working partner, while the *Rabbul-Maal* is comparable to a sleeping or silent partner. The consideration furnished by the *Mudarib* is a share of the profits generated by the enterprise, according to a predetermined ratio. The *Mudarabah* may also be based on the Sukuk or Islamic bonds, whereby the *Rabbul-Maal* and *Mudarib* have undivided shares in the ownership of assets related to a special investment activity or specific project. The *Rabbul-Maal* provides the initial investment, while the Sukuk holders also provide financing. The project is managed by the *Mudarib*, usually through a Special Purpose Vehicle. This is a limited company that is created for a specific purpose such as the issuance of a particular security and isolates the owners or financial group from financial risk.³⁷⁵ Hence, the Special Purpose Vehicle isolates the *Rabbul-Maal* and *Mudarib* from financial risk. Profit is paid to the Sukuk holders and *Rabbul-Maal*, not interest. There is no guarantee that the initial investment will be repaid.

The assumption of risk by the *Rabbul-Maal* justifies the reward. It also explains why the *Mudarabah* is deemed to resolve conflicts of interest and to curb excessive risk-taking.³⁷⁶ The managers are required to act in accordance with the terms of the partnership agreement and also promote the partnership's success. This prevents managers from taking on risky projects with money provided by the bank's shareholders. It also prevents managers from

³⁷² See T Spoors, *Islamic Finance* (Lulu 2014) 108.

³⁷³ Azmi Omar, Muhamad Abdu and Raditya Sukmana, *Fundamentals of Islamic Money and Capital Markets* (Wiley 2013) 6; MW Alswaidan, *An Investigation of Sukuk Structure Risk* (Unpublished PhD Dissertation, University of Portsmouth 2017) 87-89.

³⁷⁴ NMN Zain et al, 'Gold Investment Application through Mudarabah Instruments in Malaysia: Analysis of Gold Dinar as Capital' (2014) 10 *Asian Social Science* 173, 174.

³⁷⁵ D Murphy, *Understanding Risk: The Theory and Practice of Financial Risk Management* (CRC Press 2008) 76; T Sainati et al, 'Special Purpose Entities in Megaprojects: Empty Boxes or Real Companies? Literature Review' (2016) 48 *Project Management Journal* 55, 56.

³⁷⁶ See Z Iqbal and M Lewis, *An Islamic Perspective on Governance* (Edward Elgar 2009) 239.

distorting information in order to optimise bonuses or stock-price-related options. This is because the *Mudarib* as a general partner, must be provided with access to all information, and makes the important decisions since the *Rabbul-Maal* (the bank) is a sleeping partner. This is essentially a relationship between capital and work.³⁷⁷ Hence, there are instances where the bank is the *Mudarib* while the customer is the *Rabbul-Maal*. A good example is the Mudarabah General Investment Account offered by the Bank Negara of Malaysia.³⁷⁸ The customer or depositor seeking an investment opportunity is the *Rabbul-Maal*. He invests through the bank (the *Mudarib*), which manages the funds. Both parties share in the profit according to a pre-agreed ratio. The fund is invested in any Shariah-compliant activity chosen by the bank. This implies that the relationship may become very complex, whereby the bank uses the money as the *Rabbul-Maal* in another *Mudarabah* venture. The money will therefore constitute the capital of another venture with a customer (the *Mudarib*) who provides labour.³⁷⁹ The losses are borne by the *Rabbul-Maal*, which implies that the depositor faces the credit risk in the second *Mudarabah* venture, of which he knows nothing. Nonetheless, some Islamic banks also offer the Mudarabah Specific Investment Account, which restricts the funds to specific projects approved by the *Rabbul-Maal*.³⁸⁰ Other Islamic banks compensate the depositor for the loss suffered in the business venture with funds from a reserve account. The depositor bears all the loss only where there are no funds available in the reserve account or the loss was due to the bank's negligence.³⁸¹ However, the form of the *Mudarabah* is uncertain from a legal perspective, although it may be compared to a limited investment partnership, established as a collective investment scheme or venture capital fund.

As noted above, *Mudarabah* agreements can be very complex with the use of two-tier models, where two contracts exist within the same scheme.³⁸² The first of these contracts is concluded between the depositors or financiers and the bank (acting as an intermediary), while the second is between the bank (acting as the financier) and the borrower (*Mudarib*).

³⁷⁷ S Archer and RAA Karim, 'Profit-Sharing Investment Account in Islamic Bank: Regulatory Problems and Possible Solutions' (2009) *Journal of Banking Regulations* 300, 300-309.

³⁷⁸ See Bank Negara Malaysia, 'Investment Account' (2014). Available at: http://www.bnm.gov.my/guidelines/01_banking/01_capital_adequacy/06_psia.pdf [29 January 2018] paras 1.11 and 7.1.

³⁷⁹ See also, AA Hamzah et al, 'Islamic Investment Deposit Account through Mudarabah and Commodity Murabah Contract: An Overview' (2014) 9 *Prosiding Perkem* 28, 29-30.

³⁸⁰ Ibid.

³⁸¹ See for example, Nib International Bank, 'Mudarabah Investment Saving Account' (2018). Available at: <http://www.nibbanksc.com/mudharabah-investment-saving-account/> [29 January 2018].

³⁸² See AM Vernados, *Islamic Banking and Finance in South East Asia: Its Development and Future* (2nd edn, World Scientific Publishing 2006) 99-100.

The parties of the first contract share the bank's profits, while the parties of the second share the profits gained by the *Mudarib*. The profits may be generated from approved assets bought and sold with money provided by the bank or rent that the latter charges as co-owner of property bought with its money. Theoretically, such PLS operations should mitigate liquidity risk, since they appear on both sides of the balance sheet: withdrawals of deposits, and loans drawn down by borrowing clients. The depositors share the risk with the bank on the liability side and absorb any shock on the asset side.³⁸³ Thus, the bank may sell the asset bought by the *Mudarib* if it is unable to meet its obligations in terms of funds demanded by clients. Nonetheless, in practice, the unpredictable conduct of the borrower poses a moral hazard, thereby deterring many Islamic banks from using this mode of financing.³⁸⁴

The moral hazard in this context relates to the situation where one party is responsible for furthering the interests of another but decides to put their own interests first.³⁸⁵ As defined by Dowd, 'a moral hazard is where one party is responsible for the interests of another, but has an incentive to put their own interests first.'³⁸⁶ With regard to Islamic banks, Rahman noted that moral hazard problems could be ex ante and ex post.³⁸⁷ They are ex ante where the bank is unable to effectively monitor the borrower or the *Mudarib* and therefore cannot develop a credible project that ensures prudent behaviour. They are ex post where the bank is unable to observe returns, and some dishonest borrowers can then pretend that their returns are low. Such a *Mudarib* may therefore extract value out of the project, even if it leads the bank's insolvency.³⁸⁸

Thus, the *Mudarib* might take excessive risks that the bank would then have to bear or spend the bank's assets on non-value added perks. However, this is a risk confronted by all *Mudarabah* transactions, given that financiers are always obliged to rely on the *Mudarib*'s

³⁸³ I Sobol, 'Liquidity Management Practices in Islamic Banking' (2013) 2 The Central European Journal of Social Sciences and Humanities 566, 569.

³⁸⁴ H Ahmed, *Product Development in Islamic Banks* (Edinburgh University Press 2011) 33.

³⁸⁵ MH Hafeez, *Corporate Governance and Institutional Investment* (Universal Publishers 2015) 42. See also, MK Hasan and MK Lewis (eds), *Handbook of Islamic Banking* (Edward Elgar 2007) 314.

³⁸⁶ K Dowd, 'Moral Hazard and Financial Crisis' (2008) CRIS Discussion Paper Series VI, Centre for Risk and Insurance Studies. Available at: <https://www.nottingham.ac.uk/business/businesscentres/crbfs/documents/cris-reports/cris-paper-2008-6.pdf> [26 January 2018] 2.

³⁸⁷ A Rahman, 'Islamic Microfinance: A Missing Component in Islamic Banking' (2007) Kyoto Bulletin of Islamic Area Studies 1, 38-53. See also, M Mili and S Abid, 'Moral Hazard and Risk-taking Incentives in Islamic Banks: Does Franchise Value Matter?' (2017) 10 International Journal of Islamic and Middle Eastern Finance and Management 42, 43.

³⁸⁸ See K Dakhlallah and H Miniaoui, 'Islamic Banks vs Non-Islamic Ethical Dimensions' (2011) 2nd International Conference on Business and Economic Research 2141, 2145-2146.

expertise and good faith. The *Mudarib* is responsible for the management or operation of the venture capital fund, while the *Rabbul-Maal* simply contributes money to the fund. If a scheme fails, despite the *Rabbul-Maal* not being liable for any debts or obligations of the fund (beyond the amount contributed),³⁸⁹ it will suffer a loss of capital, while the *Mudarib* will only suffer the loss of its services. The *Mudarib* is only required to repay the principal of the loan issued by the bank. However, where the money is provided as capital for a specific project, the *Mudarib* is under no obligation to repay the capital. That is why it is noted above that some banks such as Nib International Bank have reserve accounts from which they can repay the *Rabbul-Maal*. Nonetheless, where the reserve accounts do not have sufficient funds, the bank is not liable to repay the *Rabbul-Maal* unless the scheme failed due to the bank's negligence or fault.

Despite the uncertainty over the legal form of the *Mudarabah*, as well as the moral hazard in the investment, parties in the Bailiwick of Jersey may establish simultaneous limited partnerships with the *Mudarabah*, insofar as the latter fulfils the requirements of *Shariah* Standard No.13 of the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI).³⁹⁰ This demonstrates the closeness between a *Mudarabah* and a limited partnership. In fact, the origins of the European partnership or *commenda* may be traced back to the *Mudarabah*, which was adopted by Italian merchants to finance their trips.³⁹¹ Interestingly, this was precisely the early purpose of *Mudarabah* agreements, which explains the origins of the term in '*Darabah fil ard*', referring to travel for the purpose of trade - although this expression is used in the Quran, not the *Mudarabah*. It demonstrates that the *Mudarabah* itself forms part of a practice that developed through the expansion of trade across the Middle East to Central Europe, rather than constituting a specific prescription of the Quran. It even predates the dawn of Islam.

Banaji intimates that the *Mudarabah* developed when trade with the Ottoman Empire and Muslim Near East was flourishing and trading companies, bills of exchange and contracts were established.³⁹² It was so effective that it united merchants and prevented the ritual

³⁸⁹ HA Dar and Moghul UF, *The Chancellor Guide to the Legal and Shari'a Aspects of Islamic Finance* (Chancellor Publications 2009) 217.

³⁹⁰ S Howard, 'Islamic Mudarabah: Back to the Future' (2013) *Jersey & Guernsey Law Review*.

³⁹¹ See HP Glenn, *Legal Traditions of the World: Sustainable Diversity in Law* (5th edn, Oxford University Press 2014) 195; JM Hobson, *The Eastern Origins of Western Civilisation* (Cambridge University Press 2004) 19-20.

³⁹² J Banaji. 'Islam, the Mediterranean and the Rise of Capitalism' (2007) 15 *Historical Materialism* 47, 48-49.

suicides of many bankrupts.³⁹³ Notwithstanding this, it may be difficult to argue that financing projects through an ancient form of limited partnership/collective investment scheme can curb excessive risk-taking and enhance the resilience of banks in the face of financial crises. The *Mudarabah* is among the oldest contracts in Islamic history.³⁹⁴ It has been noted that the Holy Prophet was a *Mudarib* for his future wife, Khadija, who was the *Rabbul-Maal*.³⁹⁵ It is ideally established in an interest-free economic system where traders are honest and have no incentive to prioritise their selfish interests.³⁹⁶ However, it is uncertain whether such a system exists in the contemporary society.

Bacha observed that although Islamic banking became very dominant in Malaysia, fewer banks used *Mudarabah* financing, compared to short-term trade financing.³⁹⁷ This was ironic given that *Mudarabah* is based on profit and loss sharing which is deemed to be at the core of Islamic finance. He attributed the *Mudarabah*'s lack of popularity to the serious agency problems embedded in the scheme, as well as the lack of the bonding effect of debt financing that can create perverse incentives. He noted further that when a financier was faced with conventional debt, equity financing, and the *Mudarabah*, the latter was the worst option in a risk-return framework because the expected returns were low, and the risk was high; the financier shares the profit with the manager cum borrower, while the financier bears all the loss. As such, the *Mudarabah* is structured in accordance with a strict interpretation of the Shariah, which may not be suitable for contemporary business society. He proposed ways of addressing the inequality in the distribution of risk and returns, viz., using the principles of mezzanine and vertical-strip financing,³⁹⁸ although he did not show how these solutions would comply with the Shariah, which is the main purpose of Islamic finance.

In his dissertation on the application of the *Mudarabah* in Malaysian Islamic banks, Shaharuddin noted that the rapid growth Islamic finance was driven by the use of *Ijarah* and *Murabaha* debt-like contracts rather than the *Mudarabah* and *Musharakah* which are based

³⁹³ H Dabashi, *Authority in Islam* (Transaction Publishers 1989) 28.

³⁹⁴ T Niblock and R Wilson, *The Political Economy of the Middle East: Islamic Economies* (Edward Elgar 1999) 115.

³⁹⁵ SA Karim, *The Islamic Moral Economy: A Study of Islamic Money and Financial Instruments* (Brown Walker Press 2010) 63.

³⁹⁶ S Mahmud-un-Nasir, *Islam: Its Concepts and History* (Kitab Bhavan 1981) 421.

³⁹⁷ O Bacha, 'Adapting Mudarabah Financing to Contemporary Realities: A Proposed Financing Structure' (1997) 1 *The Journal of Accounting, Commerce and Finance* 26, 27.

³⁹⁸ These involve multi-tier financing whereby each investor contributes a strip which consists of a different type of finance. See *ibid*, 51.

on profit and loss sharing.³⁹⁹ He argued that this is because it is easier to adapt the *Ijarah* and *Murabaha* to contemporary banking practices, although that entails in some instances circumventing established principles of the Shariah. Also, even when banks used the *Mudarabah* financing scheme, they focused on risk-free instruments rather than interest-free instruments. Thus, they financed the purchase of houses, cars and letters of credit and invested in the inter-bank money market. They also used the Profit Equalisation Reserve, which is a specific amount of money that is appropriated by the bank out of the *Mudarabah* fund before allocating the *Mudarib* share in order to raise the owners' equity and maintain a certain level of return on investment for the account holders.⁴⁰⁰ This enables the bank to continue to pay competitive returns, even when the investment portfolio has underperformed.⁴⁰¹ He argued this market driven approach emphasised the bankers' needs which is inconsistent with the spirit of the profit and loss sharing scheme prescribed by the Shariah.

What is important about the *Mudarabah* is that it operates on the basis of mutual trust and good faith, in order to minimise moral hazards.⁴⁰² Mutual trust is sustained by the belief that the *Mudarabah* is a trade instrument endorsed by the Holy Scriptures. Early Islamic jurists, who were venerated, such as Imam Malik and Imam Shafi, described family members and close friends of the Holy Prophet investing in the wealth of orphans under *Mudarabah* agreements.⁴⁰³ Suhaib also cites the Holy Prophet's statement that "There are three things which are blessed, selling with a postponed credit, Muqaradah and mixing wheat and barley for one's household and not for sale."⁴⁰⁴ Moreover, the second to the tenth *hadith* explain various aspects of the *Mudarabah* and highlight accepted practices.⁴⁰⁵ As such, the

³⁹⁹ A Shahrudin, A Study on Mudarabah in Islamic Law and Its Application in Malaysian Islamic Banks (Unpublished Dissertation, University of Exeter 2010) 243.

⁴⁰⁰ See E Montanaro, 'Islamic Banking: A Challenge for the Basel Capital Accord' in MF Khan and M Porzio (ed), *Islamic Banking and Finance in the European Union: A Challenge* (Edward Elgar 2010) 125; R Wilson, *Legal, Regulatory and Governance Issues in Islamic Finance* (Edinburgh University Press 2012) 49-50.

⁴⁰¹ See HS Latiff, 'The Risk Profile of Mudaraba and Its Accounting Treatment' in AN Vernardos (ed), *Current Issues in Islamic Banking and Finance: Resilience and Stability in the Present System* (World Scientific Publishing 2010) 76-78.

⁴⁰² H Timm, *The Cultural and Demographic Aspects of the Islamic Financial System and the Potential for Islamic Financial Products in the German Market* (Diplomica Verlag 2004) 30.

⁴⁰³ M Khan and M Bhati, *Developments in Islamic Banking: The Case of Pakistan* (Palgrave Macmillan 2008) 46.

⁴⁰⁴ Ibn Hajar (Book VII, Number 930 2003).

⁴⁰⁵ ZH Astrom, *Risk Analysis for Profit and Loss Sharing Instruments* (Unpublished PhD Dissertation, International University of Sarajevo 2012) 37.

Mudarabah is essentially an *Ubberimae Fidei* (utmost good faith) contract, with the parties being compelled by their belief in Islam to act honestly.

Given that the *Rabbul-Maal* agrees to share the risk of loss with the *Mudarib*, it is imperative that the latter acts in good faith. This explains why the *Shariah* principles governing *Mudarabah* transactions include fair dealing and the certainty of the contract. Excessive risk-taking and fraud, which are among the causes of financial crises (see Chapter 2), are reduced to a minimum by the requirement of good faith. This is why there is a movement to recognise good faith as a general contractual duty in English law.⁴⁰⁶ In fact, English scholars who reject the idea of a duty of good faith propound an ontological view that is diametrically opposed to what is endorsed by Islamic scholars. Sir Roy Goode, for example, argues that the general duty of good faith should be rejected, because “the predictability of the legal outcome of a case is more important than absolute justice”.⁴⁰⁷ He then maintains that the “last thing [English courts] want to do is to drive business away by vague concepts of fairness which make judicial decisions unpredictable”.⁴⁰⁸ Nonetheless, Islamic scholars prioritise fairness, honesty and the promotion of general welfare.⁴⁰⁹

Good faith is a contractual principle in many non-Islamic countries, such as the US⁴¹⁰ and Germany.⁴¹¹ In the US, section 1-304 of the Uniform Commercial Code of 1952 states that “Every contract imposes upon each party a duty of good faith and fair dealing in its performance and its enforcement”. Thus, through the duty of good faith, the *Mudarabah* provides an avenue for obtaining the economic benefits of limited partnerships and corporations, while avoiding the inherent risks of these commercial enterprises.

With regard to corporations, the separation of powers between the *Mudarib* and the *Rabbul-Maal* is akin to the separation of shareholder ownership from directors’ control. The corporation operates with resources provided by the shareholder, which are placed under the management of directors. These directors then offer the required skills and expertise. However, the *Mudarabah* does not provide any right of oversight or governance to the

⁴⁰⁶ Qi Zhou and Larry A DiMatteo, ‘Three Sales Law and the Common Law of Contracts’ in Larry A DiMatteo and Martin Hogg (eds), *Comparative Contract Law: British and American Perspectives* (Oxford University Press 2016) 356.

⁴⁰⁷ Roy Goode, *Commercial Law in the Next Millennium* (Sweet & Maxwell 1998) 19.

⁴⁰⁸ Ibid.

⁴⁰⁹ See A Hazeem, ‘The Theory of Fraud in Islamic Law’ (1986) *Islamic Law Journal* 28, 33.

⁴¹⁰ See Chapter 5.

⁴¹¹ See Werner F Ebke and Bettina M Steinhauer, ‘The Doctrine of Good Faith in German Contract Law’ in Jack Beatson and Daniel Friedmann (eds), *Good Faith and Fault in Contract Law* (Clarendon 1995) 171-173.

Rabbul-Maal in exchange for his or her funds, while the *Rabbul-Maal* does not have a board of directors to monitor the *Mudarib*. Equally, there is no provision of *Shariah* law that resembles section 172 of the UK Companies Act, 2006 (CA, 2006), which states that ‘A director of a company must act in the way he considers, in good faith, would be most likely to promote the success of the company for the benefit of its members as a whole.’ Moreover, unlike the shareholders, the *Rabbul-Maal* cannot remove the *Mudarib*, if dissatisfied with the performance of the latter. Meanwhile, the *Mudarib* does not have a duty to issue annual reports and the *Rabbul-Maal* does not have the right to appoint external auditors.⁴¹² This implies that the *Mudarabah* does not address the agency risk emerging from the threat of fund managers acting in their own interests, as opposed to the interests of the fund or the fund provider.

Regardless of the above, section 172, CA 2006 does not fully resolve the agency problem, given that a similar problem exists between the board and the management.⁴¹³ In addition, it is uncertain whether the management are required to continue promoting the success of the company for the benefit of shareholders, when the company becomes insolvent.⁴¹⁴ Logically, the interests of creditors should become the primary interest, in the case of insolvency. Nonetheless, this shows that the best way to resolve the agency problem is to consistently align the interests of the managers and owners,⁴¹⁵ which is the main objective of the *Mudarabah*.

Notwithstanding the above, it must be noted that the objective of the fund provider or investor cannot be limited to finding a person with sufficient skill or expertise to manage the funds; while the objective of the fund manager cannot be limited to finding an investor. Hence, there are other risks that *Mudarabah* transactions confront, apart from agency problems and moral hazards. These include credit risk, operational risks and a certain level of liquidity risk. Islamic banks often use other instruments to mitigate these, as explained below. In that case, the objective is to demonstrate that the effective use of PLS equity-based contracts, as well as of the instruments presented below, is to mitigate the embedded risks and thus enhance the resilience of financial institutions in the face of financial crises.

⁴¹² See AME Ahmed, *Islamic Banking: How to Manage Risk and Improve Profitability* (John Wiley & Sons 2011) 162-163.

⁴¹³ Sarah Worthington, *Sealy and Worthington's Text, Cases and Materials in Company Law* (11th edn, Oxford University Press 2016) 363.

⁴¹⁴ David Kershaw, *Company Law in Context: Text and Materials* (2nd edn, Oxford University Press 2012) 790.

⁴¹⁵ Jill Solomon, *Corporate Governance and Accountability* (2nd edn, John Wiley & Sons 2007) 18.

4.2.2 The *Musharakah*

Also known as *Shirka*, the *Musharakah* represents a joint venture, used by merchants across the ancient Middle East to conduct sizeable trading operations abroad.⁴¹⁶ However, unlike the *Mudarabah*, each party contributes to an agreed percentage of the capital, labour and entrepreneurship.⁴¹⁷ This implies that there is no silent or sleeping partner. Although it is comparable to a joint venture in the UK,⁴¹⁸ the *Musharakah* is characterised by shared returns and risks, and shared governance and ownership. Thus, the partners pursue this venture to gain scale efficiencies by pooling their resources and sharing risk in major investments. Equally, as with joint ventures in the UK and US, it is uncertain whether the *Musharakah* is a legal relationship *sui generis*; it is generally treated as an equity-based partnership and there is no attempt in the literature to distinguish it from a legal partnership (*Shirka*). In fact, what distinguishes the *Musharakah* from the *Mudarabah* are the terms of the agreement. With regard to the former, all partners are working partners and contribute to the fund, while in the latter, only the sleeping partner provides the capital. It may therefore be stated that there is no logical basis for distinguishing between the *Musharakah* and a partnership and the same legal principles should be applied to both.⁴¹⁹ This is because the *Musharakah* has not developed to a point, where it may no longer be recognised as a partnership. Hence, since partnerships may be contractual (*Shirka al uqud*) or non-contractual (*Shirka al milk*), the *Musharakah* may also be based on a contract or joint ownership, without a formal partnership agreement.⁴²⁰

Nevertheless, the *Musharakah* is closer to the form of a legal partnership (*Shirka*) than to the *Mudarabah*. This is because a key characteristic of the *Shirka* is the mixing of capital shares to make individual shares indistinguishable. This is known as *Ikhtilat*.⁴²¹ Under the *Mudarabah*, only the silent party provides the capital meaning there is no mixing of capital shares or mingling of wealth. It thus follows that unless provided to the contrary, the liability of the partners in a *Musharakah* agreement is unlimited, given that their liability for the debts

⁴¹⁶ See Sobol, note 378 above, 568.

⁴¹⁷ I Febianto, 'Risk Management in Mudharabah and Musharakah Financing of Islamic Banks' (2010) Working Papers in Business, Management and Finance. No 201013. Available at: <https://www.scribd.com/document/67134367/201013> [20 November 2017] 3.

⁴¹⁸ See Y Abdul-Rahman, *The Art of Riba-Free Islamic Banking and Finance* (Wiley 2014) 270.

⁴¹⁹ The same argument was made in regard to distinguishing a joint venture from a partnership. See WH Jaeger, 'Partnership or Joint Venture' (1961) 37 Notre Dame Law Review 138, 141-143.

⁴²⁰ Ahmed Al-Suwaidi, *Finance of International Trade in the Gulf* (Graham & Trotman 1994) 78.

⁴²¹ G Bilal, 'Business Organisations under Islamic Law: A Brief Overview' (1999) Proceedings of the Third Harvard University Forum on Islamic Law 83, 88.

of a *Shirka* is unlimited. Nonetheless, where the laws of the jurisdiction provide for limited partnerships, the *Musharakah* may be set up as a limited partnership, or as a diminishing or digressive scheme, whereby one partner's equity in the asset progressively diminishes until the asset is fully owned by the other partner.⁴²² the one partner is simply bought out of the partnership after receiving payments over and above its share of the profits.⁴²³

The various products that a bank may purchase under *Mudarabah* and *Musharakah* agreements carry different types of risk. These are largely related to the conduct of the counterparties and the limitations on banks as financiers to monitor and control these counterparties. However, emphasis is placed on good faith and fairness, in order to mitigate such risks, while banks equally use sales-based and lease asset-based contracts for this purpose. The next section explores the combination of risks embedded in the above PLS equity-based contracts and shows how sales-based and lease asset-based contracts are used for the mitigation of risk.

4.3 Managing the Mix of Risks in Equity-Based Modes

There are generally two types of *Mudarabah* agreement: the restricted *Mudarabah* and the unrestricted *Mudarabah*.⁴²⁴ Under the restricted *Mudarabah*, the fund provider specifies the terms and conditions that will bind the fund manager. This means, for example, that the fund manager may be limited to using the funds in a specific location or for specific purposes. Where the fund manager violates the terms, he or she may be liable for any loss. On the other hand, no limitations are placed on the manager of an unrestricted *Mudarabah*.

Theoretically, restricted partnerships pose a very low level of risk to the participating banks, given that the risks emerging from them relate to the specific assets or project to which a fund is linked.⁴²⁵ In contrast, the unrestricted partnership is exposed to higher financial risk, since the bank, as the fund provider, gives the *Mudarib* the permission to funnel the money into any type of project that will further the interests of both parties. The restricted partnership is akin to the *Mudarabah* Specific Investment Account offered by the Bank Negara of Malaysia,

⁴²² SA Karim, *The Islamic Moral Economy: A Study of Islamic Money and Financial Instruments* (BrownWalker Press 2010) 54.

⁴²³ B Kettell, *Case Studies in Islamic Banking and Finance* (Wiley 2011) 20.

⁴²⁴ S Zineb and M Bellalah, note 6,33.

⁴²⁵ H Bhambra, 'Supervisory Implications of Islamic Finance in the Current Regulatory Environment' in RAA Karim (ed), *Islamic Finance: The Regulatory Challenge* (John Wiley & Sons 2007) 199-200.

while the unrestricted partnership is akin to the Mudarabah General Investment Account offered by the Bank Negara of Malaysia discussed above. As such, *Rabbul-Maal* may decide to trust the bank and allow it to invest the deposit in any project that it deemed profitable, or the *Rabbul-Maal* may make the deposit for the investment in a designated project only. However, both forms of undertaking are exposed to fiduciary risks, including the risk of misconduct, negligence, poor internal control and poor governance. As noted above, this is exacerbated by the fact that the fund provider has no right of intervention or oversight. With regard to the *Musharakah*, these risks are lower, since both parties contribute to the capital and management. The reserve accounts used by Nib International Bank as well as the Profit Equalisation Reserve discussed above may mitigate these risks, although the risks cannot be eliminated given that only part of the *Mudarabah* fund is appropriated by the bank for these reserves. A higher level of financial disclosure and transparency is therefore required for *Mudarabah* agreements. Nonetheless, in both the *Mudarabah* and *Musharakah*, the parties must have thorough knowledge of the capital, so that all possibility of ambiguity or uncertainty is eliminated. Moreover, given the duty of utmost good faith under *Shariah*, the *Mudarib* or fund manager will be held liable, if he does not fully disclose financial information to the *Rabbul-Maal* on request. As a result, the latter should have ready access to audited reports and information concerning market depth and price levels.⁴²⁶

It is well-established that *Shariah* law offers many guidelines on the application of the principle of good faith, in light of the ethical behaviour required of Muslim traders.⁴²⁷ This explains why there is a sanction against inserting terms that could be considered unfair into an agreement.⁴²⁸ Moreover, the divinely-sanctioned doctrine of *Hisbah* or accountability imposes a duty on the ruler or government to intervene in the market, enjoining the right and just and forbidding the wrong and unjust.⁴²⁹ Caliph Ali is known to have written to the Governor of the Rashidun empire, El-Ashter El-Nakee, instructing him to deal with traders, whose behaviour was having a detrimental effect on good faith transactions.⁴³⁰ Hence, there

⁴²⁶ Ibid.

⁴²⁷ See M Marganee, 'Options in Islamic Fiqh and Law' (1993) *Islamic Law Journal* 229, 229-230.

⁴²⁸ See M Yoseef, *The Contract of Mustarsal in Islamic Fiqh* (El Azhar University Publications 2005) 18.

⁴²⁹ S Zubaida, *Law and Power in the Islamic World* (IB Tauris 2003) 58-60. See also, M Cook, *Forbidding Wrong in Islam* (Cambridge University Press 2003) 26.

⁴³⁰ M Fayyad, 'A Glance at Unfair Terms in Consumer Transactions in Arab Legal Systems and Islamic Law: What Arab Lawyers Can Learn from the European Experience?' (2012) 5 *International Journal of Private Law* 200, 201.

is some consensus on the requirement of good faith in contractual performance at the conclusion of a contract.⁴³¹

It follows from the above that the mutual trust and good faith of the *Mudarib* and *Rabbul-Maal* will reduce moral hazards and agency problems. They will also minimise the risk of information failure. Where the *Rabbul-Maal* does not have access to information about the management and performance of a project, the risk of information failure or asymmetry is very high, since the *Mudarib* will possess greater material knowledge.⁴³² This will consequently lead to an imbalance of power and unreasonably increase the project's exposure to risks. However, these risks may be mitigated by full disclosure and transparency on the part of the *Mudarib*, owing to his duty to behave with the utmost good faith. Nonetheless, as noted above, there are other risks involved in these transactions, although only a small proportion of the assets of most Islamic banks constitute equity. Given this fact, the main risk inherent in *Mudarabah* and *Musharakah* agreements is credit risk. The Islamic Financial Services Board (IFSB) has noted that although *Sukuk* instruments are actively rated by major international rating agencies, such as Fitch and Moody or Standard & Poor, the *Mudarabah* accounts for only 4.8% of the new global *Sukuk* issuances, while the *Musharakah* accounts for just 5.6%.⁴³³ Similarly, the *Mudarabah* accounts for only 2.4% of the global *Sukuk* outstanding, while the *Musharakah* accounts for 16.9%.⁴³⁴

Credit risk in this context is the probability of loss as a result of the *Mudarib*'s default or inability to repay a debt in time. Thus, it is essentially of risk to the borrower, as there is the possibility that the *Mudarib*, like any other lender, may fail to fulfil obligations and responsibilities pertaining to the agreed stipulations. However, the credit risk is only enhanced, if the bank as the *Rabbul-Maal* fails to conduct a suitable risk analysis, prior to entering into the agreement, and fails to monitor the *Mudarib*, who has a duty to act in good faith. Regarding *Musharakah* transactions, the bank or financier participates in the management of the project, which makes it easier to assess and manage credit risk.

However, banks using *Mudarabah* agreements also face operational risks, due to a lack of oversight. These risks may emanate from the failure of internal control systems, difficulties in

⁴³¹ A Radowan, 'Justice and Fairness in Islamic Law: A Comparative Legal Study between Law and Islamic Fiqh' (1992) *Colombia Law Review* 261, 261.

⁴³² NAK Malim, 'Islamic Banking and Risk Management: Issues and Challenges' (2015) *Journal of Islamic Banking and Finance* 64, 67.

⁴³³ IFSB, *Stability Report* (IFSB 2016) 108-109.

⁴³⁴ *Ibid.*

monitoring the general implementation of the contract, and problems with managing commodity inventories in illiquid markets. As noted above, however, the enforcement of the duty of utmost good faith mitigates these risks, although they will be lower in the case where the bank is the *Mudarib*, given that it will have skill, expertise and experience in managing similar projects within the specific legal environment. Nevertheless, it follows that where the bank is the *Rabbul-Maal*, the operational risk will be high, due to the fund manager's possible incompetence or dishonesty. Nonetheless, this is a risk that all investors are exposed to. The advantage of an Islamic bank is that the fund manager has a duty of utmost good faith. Despite this, however, what renders the *Mudarabah* and *Musharakah* problematic is that they are not secured by a collateral asset, whereby the bank or financier can recoup the investment by liquidating the assets tied to the funds in the event of default. As already explained earlier, this risk is lower in *Musharakah* agreements, since there is no silent or sleeping partner, but where the project becomes insolvent, the entire capital sum invested under both schemes is lost, given that it will rank lower than the debt instruments.⁴³⁵

Further to the above, since the *Rabbul-Maal* may withdraw its money from the fund at any time, the *Mudarib* may be confronted with enhanced liquidity risk. Both partners of the *Musharakah* will face the same risk, given that they will be obliged to rely on the counterparty's capacity to provide the funds committed and to pay the expenses of the partnership. The risk is further enhanced by the fact that Islamic banks cannot use interest-based financial instruments, which are designed for liquidity risk management, such as discount windows from the central bank, a secondary market for debt instruments, and an intra-bank market. In addition, instruments like *Bay' al Salam* may only be traded at par value, so as to avoid opening the door to interest. Hence, it is uncertain how the regulator will be able to ensure that Islamic banks secure funding liquidity, if they are not compelled to use liquidity standard protocols - such as those introduced by the Basel Committee on Banking Supervision (BCBS) - or required to implement quantitative liquidity standards, like the Basel III Liquidity Coverage Ratio.⁴³⁶ The IFSB notes that in the near future, Islamic banks are likely to face a shortage of high-quality collateral to meet the heightened regulatory requirements of Basel III.⁴³⁷

⁴³⁵ Malim, note 427 above, 67.

⁴³⁶ See Chapter 6.

⁴³⁷ IFSB, note 428 above, 108.

Banks that implement equity-based contracts also confront serious portfolio risks and as stated in Chapter 2, these include market or undiversifiable risk and idiosyncratic risk. The former relates to price, equity, and exchange or interest rate fluctuations in the general market, while the latter is a company-specific risk. There is also an important benchmark rate risk embedded in almost all products of these banks, given that they do not deal with interest-based assets. Moreover, although Islamic banks are not confronted by interest rate return risk (IRR), the value of their investments may nevertheless change, due to shifts in the return rate spread between two rates. Aside from the above, Islamic banks do not charge fixed returns on finances provided via equity-based contracts. Hence, there is a risk that returns may deviate from what is expected by depositors or investment account holders, with an asset-liability mismatch requiring the bank to reprice the mismatch. An empirical study conducted by Ariffin *et al* found that this was one of the three most important risks posed by the equity-based contracts used in Islamic banks.⁴³⁸

The *Rabbul-Maal* or rational financier requires an effective tool to manage its risk position through a bank. However, such a bank would be exclusively permitted to use Islamic instruments. Despite this serious restriction, however, some Islamic instruments may be used to effectively mitigate the risks embedded in PLS equity-based contracts. The discussion in the following section is centred on two of the most widely used instruments of this nature.

4.3.1 The Use of Sale-based and Lease Asset-based Contracts

4.3.1.1 The Murabahah

The *Murabahah* is a financing structure in the form of a sales contract, whereby one party purchases an asset and leases the asset to the other party, who subsequently makes periodic payments until the loan is repaid in full.⁴³⁹ Ownership is thus transferred to the second party. The underlying contract for deferred payment is called the *Bai-muajjal*.⁴⁴⁰ The parties must agree on the mark-up or cost-plus price for the asset. Hence, the contract is used to finance the purchase of assets, without involving interest payments.⁴⁴¹ The financier discloses the

⁴³⁸ See NM Arriffin NM, S Archer and RAA Karim, 'Risks in Islamic Banks: Evidence from Empirical Research' (2009) 10 Journal of Banking Regulation 153, 153-161.

⁴³⁹ MMT Usmani, *An Introduction to Islamic Finance* (Creative Commons 2015) 65.

⁴⁴⁰ See M Khan and M Bhati, note 13 above, 143-144.

⁴⁴¹ H Irfan, *Heaven's Bankers: Inside the Hidden World of Islamic Finance* (Overlook Press 2015) 139.

cost incurred in acquiring the asset and then adds a profit in the form of a percentage or lump sum thereon. This is quite similar to charging interest. However, as observed by Saeed, Islamic banks interpret *Riba* as occurring mainly in financial transactions whereby the borrower is obliged to pay for the use of money lent. Since, neither the Quran nor the Sunna states that any increase given to pay a debt (as in this case) is *Riba*, Islamic banks are theoretically allowed to charge a mark-up in *Murabaha* contracts. Neinhaus therefore noted as follows:

For the Islamic banks, especially their advisers in Islamic law, the prohibition of interest is not mainly an economic problem, as it is for Muslim economists who claim the allocative and distributive superiority of an interest-free system, but it is first and foremost a legal prescription. Prohibited is any predetermined positive return to the provider of capital in a purely financial transaction, that is where an entrepreneur receives from a bank liquidity or money for utilisation at his own discretion. *Murabaha*, mark-up or *Ijara*, leasing, are not such purely financial transactions, because the entrepreneur does not receive liquidity or money but real assets, i.e. merchandise or machinery.⁴⁴²

It has however been argued by some Islamic scholars that the mark-up in price is the same as financing on the basis of simple interest because they both require a fixed pre-determined return on capital.⁴⁴³ However, regardless of how the prohibition of *Riba* is construed, and whether the mark-up should be used only for trade-specific practices rather than financing schemes,⁴⁴⁴ the allocative and distributive superiority of the Islamic system is not based on the prohibition of interest but rather on the financier's obligation to disclose the cost incurred in acquiring the asset. This promotes fair trade and prevents the buyer from making an unreasonably high profit, or profit that exceeds the normal opportunity for profit derived from capital and labour costs. It then follows that the financier may only impose a penalty for late payment, if it undertakes to 'purify' the amount received as a penalty by donating it to charity.⁴⁴⁵

The fact that the financier is allowed to charge a penalty to deter late payment partially mitigates the credit risk emerging from the counterparty's delayed or deferred payments. Where the financier has already delivered the asset, it is also exposed to credit risk, if the

⁴⁴² V Niehaus, 'Islamic Economics, Finance and Banking: Theory and Practice' (1986) 3 *Journal of Islamic Banking and Finance* 39, 44.

⁴⁴³ See N Zaidi, 'Islamic Banking in Pakistan: A Review of Progress and Problems' (1988) 5 *Journal of Islamic Banking and Finance* 21, 29; MN Siddiqui, *Issues in Islamic Banking* (The Islamic Foundation 1983) 139.

⁴⁴⁴ See Z Ahmad, *The Present State of Islamic Finance Movement* (IPS 1985) 23-24.

⁴⁴⁵ B Kettell, *The Islamic Banking and Finance Workbook* (Wiley 2011) 38.

counterparty fails to make payment in time. However, this risk is not specific to *Murabahah* agreements or Islamic banks. Most banking transactions that involve the issuing of a loan or the financing of a purchase of an asset are exposed to this risk. Where the purchased asset is tied to the debt, the debt may be satisfied out of the asset's value in the event of default by the client. Thus, the asset - or any other asset of value - may be placed as collateral for the debt, in accordance with *Shariah* Standard Number 39 of the AAOIFI. The bank simply needs to include procedures in the contract for the physical repossession of the asset. The *Sukuk* and shares of Islamic financial institutions may also be used as collateral. Notwithstanding this, however, a bank's recourse will be limited to the asset being financed and no further mark-up or penalty may be applied. Given the unfairness of this restriction, some *Shariah* Boards allow banks to recover additional amounts to off-set any damage or loss caused by the client's default.⁴⁴⁶ Nevertheless, it should be added here that there is no consensus on the legitimacy of compensation for loss caused by default.

Further to the above, the financier must also confront operational risks, although these are less significant than in the equity-based transactions discussed above. This is because the financier does not rely on the client's internal control systems to identify and manage problems with operational processes. Nonetheless, due to the asset-based nature of the mode of financing, the drafting and execution of the underlying contracts may give rise to operational risks. However, once again, these risks are not specific to *Murabahah* agreements or Islamic banks.

As noted above, there is an important benchmark rate risk embedded in almost all of the products offered by Islamic banks, because they do not deal with interest-based assets. There is consequently a high probability that an investment will not meet the benchmark or minimum rate of return, where other financial institutions are trading interest-based assets on the same market. Islamic banks rely on returns receivable based on the nature of the mark-up on *Murabahah* assets (fixed in advance), or on returns on investments corresponding to market expectations.⁴⁴⁷ This is an expensive option for the bank, since it must forgo all or part of its share of the profits, in order to pay the investment account holder a rate of return

⁴⁴⁶ Z Iqbal and A Mirakhor, *An Introduction to Islamic Finance: Theory and Practice* (Wiley 2008) 89.

⁴⁴⁷ Ahmed, note 415 above, 35.

that is similar to the benchmark rate. This attempt to absorb the market risk therefore results in a displaced commercial risk.⁴⁴⁸

Additionally, for the mark-up rate, it is uncertain whether *Murabahah* agreements can use an external interest rate as a benchmark, such as the London Interbank Offered Rate (LIBOR).⁴⁴⁹ This is the average interest rate charged to leading banks in London, when they borrow from other banks. As a result, LIBOR is based on interest or *Riba*, which is prohibited under *Shariah* law. It then becomes difficult to distinguish between interest and the guaranteed profit collected by the financier from *Murabahah* transactions. This is why it has been described as a trick designed to defeat the underlying intent of *Shariah*.⁴⁵⁰ Moreover, Siddiqi emphasises that the *Murabahah* ensures the passing of any risk to which the transaction is exposed, on to the client, just as conventional banks insure risks.⁴⁵¹

Notwithstanding the above, Islamic banks may use the *Murabahah* to purchase and sell commodities, as a means of managing illiquidity or mitigating the liquidity risk that emerges from *Mudarabah* and *Musharakah* transactions. *Shariah* principles require the underlying asset to be non-perishable, uniquely identifiable and freely available. Hence, many Islamic banks use metals traded on the London Stock Exchange,⁴⁵² while others use crude palm oil.⁴⁵³ The *Mudarabah* is therefore implemented in a way that resembles the interbank deposit transactions of conventional banks. The investing bank buys the asset from a broker at cost and sells it to a client bank at cost-plus, based on deferred payment. The broker then sells the asset to another broker at cost, while the transaction may be reversed, if the investing bank faces liquidity issues.⁴⁵⁴ Some central banks, such as Bank Negara Malaysia conduct these transactions with local banks, as well as with foreign Islamic banks.⁴⁵⁵ It should however be noted that the investee bank neither possesses nor owns the underlying asset, when selling to another broker at cost. Hence, this raises issues about the legitimacy of this transaction, since it is *Gharar* for a seller to offer a product that it does not own. Furthermore, although it resolves any short-term liquidity problems created by *Mudarabah* and *Musharakah*

⁴⁴⁸ V Sundarajan, 'Risk Measurement and Disclosure in Islamic Finance and the Implications of Profit-Sharing Investment Accounts' (2007) 6th International Conference on Islamic Economics and Finance 113, 119.

⁴⁴⁹ H Visser, *Islamic Finance: Principles and Practice* (2nd edn, Elgar Publishing 2013) 66.

⁴⁵⁰ H Irfan, note 436 above, 139.

⁴⁵¹ MN Siddiqi, *Issues in Islamic Banking* (The Islamic Foundation 1983) 52.

⁴⁵² N Schoon, *Islamic Banking and Finance* (Spiramus 2010) 74.

⁴⁵³ AW Dusuki (ed), *Islamic Financial System: Principles & Operations* (International Shari'ah Research Academy of Islamic Finance 2011) 367.

⁴⁵⁴ Ibid.

⁴⁵⁵ I Sobol, note 378 above, 571.

transactions, it creates long-term illiquidity problems, due to low returns and an absence of interest.

Lastly, the instrument is of little value in an illiquid secondary market. This is an especially serious problem in Islamic finance domiciles with limited capital market activities, unless they host conventional capital and stock markets - as in the case of Pakistan's thriving Karachi Stock Exchange. This is because the secondary market would be highly likely to face illiquidity problems, where banks remained the primary or only source of funding.

4.3.1.2 The *Ijara*

The *Ijara* is also an asset-based mode of financing, which enables Islamic financial institutions to manage any risks emerging from *Mudarabah* and *Musharakah* transactions, or to securitise the debts arising from them. Using the *Ijara*, a bank may earn profit without charging interest, in accordance with *Shariah* principles,⁴⁵⁶ similar to a lease agreement in the UK. The term '*Ijara*' is derived from the term *Al-ajr*, which may be translated as 'compensation', 'reward' or 'counter value'.⁴⁵⁷ It relates to the Quranic term, *ujar*, which signifies something given in exchange for usufruct or the right to enjoy the use of another's property and its profits.⁴⁵⁸ The two main requirements of an *Ijara* contract consist of the parties agreeing to the terms of the contract, with the subject of the contract being usufruct or an agreed rental. However, the subject of the contract must actually exist and have a valuable use. Thus, assets with no usufruct cannot be leased under an *Ijara* contract and these include things that cannot be used unless they are consumed, such as oil, money or food.⁴⁵⁹ Moreover, only the usufruct is transferred to the lessee, implying that the corpus of the asset remains under the lessor's ownership. Likewise, the rental and period of the lease must be clearly defined.⁴⁶⁰

As a result, the *Ijara* contract generally carries lower risk and provides better prospects of generating profit for Islamic financial institutions, which implies that it may also be used to manage illiquidity. It is often used with forward sales modes of financing, such as *Isistna* to

⁴⁵⁶B Maurer, *Pious Property: Islamic Mortgages in the United States* (Russell Sage Foundation 2006) 48.

⁴⁵⁷ AB Abdullah and T Al-Mubarak, 'Maqasid in Risk Management: An Analysis of Ijarah Contract with Special References to Malaysia' (2015) 6 *Islam and Civilisational Renewal* 76, 77-78.

⁴⁵⁸ Ibid.

⁴⁵⁹ AMT Usmani, note 434 above, 111.

⁴⁶⁰ Ibid.

finance the construction of project assets.⁴⁶¹ Upon completion of the project, the title of the building is transferred to the bank, which then enters into a parallel *Ijara* or *Isistna* at a mark-up with a Special Purpose Vehicle (SPV) for lease or purchase of the asset. The *Isistna* ensures that the bank retains ownership of the underlying asset, in order to sell or lease it to the SPV once construction is complete.

Meanwhile, where the subject of the contract is a fungible good and the bank is required to pay the purchase price in full at the time of entering into the agreement, the forward purchase agreement is the *Salam*.⁴⁶² The risk embedded in *Salam* agreements is higher, because the bank may purchase an asset that it is eventually unable to sell. Nonetheless, it follows that the bank may enter into a *Mudarabah* or *Musharakah* agreement, if the subject is a house or other tangible asset. After paying for the construction of the house, it may then enter into a parallel *Ijara* contract at a mark-up with an SPV for the lease of the house. The *Ijara* contract consequently absorbs any shocks from the *Mudarabah* or *Musharakah* agreement.

The *Sukuk* or *Shariah*-compliant bond also offers strong potential for the securitisation of a secondary market for *Ijara* assets. Standard 17 of the AAOIFI describes the *Sukuk* as “securities of equal denomination representing individual ownership interests in a portfolio of eligible existing or future assets”. Although the structure of the *Sukuk* may be based on both equity-based and asset-based contracts, the *Ijara Sukuk* is the most widely used, as indicated above.⁴⁶³ The *Sukuk* involves investment in tangible assets and pays profit rather than interest.⁴⁶⁴ Where the *Sukuk* securities have joint ownership of an asset purchased by an investment company or special purpose vehicle, the *Sukuk* holders will be entitled to collect rent on the asset as profit. However, the *Sukuk* holders will not be the owners of the asset, since only the usufruct is transferred to them. Given that the *Sukuk* is asset-backed, however, the probability of default is low and in theory, the credit and operational risk will also be low.

The *Ijara Sukuk* is often used by Islamic financial institutions in their liquidity management. Where the government as the originator sells an asset to an SPV, which is acting for an investment company, the SPV securitises the asset and sells *Sukuk* certificates to investors. The SPV will then be able to pay for the asset with the proceeds from the sale of the *Sukuk*

⁴⁶¹ AJ Alexander, ‘Shifting Title and Risk: Islamic Project Finance with Western Partners’ (2011) 32 Michigan Journal of International Law 571, 593-594.

⁴⁶² FA Qureshi and MM Millet, Introduction to Islamic Finance (2002) Harvard Business School Series No 9-200-002, 5.

⁴⁶³ See also, I Sobol, note 378 above, 572.

⁴⁶⁴ A Mirakhor and I Zaidi, ‘Profit-and-Loss Sharing Contracts in Islamic Finance’ in MK Hassan and M Lewis (eds), *Handbook of Islamic Banking* (Edward Elgar 2007) 53.

certificates. In turn, the asset is leased back to the government, which makes rental payments. These are then passed to the certificate holders as profit. Islamic banks may therefore manage liquidity by purchasing *Ijara Sukuk* as a means of rental income. When they face liquidity problems, they may sell the certificate on the secondary market to obtain liquidity, but where the secondary market is illiquid, they may sell the certificate to the central bank.⁴⁶⁵

Notwithstanding the above, the legitimacy of this risk management scheme is questionable, since in many cases, the underlying assets are not readily available; implying that the *Sukuk* is actually asset-based, rather than asset-backed. *Sukuk* holders are only granted beneficial ownership, which is in fact an unsecured debt claim against the originator. However, *Shariah* requires a true sale transaction, where full ownership is transferred to the buyer. Moreover, Warde raised an important concern relating to what would happen to *Sukuk* in the event of failure and whether certificate holders will be treated as creditors or owners of the underlying asset.⁴⁶⁶ Nevertheless, it is unlikely that they will be treated as owners in relation to transactions based on the *Ijara Sukuk*, given that it is essentially a lease agreement. Moreover, they will be unsecured creditors.

4.4 PLS Equity-Based Modes and the Resilience of Islamic Banks

Chapter 2 clarified that not all financial institutions are equally vulnerable to failure during financial crises and that the most vulnerable institutions are those exposed to liquidity and credit risk; prone to excessive risk-taking, and unable to sell their assets or obtain liquidity from local sources as a means of returning to target leverage. Although Chapter 3 then revealed that Islamic financial institutions do not possess better risk management models and Islamic regulators cannot readily identify the different categories of risk emerging from the Islamic financial market, Islamic banks are able to provide capital and generate profits using PLS equity-based schemes with a low total risk load. This is especially the case where the banks use sales-based and lease asset-based contracts to mitigate the liquidity, market and credit risk arising from equity-based schemes.

Additionally, the exposure brought about by the above-mentioned schemes is limited. The special credit risk embedded in *Mudarabah* investments and *Musharakah* transactions is

⁴⁶⁵ See M Ayub, *Understanding Islamic Finance* (John Wiley & Sons 2010) 374-375.

⁴⁶⁶ I Warde, note 132 above, 152.

mitigated by the counterparty's duty of utmost good faith and mutual trust, which are sustained by the belief that contracts are trade instruments endorsed by the Holy Scriptures. Thus, since *Mudarabah* and *Musharakah* contracts are essentially *Ubberimae Fidei* or good faith contracts, they are based on full disclosure and transparency on the part of the *Mudarib* and the alignment of the parties' interests. It follows that the risk of moral hazards and of agency and information failure or asymmetry are mitigated. Equally, credit risk will only be enhanced, if the bank fails to conduct a suitable risk analysis prior to entering into an agreement, or if it fails to monitor the *Mudarib*. This risk will be even lower in *Musharakah* transactions, where the bank participates in the actual project management; making it easier to assess and manage credit risk. The most serious risks facing banks that use these PLS equity-based schemes comprise liquidity risk, market risk and rate of return risk.

However, banks may use a sales-based instrument, such as the *Murabahah* to manage illiquidity. This takes place in a way that is similar to the interbank deposit transactions of conventional banks. For instance, the bank buys the asset from a broker at cost and sells it to a client bank at cost-plus, based on deferred payment. The latter then sells the asset on to another broker at cost and the transaction may subsequently be reversed, if the investing bank faces liquidity issues. The bank may also use a lease asset-based instrument, such as the *Ijara*. It will consequently enter into an equity-based agreement, with a tangible asset as its subject; paying for the asset and entering into a parallel *Ijara* contract at a mark-up with an SPV for the lease of the asset. This will ensure that the *Ijara* contract absorbs any shocks from the equity-based agreement.

Irrespective of the above, a very important risk confronted by Islamic banks and one that is not mitigated by the above-mentioned instruments is rate of return risk, relating to the benchmark rate risk. This is because these instruments do not allow banks to reprice asset-liability mismatches. The risk of returns deviating from what depositors or investment account holders expect is heightened by the fact that the latter often expect returns that are similar to benchmark rates. However, the use of the *Murabahah* to mitigate this risk is rather expensive, as demonstrated above, since the bank must forgo all or part of its share of the profits, in order to pay the depositor a rate of return on a par with the benchmark rate.

Islamic banks are in a particularly difficult position, because they can only use an Islamic tool to hedge benchmark rate risk. The hedging tools available to them are limited to the liquidity mismatch between short-term funding, and long-term financing and investing, implying that

there are few liquid hedging tools available to them. Moreover, as noted in Chapter 3, although there are countless derivative products on the standard market, which could be used for hedging, Islamic banks cannot use derivatives, because they are not *Shariah*-compliant. Islamic banks therefore often use *Murabahah* contracts to manage liquidity risks. Thus, an appropriate tool could be the profit rate swap to the bank from fluctuations in borrowing rates. This would involve exchanging profit rates between a floating rate party and a fixed rate party, through the execution of an underlying contract.⁴⁶⁷ The *Waad* contract provided by each counterparty would then ensure that the swap reaches maturity.⁴⁶⁸ This is because the counterparty undertakes to enter into the relevant commodity trade. Moreover, Islamic banks may issue *Sukuk* certificates to ensure securitisation.

Overall risk may also be reduced or eliminated by profit equalisation reserves or investment risk reserves. These reserves offer returns that are based on the market rates of return on specific benchmarks, such as conventional deposits.⁴⁶⁹ They may also be used to redistribute the income accrued to investment funds.

4.5 Regulatory Challenges Posed by PLS Modes

Despite the fact that the use of PLS equity-based instruments, supplemented by sales-based and assets-based contracts (as shown above) mitigates the embedded risks and renders Islamic banks more resilient to financial crises, equity-based instruments pose remarkable challenges to regulators. This is one of the main points against the widespread acceptance of these Islamic modes of financing. Financial service regulators are unable to identify the sources of risk emerging from equity-based contracts, how these are managed at banking level, or how they interact with external forces.

The first challenge posed is the lack of a well-defined legal framework, as there are no commercial laws tailored towards the implementation of PLS contracts. This explains the uncertainty surrounding the legal forms of the *Mudarabah* and *Musharakah*. As discussed above, the *Musharakah* is closer to a legal partnership (*Shirka*), because a key characteristic of the *Shirka* is the mixing of capital shares, but under the *Mudarabah*, there is no such

⁴⁶⁷ R Ramasamy et al, 'Basic Pricing Methodology for Islamic Profit Rate Swap' (2011) 11 Global Journal of Management and Business Research 37, 37-39.

⁴⁶⁸ See S Zineb and M Bellalah, note 6 above, 60-62.

⁴⁶⁹ See AME Ahmed, note 407 above, 124; AM Vernados, note 377 above, 76.

mixing, with only the silent party providing the capital. Nonetheless, there is some uncertainty as to whether the *Musharakah* has developed to a point where it may no longer be recognised as a partnership. Although Jersey accounts for 8% of publicly accounted Islamic funds,⁴⁷⁰ parties may only establish the *Mudarabah* in tandem with limited partnerships. Thus, the *Mudarabah* is not treated as a limited partnership *stricto sensu*.

Nevertheless, it is important that these equity-based instruments should take a specific legal form, in order to define the relationship between the parties and determine their rights and liabilities in a consistent manner. It has been pointed out that an important distinction between business forms involves the issue of whether or not the business has a legal existence.⁴⁷¹ This will determine whether the business is a legal entity and whether the liability of its members is limited or unlimited. It is also held that a proper basic liability rule is the most important contract law issue.⁴⁷² Thus, the allure of the *Mudarabah* and *Musharakah* must lie in their unique ability to bring together certain key features. Such clarity may facilitate the parcelling out of liability by the regulator, in the event of relevant laws being violated, while the lack of clarity may be explained by the absence of uniform standards, which can be enforced by the regulator. The supervisory and regulatory authorities should in fact be able to ensure the enforcement of uniform standards to prevent the accumulation of risks, which then become systemic risks.

Ironically, an important associated risk inherent within all instruments used by Islamic banks is the *Shariah* risk. This pertains to the interpretation of *Shariah* principles by the bank's *Shariah* Board, which may vary from one jurisdiction to another.⁴⁷³ For example, where the *Musharakah* is treated as an unlimited partnership, the partners' liability should be unlimited. Moreover, diverse interpretations result in the use of different financial reporting, auditing and accounting standards and the *Shariah* Board of one financial institution may adopt non-standard practices or measures, which would simply be considered non-compliant with *Shariah* by other *Shariah* Boards. This is why it is indicated above that the legitimacy of instruments such as the *Ijara Sukuk* is contentious in some quarters.

⁴⁷⁰ It is the third largest domicile for Islamic funds after Saudi Arabia and Malaysia. See IFSB, note 44 above, 109.

⁴⁷¹ Stephen Judge and Imogen Moore, *Company Law* (4th edn, Oxford University Press 2014) 1-2.

⁴⁷² J Smits, 'Diversity of Contract Law and the European Internal Market' in J Smits (ed), *The Need for a European Contract Law: Empirical and Legal Perspectives* (Europa Law Publishing 2005) 146.

⁴⁷³ See Chapter 5.

In some jurisdictions, there are established standards to be complied with by Islamic banks.⁴⁷⁴ In Indonesia for example, the National *Shariah* Board issues fatwas or authoritative legal opinions on Islamic banking products and the latter are bound by these opinions.⁴⁷⁵ There are fatwas on *Mudarabah*, as well as on *Musharakah*, *Ijara*, *Istisna*, and *Salam*. In Bahrain, the Central Bank requires all Islamic banks to set up an independent *Shariah* Supervision Committee, in accordance with the standards published by the AAOIFI,⁴⁷⁶ to which Bahraini banks must comply. However, the Central Bank does not act as the regulatory and supervisory authority; each bank's board will ensure that their products comply with AAOIFI standards, as well as with other *Shariah* rules. In Pakistan, the Banking Companies Ordinance of 1962 required banks to offer products that comply with the Islamic modes established by the State Bank of Pakistan's *Shariah* Board. Each bank is required to appoint a *Shariah* Advisor, who is tasked with approving products and issuing opinions. The role of the *Shariah* Board of the State Bank is therefore largely advisory, although its opinion prevails over that of the *Shariah* Advisor. Meanwhile, in Nigeria, the Central Bank requires all Islamic banks to appoint a *Shariah* Advisory Committee to advise the senior management and board of directors on compliance with *Shariah* principles.⁴⁷⁷ Where the members of the Advisory Committee have conflicting opinions, the matter may be referred to the *Shariah* Council of the Central Bank.

It follows from the above that there is no common regulatory approach; standards and practices are fragmented, reflecting specific cultural, political and legal environments. They are consequently based on the opinions of the *Shariah* Board of each bank and to a lesser extent, on the National *Shariah* Board of the Central Bank. It is therefore difficult to evaluate the strength and effectiveness of the regulation of Islamic banks in general, even within a single jurisdiction. It is also difficult for the prudential authority to determine whether individual banks have adopted appropriate risk management strategies and reporting processes, with regard to the risk characteristics of the above-mentioned equity investments. At present, parties to *Mudarabah* and *Musharakah* agreements are simply required to agree on appropriate valuation methodologies. However, such agreement does not mitigate any risk, where one party lacks sufficient knowledge or skill in assessing valuation

⁴⁷⁴ See H van Greuning and Z Iqbal, note 355, 192.

⁴⁷⁵ See Karim Ginena and Azhar Hamid, *Foundations of Shariah Governance of Islamic Banks* (Wiley 2015) 350.

⁴⁷⁶ See Kabir Hassan and Michael Mahlknecht, *Islamic Capital Markets: Products and Strategies* (Wiley 2011) 320.

⁴⁷⁷ IMF, *Nigeria: Financial Sector Stability Assessment* (IMF 2013) 43.

methodologies. This leads to information asymmetry, as mentioned earlier. Where the party with the requisite knowledge or skill is the bank, the risk will be even higher, since the only regulatory body able to intervene will be the bank's own *Shariah* Board.

The difficulty of developing tangible regulatory measurements based on diverse interpretations of *Shariah* principles delineates the legal risks confronted by Islamic banks. These risks are nonetheless mitigated in jurisdictions where there are standard guidelines geared towards helping supervisors and regulators develop appropriate measurements. Attempts have been made to establish international standards, which address the specific risks to which Islamic banks are exposed and the requisite infrastructure for effective regulation. Some of these standards are critically analysed in Chapter 5, in order to determine whether they enhance regulatory clarity and improve supervisory instruments.

4.6 Conclusion

Under equity-based PLS modes, clients deposit money with a bank and receive no interest but are entitled to a predetermined share of the bank's profits. This implies that the bank can either be the *Mudarib* or *Rabbul-Maal*, depending on whether it is investing money deposited by a client, or investing in a general partner's enterprise. What is important is that both parties agree on how the risk is shared. This is why it is noted above that equity-based modes are based on an alignment of the parties' interests. Risk-sharing establishes a moral difference between financing on a PLS basis and loans issued by conventional banks.⁴⁷⁸ It must be clarified here, however, that usury was once also banned in many European countries and interest was only tolerated as an exception, where the debtor had inflicted damage through default. This exception subsequently became generalised, when a theory of interest was developed to justify interest at the creation of the loan, rather than at the end.⁴⁷⁹ Hence, interest-free financing on a PLS basis has a strong moral foundation. Theoretically, PLS operations should mitigate liquidity risk, since they appear on both sides of the balance sheet; the fact of depositors sharing risk with the bank on the liability side absorbs any shocks on the asset side. PLS operations are also based on mutual trust and good faith, which mitigate the moral hazards, agency risks and information asymmetry risks. In addition, where the bank

⁴⁷⁸ A Jonsen and S Toulmin, *The Abuse of Casuistry* (University of California Press 1988) Chapter 9.

⁴⁷⁹ J Oldham, *English Common Law in the Age of Mansfield* (University of North Carolina Press 2004) 164-169

is the *Mudarib*, the operational risk is lower, given that the bank will have skill, expertise and experience in managing similar projects within the specific legal environment.

Other risks embedded in equity-based transactions may be mitigated by the use of sales-based instruments, such as the *Murabahah*, and assets-based instruments, such as the *Ijara*. This is how Islamic banks can provide capital and generate profits using PLS equity-based schemes with a low total risk load. Islamic banks using these schemes match the profile of institutions that are generally more resilient to financial crises, as described in Chapter 2. They are less exposed to liquidity and credit risk, averse to excessive risk-taking, and can sell their assets (such as *Sukuk*) and obtain liquidity from local sources, so as to return to target leverage.

However, it has been noted that since the investee bank neither possesses nor owns the underlying asset of the *Murabahah*, when selling to another broker at cost, it raises issues over the legitimacy of this transaction. It represents *Gharar* for a seller to offer a product it does not own. Additionally, it is difficult to distinguish between interest and the guaranteed profit collected by the financier from *Murabahah* transactions. The legitimacy of the *Ijara Sukuk* may subsequently be questioned, given that in many cases, the underlying assets are not readily available, which in turn implies that there is no real sale transaction and a *Sukuk* holder will only have an unsecured debt claim against the originator.

Nonetheless, the most important flaw in PLS equity-based schemes is the lack of tangible regulatory measurement based on common interpretations of *Shariah* principles. The uncertainty surrounding regulatory standards thus renders it difficult to transpose these schemes to other, especially non-Islamic, jurisdictions. Moreover, the absence of clear regulatory standards makes it difficult for regulatory and supervisory authorities to compel all Islamic banks within their jurisdiction to conduct robust stress tests to identify and mitigate risks. Irrespective of this, the use of equity-based schemes only resolves short-term liquidity problems, but creates long-term illiquidity problems, due to low returns and an absence of interest, as illustrated earlier. This may explain why only a small proportion of the assets of most Islamic banks constitute equity. It may then be argued that many Islamic banks were unaffected by the financial crisis of 2007-09, due to limited exposure, especially to foreign counterparties in PLS equity-based agreements. In this light, the next Chapter critically examines and compares the management of risk by banks in KSA, as well as the regulation of these institutions. It seeks to determine whether the financial crisis of 2007-09 could have

been triggered by interest-free Islamic banks using PLS equity-based instruments to provide clients with capital.

Chapter 5

Ascertaining the Resilience of Islamic and Conventional Banks in the Regulatory Environment of Saudi Arabia

5.1 Introduction

It was noted in Chapter 4 that Islamic banks are generally more resilient to financial crises than conventional banks. However, this is only in instances where Islamic banks provide capital and generate profits using profit-and-loss sharing (PLS) equity-based schemes, with a low total risk load. It was also noted that the most serious flaw of PLS equity-based schemes is the lack of tangible regulatory measurements based on common interpretations of *Shariah* principles. This Chapter verifies the observation that Islamic banks using PLS modes are more resilient to financial crises. The focus is on assessing the regulatory framework that governs the PLS schemes. The performance of Islamic banks using these schemes is evaluated in comparison to conventional banks within the regulatory environment of the Kingdom of Saudi Arabia (KSA). In this regulatory environment, Islamic and conventional banks are required to comply with the same laws and regulations.

This Chapter begins with an analysis of the legal and regulatory framework that accommodates Islamic and conventional banks. It then assesses the measures taken by policy-makers and regulators in the KSA to ensure that the regulations account for the specific risks emanating from all *Shariah*-compliant products and services. This is especially important in the KSA, where regulators have adopted Basel Standards and approaches, although the Basel Committee on Banking Supervision (BCBS) has failed to consider the specific risks embedded in Islamic products.

The performances of Islamic banks and conventional banks in the KSA during the financial crises of 2007-09 and 2014 are compared. The objective is to determine whether interest-free Islamic banks using PLS modes of financing were more resilient to these crises. Lastly, this Chapter seeks to determine whether the use of these modes of financing in the US could have prevented the crisis and if so, how Islamic banks could be accommodated within the US regulatory framework.

5.2 The Legal and Regulatory Framework

KSA is a monarchy with no written constitution. Nonetheless, the Basic Law of Governance, promulgated by Royal Decree No. A/90 of March 1, 1992, outlines the responsibilities of the Kingdom's governing institutions. It also affirms in Article 1 that the fundamental law is *Shariah*, derived from the Quran and *Sunnah* of the Prophet Muhammad. *Shariah* therefore prescribes and regulates the implementation of all laws in KSA. Section 44 of the Saudi Basic Law provides that legislative, executive and judicial authorities are empowered to enact, enforce and interpret *Shariah*. Meanwhile, Article 51 describes the judicial authorities as comprising the *Shariah* court system, Board of Grievances, and quasi-judicial committees. Examples of such committees include the Capital Market Authority (CMA), which supervises the offer of securities regulations;⁴⁸⁰ the Banking Disputes Settlement Committee of the Saudi Arabian Monetary Agency (SAMA), and the Commercial Papers Committee and Anti-Commercial Fraud Committee⁴⁸¹ of the Ministry of Commerce and Investment.⁴⁸² SAMA regulates and supervises the insurance industry in accordance with the Cooperative Insurance Companies Control Law promulgated by Royal Decree No. M/32 on 8 January, 2003.

In addition to the above, SAMA regulates and supervises banks under Banking Control Law (BCL) promulgated by Royal Decree No. M/5 and dated 11 June, 1966.⁴⁸³ This law remains in force, since it has neither been repealed, nor substantially amended.⁴⁸⁴ The BCL is the main statute governing the regulation and supervision of 13 nationally licensed commercial banks, as well as 14 foreign-licensed commercial banks in KSA.⁴⁸⁵ However, only four of these banks are Islamic or fully *Shariah*-compliant,⁴⁸⁶ while the others provide a mix of conventional and *Shariah*-compliant products and services. The fact that only four out of the 27 banks operating in KSA are fully *Shariah*-compliant may explain why the BCL does not

⁴⁸⁰ See FS Al Kahtani, 'Current Board of Directors' Practices in Saudi Corporate Governance: A Case for Reform' in SO Idowu and KT Carliyurt (eds), *Corporate Governance: An International Perspective* (Springer-Verlag 2014) 308-310.

⁴⁸¹ It enforces the Anti-Commercial Fraud Law that was promulgated by Royal Decree No. M/19 of April 29, 2008.

⁴⁸² A Shoult, 'Privatisation and Economic Reforms' in A Shoult (ed), *Doing Business with Saudi Arabia* (GMB Publishing 2006) 94.

⁴⁸³ For an overview of the supervisory powers of SAMA, see MA Ramady, *The Saudi Arabian Economy: Policies, Achievements, and Challenges* (2nd edn, Springer 2010) 75-110.

⁴⁸⁴ For a critical analysis of the amendments, see AK Huwaydi, *Banking Control Law 1966 in Saudi Arabia, Shortcomings and Development* (Unpublished, PhD Dissertation, University of Essex 2015) 222-225.

⁴⁸⁵ The Industrial and Commercial Bank of China has been licensed but is yet to begin operations. See SAMA, 'Foreign Banks Branches.' Available at <http://www.sama.gov.sa/en-US/License/Pages/InternationalBanks.aspx> [04 December 2017].

⁴⁸⁶ These include Al-Rajhi Bank, Al Jazira Bank, Al-Bilad Bank, and Alinma Bank.

provide a specific legal framework for Islamic banks. Unlike so many other Islamic states, such as Egypt, Jordan, Kuwait, Indonesia and Sudan, there is no national *Shariah* board in KSA. Neither is there a *Shariah* Supervisory or Advisory Board comprising jurists specialised in Islamic commercial jurisprudence, who can certify Islamic financial products nationwide and issue a *fatwa* or legal opinion.⁴⁸⁷ Article 1 of the 1957 SAMA Charter provides that the agency regulates commercial banks and exchange dealers, but makes no mention of Islamic commercial banks or even Islamic products. This may be due to the fact that the Islamic financial industry was only revived as recently as 1963,⁴⁸⁸ six years after the enactment of the SAMA Charter. Nonetheless, the Charter could be modified to take into account the unique nature of Islamic finance.

The KSA financial market is regulated by Capital Market Law (CML) promulgated by Royal Decree No. M/30 of 31 July, 2003. The CML requires the development of procedures geared towards reducing the level of risk related to securities transactions.⁴⁸⁹ It broadly empowers the CMA to regulate the issuance of securities and monitor any dealings in them. Nonetheless, just like BCL and the SAMA Charter, the CML does not offer clear guidelines to traders in Islamic instruments, such as *Sukuk* or shares in Islamic banks. It therefore follows that the law in KSA does not distinguish between Islamic instruments and conventional debt instruments, based on the nature of the financial institution from which they originate, with the CMA regulating the issuance of all these instruments using the same rules and regulations. These include the CMA Listing Rules and the CMA Offer of Securities Regulations.⁴⁹⁰ Although these Rules and Regulations were issued in 2004, they make no mention of *Shariah* or even *Sukuk*. Moreover, the CMA Committee for the Resolution of Securities Disputes entertains disputes within the framework of the Resolution of Securities Disputes Regulation. This was established by the CMA Board in 2011 and amended in 2016. However, the Regulation makes no mention of any disputes relating to the issuance of Islamic bonds.

Hence, the CMA issues the requisite rules and regulations for creating an environment that is conducive to growth and enforces the transparency and disclosure standards of listed

⁴⁸⁷ For an assessment of the role of the National Shariah Board, see MA Khan, *What is Wrong with Islamic Economics?: Analysing the Present State and Future Agenda* (Edward Elgar 2013) 316.

⁴⁸⁸ See K Hassan and M Lewis, *Handbook of Islamic Banking* (Edward Elgar 2007) 401.

⁴⁸⁹ FS Al Kahtani, note 475 above, 309.

⁴⁹⁰ See GBA Gouda, 'The Saudi Securities Law: Regulation of the Tadawul Stock Market, Issuers, and Securities Professionals under the Saudi Capital Market Law of 2003' (2012) 18 *Annual Survey of International and Comparative Law* 115, 134-139.

companies,⁴⁹¹ without regard to whether or not a financial institution is *Shariah*-compliant. Islamic banks have *Shariah* Supervisory Boards, which determine whether they are *Shariah*-compliant, although if they are not, it does not invalidate the process or product. This is somewhat confusing, given that the legal system in KSA is based on *Shariah*. Surely, if an institution or person acts in a way that contravenes *Shariah* rules, such conduct should be illegal. Nonetheless, given the absence of standardised regulations, it is sometimes difficult to determine whether certain conduct or a product is *Shariah*-compliant - reliance on banks' *Shariah* Supervisory Boards can be problematic, as shown in Chapter 4, given that the legal opinions of different Boards may conflict with each other. A good example of this is a debate that followed an interest-based loan taken out by the Yanbu National Petrochemical Company (YANSAB), where the CMA subsequently approved YANSAB's initial public offering of 35% of its shares on the KSA market. It was argued in some quarters that CMA's approval of the offering was justified by the fact that YANSAB's main activities were *Shariah*-compliant.⁴⁹² However, other observers contended that the CMA should have rejected the offering, because YANSAB had failed to meet the requisite standard, due to its involvement in activity that was not *Shariah*-compliant.⁴⁹³ Moreover, it is uncertain whether the same argument would arise, where a financial institution's activities were only indirectly related to instruments that were not *Shariah*-compliant. This would in fact be a very difficult standard to uphold, given that the Saudi riyal is committed to a long-standing exchange rate peg to the US dollar.⁴⁹⁴ The consequence is that SAMA's key policy rate is linked to interest rates in the US, which is quite beneficial to SAMA, since it enables it to anchor monetary policy at the short end, while liquidity conditions in the country stabilise long-term rates.⁴⁹⁵ Nevertheless, fluctuating interest rates in the US have a significant impact on SAMA, despite interest being outlawed in KSA.

Notwithstanding the above, KSA has a distinct regulatory framework, whereby transparency and disclosure standards are enforced without regard to whether or not the financial institution is *Shariah*-compliant. The same rules apply to both conventional and Islamic banks. Given that the BCBS seeks to promote convergence toward common standards and

⁴⁹¹ K Hassanmet al, *Islamic Capital Markets: Products and Strategies* (John Wiley & Sons 2011) 102.

⁴⁹² A Al Elsheikh and J Tanega, 'Sukuk Structure and Its Regulatory Environment in the Kingdom of Saudi Arabia' (2011) 5 *Law and Financial Markets Review* 183, 184.

⁴⁹³ Ibid. See also, A Alshamrani, 'Sukuk Issuance and Its Regulatory Framework in Saudi Arabia' (2014) 2 *Journal of Islamic Banking and Finance* 305, 330.

⁴⁹⁴ A Al-Hamidy and A Banafe, 'Foreign Exchange Intervention in Saudi Arabia' (2012) BIS Papers No. 73. Available at: <https://www.bis.org/publ/bppdf/bispap73v.pdf> [04 December 2017] 301.

⁴⁹⁵ Ibid, 302-305.

approaches, SAMA has logically adopted the Committee's supervisory standards and guidelines. This has no doubt facilitated the process of regulating each type of bank with the same approach. The following subsection shows how this has been achieved.

5.2.1 The Implementation of Basel Standards

Given KSA's unique regulatory environment, where Islamic and conventional banks are required to comply with the same laws and regulations, SAMA has consistently exercised its powers under the BCL and SAMA Charter to implement Basel requirements, with a few exceptions, such as the definition of high quality liquid assets or securities.⁴⁹⁶ In some instances, SAMA has also imposed stricter requirements than those recommended by the BCBS. It is argued here that this ensures that the unique risks embedded in some Islamic products are covered.

SAMA has issued regulations based on Basel II (as amended) and Basel III, with no challenge to the validity of the regulations in any court of law.⁴⁹⁷ Thus, Islamic banks in KSA, including Al Rahji Bank, the largest Islamic bank in the world,⁴⁹⁸ have avoided raising the issue with SAMA of these standards not being tailored towards Islamic finance. This is regardless of the fact that it should have happened, if these banks had felt compelled to apply standards that did not comply with *Shariah*, because neither the Charter nor the BCL grants legal protection to SAMA in either its regulatory or supervisory capacity. SAMA requires the Basel framework to be applied to every tier within each banking group, including foreign banks that are active on a fully consolidated basis.⁴⁹⁹ The objective here is to capture risk in a holistic way and to ensure that banks' risk exposure is backed by high quality capital. This amounts to an attempt to ensure that each bank maintains a level of capital that is commensurate with its risk profile. In July 2009, SAMA issued Circular No. BCS 769, which specifically required banks in KSA to devise policies and set up systems and processes that are compliant with Basel II Standards. It also included guidelines in this regard. In December

⁴⁹⁶ BCBS, *Regulatory Consistency Assessment Programme (RCAP): Assessment of Basel III Liquidity Coverage Ration Regulations – Saudi Arabia* (BCBS 2015) 4. This is because the Basel standard requires assets it considers high quality liquid assets to be traded in large and active markets that have a low level of concentration. However, there is no liquid market in KSA for such assets.

⁴⁹⁷ Ibid, 19.

⁴⁹⁸ In 2008, this bank had Shariah-compliant assets that totaled about 44 billion US dollars and represented 31.8 per cent of the Islamic banking market of the KSA. See FA Lone, *Islamic Banks and Financial Institutions: A Study of their Objectives and their Achievements* (Palgrave Macmillan 2016) sections 2.3 and 3.7.

⁴⁹⁹ See H Banafe and R McLeod, *The Saudi Arabian Monetary Agency, 1952-2016: Central Bank of Oil* (Palgrave Macmillan 2017) chapter 13.

2012, SAMA issued its Final Guidance on the implementation of capital reforms under the Basel III framework and in July 2014, it issued its Final Guidance on the implementation of the Basel III internal ratings-based approach to credit risk.⁵⁰⁰

In short, SAMA has generally reproduced Basel III requirements to enhance the management of credit risk, market risk, operational risk and liquidity risk by banks in KSA. For example, Circular No BCS 5611 requires KSA banks to comply with Basel III's rules on the point of non-viability. Hence, any bank seeking to issue an additional Tier 1 or Tier 2 capital instrument must adopt a contractual loss absorption mechanism, which can be activated by the bank's non-viability or a trigger event. However, it is important to note here that Basel III's requirements regarding non-viability do not apply, where local laws require Tier 1 and Tier 2 instruments to be written off on the point of non-viability. Thus, rather than enact regulations to such effect, which would ensure that the instruments fully absorb any losses before they become systemic, SAMA has opted to reproduce the Basel requirements. SAMA has likewise reproduced Basel III requirements on capital conservation and countercyclical buffers.⁵⁰¹

The Basel Liquidity Coverage Ratio therefore applies to all 13 nationally licensed banks in KSA, whether Islamic or conventional. The first liquidity coverage ratio standard was introduced by SAMA through Circular No. BCS 7390 of 8 February, 2012. Three major revisions were issued over three subsequent years. The effect of the Circular and regulations was that all commercial banks in KSA are subject to Basel III liquidity coverage ratio standards, with SAMA being able to impose corrective measures or fines in the event of breach. It may also take supervisory action to ensure compliance with its regulations.

Interestingly, the way in which SAMA regulates both Islamic and conventional banks using the same instruments has not resulted in any deviation from the Basel Standards.⁵⁰² For example, SAMA has issued a Circular to banks stipulating the implementation of Basel principles for sound liquidity risk management (Sound Principles) and application of liquidity monitoring tools. The Sound Principles were introduced through Circular No. 771 of December 2008, requiring all commercial banks to assess their level of compliance with these

⁵⁰⁰ Copies of these circulars and the guidelines can be found on SAMA's website.

⁵⁰¹ BCBS, *Assessment of Basel III Risk-Based Capital Regulations: Saudi Arabia* (BCBS 2015) 11-12.

⁵⁰² Ibid, 5.

Principles.⁵⁰³ Nonetheless, although Basel II (para. 651) encourages banks to comply with these Principles using the basic indicator approach, SAMA imposes compliance on banks in KSA. The basic indicator approach is a risk measurement technique that is suitable for banks with non-significant international operations; banks are required to hold capital for operational risk that is equal to the average over the past three years of a fixed percentage of positive gross income for each year.⁵⁰⁴ It must however be noted that the BCBS published a revised standardised approach for operational risk in December 2017. This replaces the approach in the Basel II framework. It is based on the Bank Indicator or a measure of the bank's income, and the Internal Loss Multiplier or a measure of the bank's historical losses.⁵⁰⁵ Nonetheless, SAMA's guidelines complement the approaches in the Basel II and Basel III frameworks. Given that Islamic banks in KSA do not have significant international operations beyond the Cooperation Council for the Arab States of the Gulf (GCC) countries, the imposition of the basic indicator approach on all banks is of benefit to the Islamic banks.

What emerges over the course of this clarification is the requirement for KSA banks to set up processes for the active management of liquidity risk. In this regard, SAMA has issued guidelines that complement Basel II's Pillar II stress test.⁵⁰⁶ The objective of this is to ensure that each bank operates at a level of risk that is commensurate with its liquidity profile. The bank must also maintain an adequate level of liquid assets, clearly determining its liquidity risk tolerance and devising an appropriate strategy to maintain its stability. Equally, SAMA requires the involvement of senior management to define, approve and monitor the above processes, similar to the recommendations of the BCBS.⁵⁰⁷

Out of all the Sound Principles, one of the most important is Principle 13, which requires banks in KSA to disclose liquidity-related information to the public on a regular basis. This is intended to enable market participants to assess the soundness of each bank's risk management strategy and liquidity position.⁵⁰⁸ This disclosure is beneficial to Islamic banks, because (as noted in Chapter 4), certain important Islamic modes, such as the *Mudarabah* and *Musharakah* require a high level of financial disclosure and transparency, in that the parties

⁵⁰³ For an overview of the Principles, see BCBS, *Principles for Sound Liquidity Risk Management and Supervision* (BCBS 2008) 6-36.

⁵⁰⁴ See K Sophastienphon and A Kulathunga, *Getting Finance in South Asia 2009: Indicators and Analysis of the Commercial Banking Sector* (The World Bank 2008) 88.

⁵⁰⁵ See BCBS, *Basel III: Finalising Post-Crisis Reforms* (BCBS 2017) 128-133.

⁵⁰⁶ Stress-testing in the KSA is discussed below.

⁵⁰⁷ This is also in accordance with Principles 2-4 of the Sound Principles. See BCBS, note 498 above, 32.

⁵⁰⁸ *Ibid*, 33.

need to be thoroughly informed about the capital and in a manner that minimises or eliminates any possibility of ambiguity or uncertainty.

Liquidity monitoring tools were introduced in KSA through Circular No. 351000147086, issued in September 2014. This Circular proposed a specific risk management strategy for adoption by banks. For example, banks are required to define their monitoring tools as part of the risk management process and submit monthly returns. These tools capture specific data on certain market indicators, as well as on cash flow, the quality of any available unencumbered assets, and the balance sheet structure of each bank. These data help supervisors assess the liquidity risk of each bank. Thus, the tools monitoring contractual maturity mismatch profiles identify any gaps indicating the amount of liquidity each bank must raise in each specific time band. Banks must also identify any sources of wholesale funding that are of such importance that withdrawal of the funding could cause serious liquidity problems. This is very important for Islamic banks, given that in PLS equity-based agreements, the *Rabbul-Maal* may withdraw their money from the fund at any time.

SAMA is empowered by the BCL to conduct regular on-site inspections. Banks are consequently required to provide information on their risk management processes, while SAMA may thereby evaluate their operations and systems of internal control and management. SAMA therefore regularly assesses all commercial banks in KSA to identify any risks that they might be exposed to, while at the same time ensuring that they maintain adequate liquid assets and operate at a level of risk that is commensurate with their liquidity profile. It follows that SAMA is justified in implementing the same regulations with regard to both Islamic and conventional banks, since any bank that does not maintain an adequate level of liquid assets is likely to confront problems of illiquidity, irrespective of whether or not its processes are *Shariah*-compliant.

Notwithstanding the above, the uniqueness of Islamic finance cannot be overlooked. It was demonstrated in Chapters 3 and 4 that Islamic banks confront special risks embedded in PLS agreements, which require relevant credit-scoring models and unique methods of measuring any risks that may be duly assessed by regulators. The problem posed by standardised approaches, such as Basel II and Basel III, as well as the IFSB Principles discussed in Chapter 3, is that they are generic and do not address the unique difficulties faced by Islamic banks as a result of restrictions imposed by *Shariah*. In light of SAMA's implementation of the Basel Standards described above, the following subsection looks at how the risk profile of

Islamic products and services may be assessed, taking into account the peculiar nature of Islamic finance.

5.2.2 Assessing the Risk Profile of Islamic Products and Services

It is unfortunate that despite issuing more than 1500 Circulars,⁵⁰⁹ SAMA has yet to provide any clear guidance on how banks in KSA should determine the risk profile of Islamic products and activities. This explains why there are no specific rules governing the prudential reporting of Islamic products. Moreover, it is uncertain how the specific risks embedded in these products should be integrated into supervisory processes. For instance, the transposition of Basel requirements may not always be effective in KSA, since the BCBS has not taken into account the specific risks emanating from the range of *Shariah*-compliant activities. The BCBS contends that there might not be any observable consequence in KSA, because *Shariah*-compliant activities are not prevalent.⁵¹⁰ As a result, only a relatively small percentage of banking activities are required to be *Shariah*-compliant, since Islamic banks constitute a minority in the banking industry and the regulators' interpretation of *Shariah* rules are sometimes flexible. A good example is the CMA's approval of YANSAB's initial public offering, although the latter had previously obtained an interest-based loan from a conventional bank. Moreover, none of the 13 local banks in KSA may be considered important in global terms, while only three of the 14 branches of foreign banks are of importance in the global system.⁵¹¹ Besides this, SAMA has identified just six local banks of importance in the domestic system,⁵¹² with Al Rajhi Bank being the only one that is fully *Shariah*-compliant.

Notwithstanding the above, it may be submitted that SAMA is aware that Basel requirements fail to take into account the specific risks emanating from *Shariah*-compliant activities. Hence, in several instances, SAMA has adopted an approach that is stricter than the Basel Standards. Abdullah et al. are cited in Chapter 3 as recommending this approach to mitigating the unique risks embedded in *Shariah*-compliant products and services. Two examples are

⁵⁰⁹ IMF, 'Saudi Arabia: Financial Stability Assessment' IMF Country Report No. 17/318, October 2017. Available at: <http://www.imf.org/en/Publications/CR/Issues/2017/10/05/Saudi-Arabia-Financial-System-Stability-Assessment-45316> [02 December 2017] 21.

⁵¹⁰ BCBS, note 498 above, 34.

⁵¹¹ BCBS, note 496 above, 8.

⁵¹² Ibid. These banks also hold more than 63% of the total assets of the KSA's banking system. They include Al Rajhi Bank, National Commercial Bank, Riyadh Bank, Samba Financial Group, and Saudi British Bank.

discussed above, namely SAMA's imposition of the basic indicator approach and requirement for liquidity-related information to be disclosed to the public on a regular basis. Another example is that SAMA does not allow banks to include Level 2B assets in their liquidity coverage ratio. Level 2 assets are those with a value that can be determined through a quote on an inactive market.⁵¹³ Good examples of Level 2B assets that are often traded include corporate debt securities and residential mortgage-backed securities, which are not issued by a bank.⁵¹⁴ These will attract a haircut ranging from 25% to 50%, indicating a huge difference between the market value of residential property used as collateral and the amount of the loan. Thus, Level 2B assets are interest-based and this can result in unfair profit exploitation,⁵¹⁵ implying that they are not *Shariah*-compliant.

Aside from the above, the GCC Member States, which are all Islamic,⁵¹⁶ have agreed to grant a concession for banks exposed to any GCC sovereign funds, whereby they can apply a 0% risk weight for such exposure when calculating the credit risk capital charge.⁵¹⁷ They may however assign risk weights ranging from 0-150% to claims on non-GCC sovereign funds. This preferential treatment enables GCC sovereign funds to scale up their investments in Islamic finance and ensure long-term funding for Islamic banks. For example, the Kuwait Investment Authority and Dubai Financial Group have since increased their exposure to Islamic products by taking stakes in Islamic banks.⁵¹⁸ However, this is an easy decision for banks in KSA, because all GCC countries have a rating of AA- and above, except for Oman and Bahrain- with KSA's banks having only minimal exposure to either of these two countries.⁵¹⁹

Additionally, GCC Member States, such as Kuwait, Qatar and the UAE, require their domestic public-sector entities to be risk-weighted as sovereign wealth funds. Their banks may apply the same criteria to the public-sector entities of other GCC Member States, whose supervisors reciprocate, insofar as the exposure is funded in the local currency. However,

⁵¹³ M Rice et al, *Nonprofit Asset Management: Effective Investment Strategies and Oversight* (Wiley 2012) 9.

⁵¹⁴ S Archer and RAA Karim, *Islamic Capital Markets and Products* (John Wiley & Sons 2018) 178.

⁵¹⁵ With regard to the rejection of exploitation and unfair profit under Islamic law, see N Murtaza and U Fatima, 'Financial Crimes in Perspective of Public Policy and Islamic Law: Case of Pakistan' in D Mutum, Butt MM, and Rashid M, *Advances in Islamic Finance, Marketing and Management: An Asian Perspective* (Emerald 2017) 175.

⁵¹⁶ Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

⁵¹⁷ IMF, 'Assessing Concentration Risks in GCC Banks' Gulf Cooperation Council: Annual Meeting of Ministers of Finance and Central Bank Governors, October 25, 2014. Available at: <https://www.imf.org/external/np/pp/eng/2014/102514.pdf> [02 December 2017] 26.

⁵¹⁸ Ibid.

⁵¹⁹ BCBS, note 496 above, 11.

SAMA requires claims on public-sector entities to be risk-weighted on the basis of their credit assessment.⁵²⁰ This demonstrates that SAMA's commitment to deviate from the Basel Standards in the promotion of Islamic finance is questionable. It may subsequently be argued that SAMA's changes to the Basel Standards are motivated by the need to ensure that banks in KSA effectively monitor and control risk, rather than complying with *Shariah*. However, it is shown above that SAMA has modified Basel Standards in a way that clearly enhances risk management in Islamic banking. Another example in this regard is that unlike the 15% materiality level of the bank's capital for significant investment in business entities, as recommended by Basel II, SAMA requires a materiality level of 10%, which is much stricter.⁵²¹ Moreover, unlike Basel II (para. 56), SAMA considers international organisations, such as the Bank for International Settlements (BIS), European Central Bank (ECB) and International Monetary Fund (IMF) as sovereign funds and does not necessarily risk-weight them at 0%. In fact, only the GCC sovereign wealth funds are risk-weighted at this level. SAMA then applies a 100% risk weight on claims that are collateralised by residential mortgages, which is much stricter than the 35% recommended by Basel II (para. 72). It relates to the aforementioned fact that SAMA does not allow banks to use Level 2B assets for their liquidity coverage ratio, since most of these frequently traded Level 2B assets include residential mortgage-backed securities, which have not been issued by a bank. SAMA equally forbids the recognition of equities and mutual funds for credit-risk mitigation under the standardised approach, although this is permitted by Basel II (para. 145). Furthermore, SAMA has imposed a run-off rate of 10% on all overseas subsidiaries or branches of KSA banks, regardless of whether their host countries have insurance schemes or require a lower run-off rate.

It may therefore be argued that the application of Basel Standards and the imposition of stricter measures enables SAMA to fully capture the large number of risks that are imbedded in the broad range of *Shariah*-compliant products and transactions. Without a regulatory framework tailored towards *Shariah*-compliant banking, it is difficult to imagine an approach, which could more effectively ensure that Islamic banks maintain a sufficient level of capital for their risk profiles. This also explains why SAMA uses an interventionist approach; applying the supervisory review process to each bank, in order to ascertain its capital adequacy and determine whether it should hold additional capital to cover risks that

⁵²⁰ Ibid.

⁵²¹ Ibid.

are not sufficiently covered. Thus, it does not simply capture risk holistically, but also ensures that the risk exposure of each bank is backed by high quality capital. In this way, it conducts a detailed and in-depth risk assessment of each bank and sets the minimum or target capital adequacy ratio for it. Moreover, it generally expects banks to operate above this target and may compel them to do so.⁵²² Hence, KSA's banks require a formal internal process, used to determine their overall capital adequacy, with SAMA discussing the internal capital adequacy process (ICAAP) of each bank in annual meetings. During these meetings, SAMA assesses the bank's methodology with regard to risk identification, measurement and aggregation, which enables it to intervene at a very early stage and prevent a bank's capital from falling below the target. For this reason, a bank may be required to increase its capital, limit dividend payments and risk-weighted assets, or consider mergers.

It must nonetheless be noted that the legal basis for SAMA's monthly meetings and evaluations is problematic. Although Article 3(d) of the SAMA Charter empowers it to demand monthly statements from banks, it also specifies that banks should avoid disclosing details of their customers' private accounts. However, SAMA understandably often relies on Article 17 of the BCL, which states that it may compel banks to provide any information that it deems important. The fact that SAMA prioritises Article 17 of the BCL, rather than Article 3(d) of its Charter, shows that it considers disclosure to be an essential regulatory requirement. As noted above, this may be attributed to the fact that equity-based PLS agreements are *ubberimae fidei* contracts based on full disclosure. SAMA therefore enables Islamic banks in KSA to apply Basel Standards along the same lines as conventional banks, and also gives them the opportunity to monitor and mitigate unique risks in their products and services.

It follows that KSA provides a unique forum for comparing the risk management strategies of both Islamic and conventional banks, as well as their resilience to financial crises. Such a comparison may therefore help to ascertain whether the kind of financial crisis experienced in 2007 can equally be triggered by interest-free Islamic banks using PLS modes of financing.

⁵²² BCBS, note 496 above, 51.

5.3 The Resilience of Saudi Banks to Financial Crises

As indicated above, both Islamic and conventional banks operate in KSA within the same legal and regulatory framework. However, Islamic banking is solely delineated by *Shariah* rules, specifically the rules prohibiting interest and promoting the sharing of profit and loss (PLS). In addition, Islamic banks are prohibited from investing in *haram* products or activities, such as gambling, prostitution, alcohol and drugs. They are also prohibited from investing in speculative instruments, such as those that do not derive their value from underlying assets. All transactions must involve direct participation in asset performance and banks must invest in real or tangible products. Although these restrictions drastically reduce the number of products and services that Islamic banks can buy and sell, Chapter 4 clarified that they can provide capital and generate profits using PLS equity-based schemes, with a low total risk load. They also use sales-based and lease asset-based contracts to mitigate the liquidity risk, market risk and credit risk emerging from these equity-based schemes. Nonetheless, it was equally noted that the special risks embedded in PLS schemes are largely mitigated by the counterparty's duty of utmost good faith and the mutual trust sustained by the belief that contracts are trade instruments, which are endorsed by holy scripture. Notwithstanding this, since the same rules apply to both conventional and Islamic banks in KSA, and because SAMA has reproduced the Basel Standards - modifying them to include much stricter requirements, so that any risks relating specifically to Islamic products are covered - the question that follows is whether Islamic banks in KSA are more resilient than conventional banks to crises occurring in the same country. It is difficult to provide a straightforward answer to this question, because although only four of the 13 licensed local banks in KSA are Islamic banks, most of the commercial banks offer a mix of Islamic and conventional products. Thus, around half of the assets on the KSA market are Islamic products.⁵²³ This means that the resilience of Islamic banks may only be determined by how they perform during financial crises, rather than how they perform in relation to conventional banks. The discussion below focuses on the performance assessment of KSA banks during the 2014 crisis, which had a greater adverse effect on GCC countries than it did on other regions. Also examined will be the global crisis of 2007-09.

⁵²³ HB Ghassan and S Fachin, 'Time Series Analysis of Financial Stability of Banks: Evidence from Saudi Arabia' (2016) *Review of Financial Economics* 3, 8-9.

5.3.1 The Crisis of 2014

Oil prices plummeted towards the end of 2014, causing a swing in KSA's current account from a surplus of approximately 10% of its GDP to a deficit of around 8% by the end of 2015.⁵²⁴ The government's oil revenue was almost halved, meaning that the fiscal deficit rose from around 3.4% of the GDP in 2014 to approximately 16% in 2015, and payment to suppliers was generally delayed.⁵²⁵ The government responded with its Vision 2030 plan and the National Transformation Programme. This began with spending cuts and the issuing of USD 17.5 billion in international bonds, and USD 9 billion of the *Sukuk*.⁵²⁶ Customers, individuals and enterprises began withdrawing their deposits by the end of 2014 to meet cash flow needs and to purchase government bonds that were issued to finance the fiscal deficit. Thus, by the middle of 2016, deposits had fallen sharply, to the extent that withdrawals of liquidity from the market by SAMA exceeded cashflows into the Saudi banking system.⁵²⁷ There was also a sharp rise in interbank interest rates amongst conventional banks. The interbank market is not well-developed in KSA, because Islamic banks do not award or receive interest-based loans. Thus, as noted in Chapter 4, due to the limited number of funding sources, Islamic banks are compelled to rely on the Central Bank in times of crises. They use the *Murabahah* in a way that is similar to the interbank deposit transactions of conventional banks; whereby the commercial bank, acting as the investing bank, buys the asset from a broker at cost and sells it to the client's Central Bank at cost-plus, based on deferred payment. The latter then sells the asset on to another broker at cost. The transaction may subsequently be reversed to help the investing bank manage liquidity. However, despite the legitimacy of the transaction under *Shariah*, it has not been successful in easing the liquidity conditions of certain Islamic banks.⁵²⁸

Regardless of the above, the IMF noted that the number of non-performing loans increased by only 0.3% between 2014 and 2016.⁵²⁹ Despite the fact that there is no detailed information about restructured and rescheduled loans, this demonstrates that most banks in KSA have a

⁵²⁴ IMF, note 30 above, 7.

⁵²⁵ Ibid.

⁵²⁶ See J Kinninmont, 'Vision 2030 and Saudi Arabia's Social Contract: Austerity and Transformation' (2017) Research Paper, Chatham House. Available at: <https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-07-20-vision-2030-saudi-kinninmont.pdf> [03 December 2017] 9-16.

⁵²⁷ IMF, note 512 above, 4. See also, IMF, *Strengthening Liquidity Management Frameworks in Support of Stability and Growth in the GCC* (IMF 2018) 5.

⁵²⁸ IMF, note 512 above, 10.

⁵²⁹ Ibid, 9.

high-quality loan portfolio. Moreover, despite the fall in banks' net income, they remained profitable, with a stable fee income and high net interest margins.⁵³⁰ In fact, these margins remained high, due to a large proportion of the deposits and loans being *Shariah*-compliant and therefore, interest-free. The loan-to-deposit ratio⁵³¹ continued to rise during the crisis, while the liquid assets to short-term liabilities ratio⁵³² dropped in 2014, but began rising again in 2015.⁵³³ Hence, many banks did not have sufficient liquidity to cover unexpected funding requirements. They were therefore required by SAMA to increase their capital buffers as well as provision coverage of non-performing loans. Also, SAMA relaxed the limits on banks' loan-to-deposit ratios and facilitated the transfer of deposits from government undertakings to the banks.⁵³⁴ The IMF assessed the impact of the crisis on KSA's banking system, using solvency and liquidity stress tests, as shown in the following subsection.

5.3.1.1 Solvency and Liquidity Tests

The IMF used the balance sheet data of December 2016 from 12 banks that were nationally licensed at the time, representing 97% of the banking system's assets. The tests were based on Basel III's minimum capital requirements, which have been fully implemented in KSA, and the Basel standardised approach adopted by SAMA.⁵³⁵ The solvency test included single factor shocks and macro-economic scenario-based tests. The single factor shocks related to credit risk over a period of three years. However, the single factor sensitivities did not include any Islamic regulation or product, which attests to the fact that there was no identifiable idiosyncratic risk embedded in Islamic products or transactions. The macro-economic scenario-based tests assessed all aspects of the banks' operations in several scenarios.⁵³⁶ This test was designed by the Treasury and Federal Reserve of the United States for the testing of financial institutions, ascertaining the amount of capital required to restore their financial health.⁵³⁷ Banks quantify what might happen to their portfolios - including mortgages and

⁵³⁰ Ibid.

⁵³¹ This is the percentage of customer loans financed by customer deposits. See Vanessa Le Lesle, *Bank Debt in Europe: "Are Funding Models Broken?"* (IMF 2012) 6.

⁵³² This is the predetermined percentage of short term liabilities that banks are required to maintain in the form of liquid assets. See Anne Marie Gulde, *Liquid Asset Ratios and Financial Reform* (IMF 2007) 5.

⁵³³ Ibid, 11.

⁵³⁴ IMF, note 512 above, 9-10.

⁵³⁵ Ibid, 14-18.

⁵³⁶ See H Hesse, F Salman and C Schneider, *How to Capture Macro-Financial Spillover Effects in Stress Tests* (IMF 2014) 4-6.

⁵³⁷ This is discussed further below.

credit cards - in a financial crisis. Thus, the scenarios take into account the risks that threaten banks or stress their unique exposure and potential areas of vulnerability in the financial system. The threats to KSA's banks and financial system included the sharp fall in oil prices; the attendant impact of this on GDP growth and banks' asset quality; the discontinuance of the practice of expeditious bad loan write-offs, and the increase in the number of non-performing loans.⁵³⁸

The results of the IMF's solvency test indicated that the capital adequacy ratios of all 12 licensed banks exceeded the minimum requirements in the projected period of 2016-2019.⁵³⁹ In the adverse scenario of a financial crisis, the total capital adequacy ratios for KSA's financial system were reduced by only 2%, with 10 out of the 12 licensed banks still meeting the minimum requirements. Notwithstanding the above, the aggregate capital shortfall of the two banks that failed to meet the minimum requirements only made up around 0.03% of KSA's GDP in 2016. As such, it may be concluded that KSA's banking system is resilient to severe financial crises. It also confirms the results of a previous test conducted by SAMA, which showed that KSA's main banks are safe.⁵⁴⁰ Moreover, the fact that the only two banks that did not meet the minimum requirements were conventional banks implies that Islamic banks generally performed better.

The test also revealed a limited credit concentration risk. In the event of default by the three largest borrowers (who are not sovereign funds) from each bank, the aggregate capital adequacy ratio fell by 7% and 7 out of the 12 banks were unable to meet the minimum requirements.⁵⁴¹ Given that most banks in KSA trade with sovereign borrowers, it may be contended that the risk is very limited. Moreover, 5 of the 12 banks were still resilient to the prevailing risk. The IMF even noted that banks in KSA are more resilient to this risk than banks in other countries, where similar tests have been conducted.⁵⁴² This resilience is attributed to strong initial buffers.

The above-mentioned test also revealed that all 12 banks in KSA were resilient to severe liquidity shocks; they all met the standard Basel III liquidity coverage ratio requirement and

⁵³⁸ The IMF assumed that there was a sharp increase of nonperforming loans from 1.4% in 2016 to 12% in 2019. This increase is extraordinarily high compared to the increase of 0.3% during the crisis of 2014-2016 as shown above.

⁵³⁹ IMF, note 512 above, 15.

⁵⁴⁰ See R Alfaro and Drehmann M, 'Macro Stress Tests and Crises: What Can We Learn?' BIS Quarterly Review 29, 29-30.

⁵⁴¹ IMF, note 512 above, 15.

⁵⁴² Ibid.

passed the maturity-mismatch test. Moreover, they all passed a more severe liquidity test, with run-off rates that were 20% higher than those proposed by Basel III. The IMF attributed this to the banks' large liquid asset holdings and the efficient operation of the money market.⁵⁴³ This is because the money market permits the reliable communication of credible information to participants and regulators; enables the effective implementation of regulations, and allows the efficient allocation of liquidity, in such manner that it is effectively channelled into the real economy.⁵⁴⁴ However, liquidity management has room for improvement, because it is still focussed on the absorption of liquidity, with little emphasis on instruments to reallocate liquidity in the system. Moreover, the interbank market is still very limited and accounts for less than 4% of banks' total liabilities. Nonetheless, as noted above, this may be explained by the prohibition of interest and trading of loans. Thus, Islamic banks do not generally engage in interbank lending. However, contrary to the IMF's conclusion, this is not a shortcoming of KSA's banking system, but rather the nature of Islamic banking itself, which largely relies on deposits to fund lending. Moreover, the secondary markets for Islamic products are also limited; they are naturally challenged by sudden shifts in deposits and rely on the Central Bank, as shown in Chapter 4.

5.3.2 The Crisis of 2007-09

5.3.2.1 Individual Measure of Soundness

Ghassan and Fachin assessed the quarterly data of a sample of KSA's banks during the financial crisis of 2007-09.⁵⁴⁵ The sample comprised four conventional banks⁵⁴⁶ and two Islamic banks.⁵⁴⁷ The above authors measured the soundness of these banks using a z-score, focused on accounting information. They argued that this method was superior to other measures, such as stress tests and value-at-risk, because its results are not affected by the nature of a bank's activities.⁵⁴⁸ Hence, it may be used to measure the stability of banks that use conventional accounting methods, as well as banks which use methods that are unique to Islamic financial institutions. Ghassan and Fachin also argued that the z-score assesses

⁵⁴³ Ibid, 15-16.

⁵⁴⁴ Ibid, 17.

⁵⁴⁵ HB Ghassan and S Fachin, 'Time Series Analysis of Financial Stability of Banks: Evidence from Saudi Arabia' (2016) *Review of Financial Economics* 3, 3-17.

⁵⁴⁶ Riyadh Bank, Saudi Investment Bank, Saudi British Bank, and Saudi American Bank.

⁵⁴⁷ Al-Rajhi and Al-Bilad. The study did not include Alinma Bank and Al-Jazirah Bank because the former was founded in 2008 and the latter became an Islamic bank in 2007. Thus, it was not possible to assess the impact of the 2007 financial crisis on these banks.

⁵⁴⁸ Ghassan and Fachin, note 540 above, 9.

insolvency risk, rather than liquidity risk alone, as is the case with stress tests. This explains why the IMF, cited above, used both a solvency and stress test. It is important to assess insolvency risk, because some illiquid banks are solvent, given that most of the assets held by them are long-term financial or real assets. Thus, in order to determine whether a bank is resilient to a crisis, it is important to determine whether its liabilities exceed the value of its assets.

Ghassan and Fachin used z-scores to compare the risk of default in different groups of the six banks. The banks' insolvency risk was measured on the basis of their adjusted return on assets (ROA) and adjusted return on equity (ROE). Although the institutions managed different levels of financial assets, Ghassan and Fachin found that the distribution of z-scores was negatively skewed for all the conventional banks, but positively skewed for the Islamic banks.⁵⁴⁹ Additionally, the products and activities of conventional banks carried more risks than those of Islamic banks. In fact, the conventional banks that were active in international financial markets confronted even more risks. The Islamic banks in the sample operated only within KSA or GCC markets and the assets of Al-Rajhi Bank, the larger of the two, were more diversified and mainly consisted of loans, with a quasi-symmetric distribution of risks. Nonetheless, Riyadh Bank, the largest bank in KSA, had the highest median z-score, indicating more variability than the other banks. Moreover, only one conventional bank, Saudi British Bank, failed to keep its z-scores stationary around a desired level between 2005 and 2011. The above authors subsequently argued that this supports the notion of conventional banks being comparatively less stable than Islamic banks. However, they also noted that, based on long-run average z-scores, the individual heterogeneity of each bank was a more important factor than its Islamic or conventional nature. Furthermore, each bank had a specific risk management strategy that determined how it identified and mitigated risk.

5.3.2.2 The Dodd-Frank Comprehensive Capital Analysis and Review (CCAR) Test

Haddad and Hakim used the Comprehensive Capital Analysis Review (CCAR) test, enshrined in the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, to assess the balance sheets of three of the largest banks in the GCC.⁵⁵⁰ These consisted of

⁵⁴⁹ Ibid, 11-13.

⁵⁵⁰ MM Haddad and S Hakim, 'Can Gulf Banks Pass the CCAR Stress Tests?' (2017) 19 Journal of Applied Business and Economics 44, 44-58.

KSA's Riyad Bank, the National Bank of Kuwait, and the Qatar National Bank. The Dodd-Frank Act was passed in the wake of the 2007-09 financial crisis, in order to enhance financial regulation in the US. To ensure comprehensive regulation, the Act specifies the stress-testing of each bank's capital structure within the CCAR framework. This will determine whether the bank possesses adequate capital, whether its capital structure is stable in different stress-test scenarios, and whether any planned capital distributions are legitimate and viable with regard to the statutory minimum capital requirements. Thus, the CCAR enables the Federal Reserve to determine whether a bank with consolidated assets of more than USD 50 billion has sufficient capital to operate during financial crises and appropriate strategies for managing its idiosyncratic risks.⁵⁵¹

Haddad and Hakim selected the CCAR stress test, because no other test was tailored to the economic conditions of the Middle East and North African (MENA) region.⁵⁵² Hence, different banks in different parts of this region use variants of the stress test, whereby they are simply required to comply with capital adequacy rules under Basel II and Basel III, as shown above. Moreover, there is no regulatory requirement to publish the results of the test. Thus, it is uncertain which stress scenarios are used by individual banks, whether they are sufficiently severe, or which capital buffer is required to resist a severe shock.⁵⁵³ Among the several potential types of stress-testing methodology, the River Driver Stressing Model was used in the above-mentioned case. This involves estimating parameters (such as the probability of default) on the basis of the stress values of risk drivers. Haddad and Hakim adopted a top-down approach by assessing the impact of movement in macro-economic indicators on ROA, loan-loss provision, and the capital ratio of each bank. The results showed that KSA's Riyad Bank and the Qatar National Bank resisted the most severe financial shocks.⁵⁵⁴ In the worst scenarios, oil prices fell by 53.2% and the stock market index dropped 62.6% on a year-to-year basis. However, both banks maintained a capital-to-asset ratio that was equal to or above 7% in all 13 projected quarters.

In light of the above, it may be contended that Islamic banks are comparatively more resilient to financial crises than conventional banks, even when the same regulations are applied to all banks. Although they constituted a minority in the study samples mentioned above, the

⁵⁵¹ This process has been streamlined by the Financial Choice Act of 2017 that now requires the test to be conducted once a year by the Federal Reserve and bank, rather than twice. Hence, there will be no mid-cycle stress test going forward.

⁵⁵² Haddad and Hakim, note 545 above, 45.

⁵⁵³ Ibid, 46.

⁵⁵⁴ Ibid, 50-51.

Islamic banks in each case exceeded the minimum requirements. Meanwhile, the few banks that failed to remain profitable during the crises were conventional banks. Moreover, as stated earlier, the IMF noted margins remaining high in KSA during the crisis, because large proportions of deposits and loans were *Shariah*-compliant and did not accrue interest. It may therefore be contended that Islamic banks offering interest-free products through PLS schemes are not only more resilient to financial crises but are also less likely to trigger a crisis. The next section seeks to determine whether Islamic banks using PLS modes of financing would have helped prevent the 2007-09 crisis in the US.

5.4 Would Profit-and-loss Sharing (PLS) Have Made a Difference in the US?

The scholarship on the financial crisis of 2007-09 is sufficiently broad for any researcher to identify a myriad of causes. This is why some commentators have argued that several causes converged to create a perfect storm.⁵⁵⁵ However, if it was a perfect storm, then regulators could not have foreseen the severe shock. One of the main causes of the crisis was the deregulation of financial institutions in the US.⁵⁵⁶ In evaluating the creditworthiness of borrowers, the institutions were allowed to give high adjustable interest rate mortgages to riskier borrowers. Also, mortgage originators (intermediaries) did not have deposits given that their finance came directly from the capital markets, and they were not supervised by the central bank, the Federal Reserve. This may be explained by the shift towards reduced regulation of private markets in the decades preceding the crisis.⁵⁵⁷ Hence, the subprime mortgages that are at the genesis of the crisis were originated by intermediaries (unaffiliated with any bank) that were outside the purview of the extant regulation. It may be argued that if US banks had used PLS modes of financing as described in Chapter 4, most of these causes would either have been inoperative or mitigated through early intervention by the regulator. For example, unlike in the US, the Islamic regulator would have noticed that the

⁵⁵⁵ See N Ryder, *The Financial Crisis and White Collar Crime: The Perfect Storm?* (Edward Elgar 2014) 43-115; R De Haas and I Van Lelyveld, 'Multinational Banks and the Global Financial Crisis: Weathering the Perfect Storm?' (2014) 46 *Journal of Money, Credit and Banking* 333, 333-334; C Bilginsoy, *A History of Financial Crises: Dreams and Follies of Expectations* (Routledge 2014) 371-372; JR Barth, *The First Great Financial Crisis of the 21st Century: A Retrospective* (World Scientific Publishing 2016) 104.

⁵⁵⁶ See F Jareno and M Tolentino, 'A Brief Review of the US Financial Crisis Origin' (2012) 74 *American Journal of Scientific Research* 51, 51-55; MN Baily, RE Litan and MS Johnson, 'The Origins of the Financial Crisis' (2008) *The Initiative on Business and Public Policy* 5, 40-44.

⁵⁵⁷ MN Baily et al, *ibid*, 40.

securitisation of mortgage assets had gone beyond the point of value. Thus, the regulator would have immediately known that assets were overvalued and warned on the risks embedded in the assets. Also, derivatives would not have been used in the transactions, whether over the counter or on the exchange.

The US context is therefore relevant to the current study because it helps to determine whether the use of asset-based PLS modes of financing by US banks rather than risk-based modes would have made the country's system more resilient to the financial crisis. This corresponds to what was outlined earlier, where it was shown that Islamic banks can be accommodated within the same legal and regulatory framework as conventional banks but perform better in terms of risk management and resilience.

It has been argued that the financial crisis was caused by an inordinate increase in hybrid sub-prime mortgages and the spread of a variable rate, which motivated excessive risk-taking following a rise in interest rates.⁵⁵⁸ It has also been argued that it was caused by speculation on rapidly increasing house prices,⁵⁵⁹ excessive amounts of short-term wholesale funding,⁵⁶⁰ and too few high-quality liquid assets.⁵⁶¹ Although these may be considered as symptoms, rather than significant proximate causes, they would not have become operative, had the banks complied with *Shariah* rules to prohibit interest, speculation and uncertainty. Additionally, excessive risk-taking can create a moral hazard.⁵⁶² It was noted in Chapter 4 that excessive risk-taking is mitigated in Islamic banking through the use of equity-based PLS agreements, which are essentially *ubberimae fidei* contracts.⁵⁶³ Given that the bank and the client enter into a partnership or joint venture, it may be difficult for either party to undertake excessively risky investments. With regard to high-quality assets, it is indicated above that studies conducted on banks in KSA reveal the high quality of their loan portfolios. In light of these, it may further be contended that where Islamic banks are concerned, a

⁵⁵⁸ JB Foster and F Magdoff, *The Great Financial Crises: Causes and Consequences* (New York University Press 2009) 33-38.

⁵⁵⁹ T Sinai, 'House Price Moments in Boom-Bust Cycles' in EL Glaesser and T Sinai (eds), *Housing and the Financial Crisis* (University of Chicago Press 2013) 33.

⁵⁶⁰ I Hardie and D Howarth, 'A Peculiar Kind of Devastation: German Market-Based Banking' in I Hardie and D Howarth (eds), *Market-Based Banking and the International Financial Crisis* (Oxford University Press 2013) 115.

⁵⁶¹ A Campbell and R Lastra, 'Revisiting the Lender of Last Resort – The Role of the Bank of England' in IG McNeil and J O'Brien (eds), *The Future of Financial Regulation* (Hart Publishing 2010) 168.

⁵⁶² As noted in Chapter 4, this is where the party that takes excessive risk does not bear the cost or pay the consequences of the risk due to insurance or other protection against liability.

⁵⁶³ It was also noted that these are agreements that require the highest standard of good faith. See also, Laurence Koffman and Elizabeth Macdonald, *The Law of Contract* (7th edn, Oxford University Press 2010) 326; Mindy Chen-Wishart, *Contract Law* (6th edn, Oxford University Press 2018) 218.

financial crisis can only be caused by a major confluence of different factors, none of which would be systemic in themselves. This implies regulatory failure, since Islamic financial systems have a regulator (usually the Central Bank) that is often tasked with consolidated supervision and oversees systemic risk. Unlike the UK, where the regulatory reform following the financial crisis of 2008 largely consisted of enhancing macro-prudential regulation by strengthening the Bank of England,⁵⁶⁴ in the KSA, the central bank was already the main regulator prior to the crisis. SAMA was therefore in a position to assess correlations and common exposures across banks in order to calibrate prudential controls.

Where circumstances in the competitive market are not ideal, the regulator is required to intervene to enhance efficiency or equity. Elements of such intervention are well-accepted in most societies. A good example of this is regulation that seeks to prevent or mitigate systemic externalities and ensure the soundness of the banking system. It follows that where intervention was necessary in the 2007-09 crisis, the regulator failed to intervene.⁵⁶⁵ Thus, regulation is effective when it renders the need for intervention less likely. However, although there are various reasons why markets may become less efficient or fail to produce socially desirable outcomes, the government is in a position to impose regulations that dictate conduct and prevent harmful behaviour. It is therefore very difficult to overlook the causal link between the failure of regulation and negative spill-overs or externalities. Prudential regulation is consequently more important than the nature of the banking or financing activity. The regulator may for example require participants in the market to disclose key information about their performance, which it may then use to assess their resilience. A good example is SAMA, as shown above. After a series of corporate scandals in the US at the beginning of this century, the Sarbanes-Oxley Act was passed in 2002. However, this Act failed to address stock options, thereby providing incentives to dishonest managers to disclose information to shareholders that led to higher share prices.⁵⁶⁶ Such off-balance-sheet conduct also played an important role in fomenting the financial crisis of 2007-09.⁵⁶⁷

⁵⁶⁴ See Michael W Taylor, 'Regulatory Reform after the Financial Crisis: Twin Peaks Revisited' in Robin H Huang and Dirk Schoenmaker (eds), *Institutional Structure of Financial Regulation: Theories and International Experiences* (Routledge 2015) 24-25; Richard Hooley, 'Banking' in Andrew Burrows (ed), *Principles of English Commercial Law* (Oxford University Press 2015) para 6.03-6.05.

⁵⁶⁵ J Stiglitz, 'Regulation and Finance' in D Moss and J Cisternino (eds), *New Perspectives on Regulation* (The Tobin Project 2009) 11.

⁵⁶⁶ Ibid, 15.

⁵⁶⁷ Ibid.

The lack of effective regulation therefore promotes perverse incentives, which in turn fuel excessive risk-taking. It explains why there is some degree of consensus over regulatory failure being one of the root causes of the 2007-09 financial crisis in the US. However, there is one question related to this contention that remains unanswered. It was posed by Stiglitz: “Even if we have good regulations, how do we ensure that they will be enforced?”⁵⁶⁸ Stiglitz observed that the US government had, through the Dodd-Frank Act, adopted the correct approach, which involved oversight from multiple sources and a system of checks and balances at different levels.⁵⁶⁹ Nevertheless, this view is certainly not prevalent, given that, as noted above, the Financial Choice Act has streamlined the stress test under the Dodd-Frank Act. The effect of this is that it only needs to be conducted once a year by the Federal Reserve and Bank, rather than twice yearly, as required by the Dodd-Frank Act: a mid-cycle stress test by the bank and an end-of-year test by the Federal Reserve. Other solutions proposed by Stiglitz include a focus on inclusive growth and the objectives of social justice.⁵⁷⁰ However, the limitations of government constitute a formidable obstacle to achieving such goals through regulatory intervention alone. Jenkins therefore argues that regulation is only effective against financial contagion, when it internalises the systemic costs of financial intermediation to reduce moral hazards.⁵⁷¹

It is submitted here that the use of PLS modes of financing, as shown in Chapter 4, provides a unique opportunity in this regard. Here and in other studies, although Islamic banks are not more profitable and liquid than conventional banks, they are more stable and have a higher capitalisation ratio.⁵⁷² It has been proposed that this may be attributed to the use of PLS modes of financing by Islamic banks.⁵⁷³ Chapter 2 revealed how many Islamic scholars argue that the appeal of Islamic banking lies in its use of PLS modes. For example, Khoutem and Nedra note that these modes enable Islamic banks to provide better mobilisation of savings and savings rates, while mitigating risk more effectively by resolving information asymmetry.⁵⁷⁴ Moreover, Iqbal and Chapra argue that PLS modes ensure macro-economic

⁵⁶⁸ Ibid, 18.

⁵⁶⁹ Ibid.

⁵⁷⁰ Ibid, 19-20.

⁵⁷¹ AM Jenkins, ‘Financial Regulation, Systemic Risk, and the Audit of Financial Contagion’ (2008) Committee on Capital Markets Regulation, Harvard University. Available at: http://www.law.harvard.edu/programs/olin_center/Prizes/2011.pdf [02 December 2017] 2.

⁵⁷² See T Beck, A Demircuc-Kunt, and O Merrouche, ‘Islamic vs Conventional Banking: Business Model, Efficiency and Stability’ (2013) 37 Journal of Banking and Finance 433, 441.

⁵⁷³ Ghassan and Fachin, note 540 above, 4.

⁵⁷⁴ BJ Khoutem and BA Nedra, ‘Islamic Participative Financial Intermediation and Economic Growth’ (2012) 8 Journal of Islamic Economics, Banking and Finance 45, 46.

stability.⁵⁷⁵ Thus, while, conventional modes of financing based on *Riba* are subject to repetitive crises and losses, Islamic banks are able to avoid the adverse effects of crises through PLS agreements.

In the same vein, Ali et al. affirm that PLS plays a crucial role in maintaining the net worth of banks under varying macro-economic conditions; it is pivotal in helping Islamic banks to avoid balance-sheet deterioration and significantly enhances their overall solidity.⁵⁷⁶ Iqbal and Chapra also note that this could be a key reason why Islamic banks were more resilient than conventional banks throughout the global financial crisis of 2007-09. However, it was shown in Chapter 4 that the above arguments are only true to the extent that Islamic banks are able to:

- 1) Provide capital and generate profits using PLS equity-based schemes, with a low total risk load, and
- 2) Use sales-based and lease assets-based contracts to mitigate the liquidity risk, market risk and credit risk emerging from equity-based schemes.

Hence, it follows that banks in the US could enhance their resistance to shock, if they adopted this mode of financing and use it as prescribed in Chapter 4. It would be a means of ensuring the enforcement of effective regulations. Notwithstanding the above, it is shown in the next subsection that a few adjustments are necessary for Islamic banks to operate in the US.

5.4.1 Accommodating Islamic Banks in the US Legal Framework

Islamic banks are required to comply with *Shariah* rules that prohibit interest, the trading of loans and derivatives, and investment in *haram* products, such as gambling and prostitution. This implies that a financial institution providing Islamic products in the US must comply with *Shariah* rules, as well as State and Federal regulations. However, this can be highly problematic. For example, section 29 of the National Bank Act of 1864 forbids national banking associations from purchasing or holding the legal title or possession of real estate to secure debts due to it for a period exceeding five years. This automatically makes many Islamic home finance products illegal, where the bank will hold a legal title for more than five years. In fact, it is impossible to use sales-based or lease asset-based contracts to mitigate

⁵⁷⁵ Z Iqbal, *Islamic Financial Systems* (Finance and Development 1997).

⁵⁷⁶ SS Ali, 'Financial Distress and Bank Failure: Lessons from Closure from *ihlas finans* in Turkey' (2007) 142 *Islamic Economic Studies* 21, 22.

the liquidity risk, market risk and credit risk in equity-based schemes, as shown in Chapter 4, given that the most reliable asset class on which most of these transactions are based is real estate. However, section 29 also provides that a national banking association may apply to the Comptroller of the Currency to approve the possession of real estate by the association for a period in excess of five years, where disposal within the five-year period would be detrimental to the association. It is easy for an Islamic bank to show that disposal within five years of purchasing real estate under an *Ijara* or *Murabahah* agreement would adversely affect its earnings. Nonetheless, the Comptroller's approval may only extend the period by an additional five years. This implies that the Islamic bank entering into a home finance agreement may only hold the legal title for 10 years.

Interestingly, the Office of the Comptroller has issued two letters, apparently indicating wider margins provided by the law, within which Islamic banks may enter into an asset-based PLS agreement.⁵⁷⁷ The first letter approved an application by an Islamic bank in 1997, for the use of the lease-based asset, *Ijara*. It had entered into a lease-to-own agreement with a client, whereby the latter was required to pay a down-payment for the purchase of a family home. The bank paid the remainder of the purchase price and became the legal owner. Both parties then entered into another net lease agreement. Although the bank's application was approved, it was required by the Comptroller to record its profit in the same way as conventional banks record their interest in a property under a traditional family-home mortgage. The monthly payments made by the client covered the principal and pre-determined profit, as well as insurance and taxes. The bank simply needed to transfer the legal title to the client after the final payment. It must be noted that the Comptroller recorded the payment of the pre-determined profit as interest.⁵⁷⁸ However, given that this is *Riba*, the bank referred to it as profit, which shows that there are differences between Islamic finance and conventional finance that are *pro forma*, rather than substantive. What the bank described as profit was money paid regularly for delaying the repayment of debt, which is in fact interest.

Two years later, the Comptroller approved another application by an Islamic bank allowing the latter to use a sales-based contract, *Murabahah*, to finance the acquisition and construction of a mosque, community centre and Islamic school. The client agreed on the purchase prices of the property and equipment with the sellers and then sought financing

⁵⁷⁷ See KJ Tacy, 'Islamic Finance: A Growing Industry in the United States' (2006) 10 North Carolina Banking Institution 355, 371-375.

⁵⁷⁸ Ibid.

from an Islamic bank. The client and bank entered into a *Murabahah* agreement, whereby the bank purchased the property and equipment and immediately leased them to the client at cost-plus mark-up. The Comptroller noted that the transaction was similar to secured lending and posed the same risks as a traditional home mortgage loan.⁵⁷⁹ In addition, the bank's underwriting standards determined its decision to accept the client and credit risk and was required to have the same remedies as a non-recourse mortgage. With regard to the five-year period set by section 29 of the National Bank Act of 1864, the Comptroller stated that it was a matter of interpretation and it would be unfair to focus on the plain meaning of the words used by the legislator.⁵⁸⁰ The Comptroller recognised the fact that the Islamic bank's legal title in these transactions is largely cosmetic and the client or lessee holds the indicia of ownership. This is because the client pays the taxes, insurance and maintenance costs, as well as operating the property, conducting repairs and assuming responsibility for any accidents occurring at the property.⁵⁸¹

The Comptroller's flexibility and broad interpretation of the National Bank Act shows how Islamic banking may be accommodated within the US regulatory framework; the important thing is that regard be given to the intention of the legislature. It has also been shown that the structure and operations of financial institutions, such as savings associations and credit unions, are similar to those of Islamic banks.⁵⁸² Credit unions are owned and controlled by customers. They place an emphasis on providing credit at very competitive rates and promoting thrift, because the depositors are the owners. Savings associations are in fact also referred to as thrift institutions; they accept deposits and savings, issue loans and make mortgage loans on residential property. This implies that Islamic banks may be set up in the US in the same way as credit unions or savings associations, receiving savings from customers and using the funds to make mortgage loans on residential property.

Nonetheless, as shown in Chapter 4, Islamic banks perform better when they use sale-based contracts and lease asset-based contracts to effectively mitigate the risks embedded in PLS equity-based contracts. This may be problematic, because under a PLS agreement, the client or depositor shares in the losses with the financial institution. In the US, the bank must

⁵⁷⁹ Ibid.

⁵⁸⁰ Ibid, 374.

⁵⁸¹ Ibid.

⁵⁸² J Michael Taylor, 'Islamic Banking: The Feasibility of Establishing an Islamic Bank in the United States' (2003) 40 American Business Law Journal 385, 412-413,

guarantee to return the invested principal⁵⁸³ and so the deposit principal must be certain. The Islamic bank may then be compelled to structure the PLS agreement in such a way that the client or depositor only shares in the profit and not in the loss. However, the client is likely to violate *Shariah* rules, if he accepts the full repayment of the principal in the event of the bank suffering a loss. Moreover, banks in the US are required to invest only in interest-bearing securities and fixed income, in order to minimise exposure to risk. In contrast, interest is prohibited by *Shariah*. It must also be noted that although it is shown above that the Office of the Comptroller approved one *Ijara* agreement and *Murabahah* contract, some states may require the institution financing the purchase of real estate or car to be an auto-lender or licensed leasing company.

5.5 Conclusion

It is demonstrated in this chapter that Islamic banks may be accommodated within the same legal and regulatory framework as conventional banks but perform better with regard to risk management and resilience. Although they constitute a minority in the samples of the various studies cited here, all the Islamic banks in these studies exceeded the minimum regulatory requirements. The few banks that failed to remain profitable during the crises were conventional banks. Moreover, it was stated in this chapter that the IMF noted margins remained high in the KSA during the 2007-09 global crisis, because a large proportion of deposits and loans were *Shariah*-compliant and did not accrue interest.

It has also been shown here that the causes of the financial crisis in the US, as identified in the literature, would not have occurred, if banks had complied with *Shariah* rules prohibiting interest, speculation and uncertainty, and used equity-based PLS agreements that are essentially *ubberimae fidei* contracts. It was then observed that flexibility in the interpretation of statutes may enable Islamic banking to be accommodated within the US regulatory framework. Additionally, the structure and operations of financial institutions, such as savings associations and credit unions, are similar to those of Islamic banks.

Notwithstanding the above, in order for Islamic banks to perform better within a given regulatory environment, it is important for the regulator to tailor laws to suit the unique risks

⁵⁸³ See *Nolting v National Bank of Virginia* (1901) 6 Virginia Law Register 748. See also, James Smith McMaster, *McMaster's Commercial Cases: Affecting the Banker and Merchant* (Weed-Parsons Printing 1901) 324-325.

embedded in Islamic products and services. This may involve the imposition of stricter measures, as evidenced by SAMA's honing of Basel Standards and approaches. For example, Basel II (para. 651) encourages banks using the basic indicator approach to comply with these principles, but SAMA imposes compliance on all banks in KSA. SAMA also requires all banks to comply with Principle 13 of the Sound Principles and disclose liquidity-related information to the public on a regular basis. However, it does not allow banks to use Level 2B assets for their liquidity coverage ratio. Unlike Basel II (para. 56), SAMA considers international organisations, such as the BIS, ECB and IMF as sovereign funds and does not necessarily risk-weight them at 0% - only GCC sovereign funds are risk-weighted at this level. The stricter measures adopted by SAMA may explain why there has been no deviation from Basel Standards by banks in KSA.

Irrespective of the above, it has been highlighted in this chapter that each bank has a specific risk management strategy, which determines how it identifies and manages risk. Moreover, the bank's underwriting standards will determine its decision to accept client and credit risk. Thus, the individual heterogeneity of each bank and effective prudential regulation are more important than the nature of the banking or financing activity. It follows that it is important to ascertain whether Islamic banks in KSA have actually developed specific risk management strategies, which take into account the unique risks embedded in their products. It could also be important to determine whether the stricter measures adopted by SAMA in implementing Basel Standards and approaches have made Islamic banks more resilient. The next Chapter therefore examines the risk management strategies of four KSA banks, as well as the way in which their resilience has been affected by SAMA's implementation of Basel Standards.

Chapter 6

Compliance Risk Management and Resilience: A Comparative Case Study

6.1 Introduction

This Chapter adopts the heuristic approach of comparative case study in order to delimit the object of study to four banks in the KSA. It critically examines their risk management strategies and attempts to determine whether the Islamic banks of the sample manage risk better and are more resilient to financial crises than the conventional banks. For this purpose emphasis is placed on compliance risk. It is argued that compliance risk includes other categories of risk such as reputation risk, liquidity risk, credit risk and market risk given that there is a legal obligation in the KSA to manage these risks, and a bank may fail to fulfil the obligation. It is also contended that the number of laws, regulations and compulsory standards that banks in the KSA must comply with are so large that compliance risk is arguably the most important risk confronted by banks in the KSA. This Chapter therefore begins with a brief analysis of the concept of compliance risk. This is followed by a discussion of the features and expectations of the compliance function. It is then shown how the four banks use risk management processes that involve identifying, monitoring, managing and reporting the risks.

Given that the annual reports of the four banks paint positive pictures of their ability to withstand adverse conditions, an attempt was made to look beyond the annual reports by conducting a survey of the stress tests carried out by the banks. Stress testing is increasingly recommended as the primary tool to identify risks and determine the adequate capital levels to resist shock. The importance of stress testing and the recommendations of SAMA and the Islamic Financial Services Board (IFSB) are highlighted. Although the four banks were asked eleven questions, their responses are examined across three key areas, namely Board of Director and senior management engagement, the integration of stress testing in the risk management strategy, and the hypothetical scenarios and portfolios on which they were modelled. The results of the survey of the stress tests conducted by the four banks are then discussed. The survey data provides a benchmark for assessing and comparing the banks' views on the sources and nature of stress or material risks and their use of the tests in risk management.

6.2 The Concept of Compliance Risk

As noted in Chapter 3, compliance risk is a broad concept that may or may not include or be part of legal risk and may or may not be part of operational risk. It is simply a matter of perspective.⁵⁸⁴ However, there is a structural similarity between compliance risk, legal risk and operational risk. The BCBS defines compliance risk as follows:

[T]he risk of legal or regulatory sanctions, material financial loss, or loss to reputation a bank may suffer as a result of its failure to comply with laws, regulations, rules, related self-regulatory organisation standards, and codes of conduct applicable to its banking activities (together, “compliance laws, rules and standards”).⁵⁸⁵

It is therefore submitted that commentators who use the terms compliance risk and legal risk interchangeably are not necessarily wrong when understood within the relevant context. This explains why there is no precise definition of compliance risk. In the same vein, McCormick notes that legal risk management is neither well-defined nor well-established and is generally of a proactive nature.⁵⁸⁶ Unfortunately, he did not attempt to provide a concise definition. It has nonetheless been suggested that it is not helpful to produce a standard definition since legal risk overlaps with other forms of risk.⁵⁸⁷ Moreover, compliance, risk management, and corporate governance serve a common purpose. That purpose in this context is to ensure that the bank complies with all laws, regulations and compulsory standards. Thus, what is important is how the bank responds to legal or compliance risk and associated risks, and whether Islamic banks manage these risks better in the KSA.

The emphasis on laws, regulations and standards is meant to show that compliance risk covers issues related to standards of market conduct, treatment of customers, and management of conflicts of interest. Hence, a bank is exposed to compliance risk where it is knowingly involved in transactions that customers intend to use to evade tax liabilities or avoid regulatory requirements.⁵⁸⁸ It follows that there are many sources of compliance rules and standards, including primary statute, regulations and standards issued by legislators and

⁵⁸⁴ See S Ramakrishna, *Enterprise Compliance Risk Management* (John Wiley & Sons 2015) 55-56.

⁵⁸⁵ BCBS, *Compliance and the Compliance Function in Banks* (BCBS 2005) 7.

⁵⁸⁶ R McCormick, *Legal Risk in the Financial Markets* (2nd edn, Oxford University Press 2010) 105-113.

⁵⁸⁷ A Whittaker, ‘Lawyers as Risk Managers’ (2003) *Butterworths Journal of International Banking and Financial Law* 5, 5.

⁵⁸⁸ *Ibid.*

supervisors, codes of conduct published by industry associations, and internal codes of conduct issued by the senior management of the bank. The analysis in this chapter does not extend to internal codes of conduct given that they are not formally recognised as binding by the regulator or legislator. Nonetheless, it may be said that compliance risk involves legal risk, as well as operational risk. This is because it goes beyond the requirements of the laws (statutes) and includes compulsory standards imposed by the regulator. Also, as noted in Chapter 3, the compliance or legal risk includes reputation risk since the failure to comply with the relevant laws and regulations may damage a bank's reputation; as well as liquidity risk, credit risk and market risk given that SAMA has imposed the broad Basel standards on banks in the KSA. Circular No BCS 5611, for example, requires banks of the KSA to comply with Basel III's rules on the point of non-viability. This means that banks that seek to issue any additional Tier 1 or Tier 2 capital instruments are required by law to adopt a contractual loss absorption mechanism that may be activated by their non-viability or trigger events. Banks are therefore compelled by law (Circulars by SAMA) to manage liquidity risk, and the failure to comply with this law is a compliance risk. Banks in the KSA are also compelled by SAMA to implement the Basel III internal ratings-based approach for credit risk. The fact there is a legal obligation to manage credit risk in this light creates a compliance or legal risk because a bank may fail to comply with SAMA's Circular. In fact, the number of laws, regulations and compulsory standards that banks in the KSA must comply with are so large that it may be contended that compliance risk is the most important risk confronted by banks in the KSA. A non-exhaustive list of the laws, regulations and standards provided by SAMA includes the following:

'The Banking Control Law (BCL) and rules for its enforcement

Anti-Money Laundering Law and its implementing regulations

Currency Law

Anti-Forgery Law

Guidelines and Instructions related to bank operations, financial returns,

Circulars related to safety and security

Anti-Money Laundering Rules Manual

SAMA Rules Governing the Opening of Bank Accounts and General Rules for their Operation

Anti-Fraud and Financial Embezzlement Law

Internal Control Guidance Manual

Accounting Standards for Commercial Banks

Audit Committee Regulating Rules Manual and its Guidance Manual for Regulating Audit Committees, and Manual of Operational Risk through an appropriate insurance system,

The Guide of Secure Online Banking Services

Requirements for Appointment in Senior Positions

Requirements for Regulating Money laundering Units

Controls for Addressing Complaints

Controls Regulating Consumer Finance

Currency Reproduction Controls in Saudi Arabia

The Bank Services Charges

Credit Card Guidelines

Outsourcing Rules

Laws, Regulations and Rules issued by other competent Government authorities such as the Companies Law, Labour Laws, Capital Market Law, and Foreign Investments Law and Regulations

Internal compliance policies and procedures consistent with this “Compliance Manual” as set forth in Chapter 3 of this Manual which contains a “Framework of Compliance Manual”

Principles issued by the Basel Committee for Banking Supervision pertaining to Setting up Compliance Units at banks, any other papers, reports, resolutions or recommendations issued by the Financial Action Task Force (FATF) of which banks were informed in the past or to be informed in the future.⁵⁸⁹

The above list provides a snapshot of the complexity of the compliance function in banks. Nonetheless, what is important is that these laws, regulations and compulsory standards are adhered to. The failure to adhere to them entitles the government to intervene in order to prevent others from suffering the consequences of the failure.⁵⁹⁰ Also, adhering to them facilitates the regulation of the financial sector and prevents serious financial loss.⁵⁹¹ This is especially the case in the KSA where the failure to comply with SAMA’s directions on capital adequacy implies that the bank does not hold enough capital to cover risks. Thus, it may be argued that banks that manage risk better are more resilient to financial crises. However, it is only at the end of the 20th century that compliance with risk management

⁵⁸⁹ SAMA, *Compliance Manual for Banks Working in Saudi Arabia* (SAMA 2008) para 9.

⁵⁹⁰ TP Duane, ‘Regulation’s Rationale: Learning from the California Energy Crisis’ (2002) 19 Yale Journal on Regulation 471, 481-482.

⁵⁹¹ BCBS, note 578 above, 7.

developed as a distinct risk discipline.⁵⁹² In order to comply with the law, organisations use a risk management process that involves identifying, monitoring, managing and reporting the risk. With the increasing appeal of convergence, lawmakers adopt or reproduce international instruments based on best practice such as the Circulars of SAMA based on the standards recommended by BCBS or Circulars of CMA regarding the transition to International Financial Reporting Standards (IFRS).

The above, notwithstanding the concept of compliance in the KSA, is problematic because of the operation of different legal systems. As noted in Chapter 5, Article 1 of the Basic Law of Governance (BSL) provides that the Shariah as derived from the Quran and the Sunnah of the Prophet Muhammad, is the fundamental law. However, SAMA has equally reproduced international standards such as those of Basel. Hence, all banks in the KSA must comply with the Shariah, and the Circulars issued by SAMA. This shows that there is a lingering uncertainty as regards compliance with the principles of the Shariah. Conventional banks in the KSA are allowed to buy and sell products that are not Shariah-compliant but are required to comply with the Circulars issued by SAMA. However, Islamic banks on the other hand are required to comply with the rules of the Shariah as well as the Circulars. One may therefore ask why only Islamic banks are compelled to confront the Shariah risk although the Shariah is the fundamental law of the KSA. Moreover, each bank has a Shariah Board that may determine on the basis of subjective criteria whether the bank's Islamic products and transactions are Shariah-compliant or not. The Shariah Board of one bank may endorse a product that is considered by the Shariah Board of another bank as non-compliant. This raises the question of the true scope of the Shariah risk in the KSA, given that SAMA or CMA does not impose any penalty or sanction for non-compliance with the principles of the Shariah.

Nonetheless, if compliance risk is a component of legal risk, then it may be said that conventional banks and Islamic banks confront different facets of the same legal risk. On the one hand, all banks confront the risk that the law (BCL, Circulars) may give rise to an outcome that is unplanned and undesirable. This may be due to amendments or new interpretations of an old law. The Banking Disputes Settlement Committee SAMA may for example affirm that a conventional bank in a dispute before the Committee is required to comply with the principles of the Shariah, given that the Shariah is the fundamental law of

⁵⁹² S Ramakrishna, note 577 above, xvii.

the land. This would then imply that the conventional banks would cease to trade in products and services that are not compliant with the Shariah. On the other hand, only Islamic banks face the risk that they may be found to have carried out transactions in violation of the principles of the Shariah. Given that Islamic banking is not expressly recognized in the applicable laws and regulations in the KSA, Islamic banks are compelled to confront the Shariah risk only because they hold themselves out as Shariah-compliant banks. The assumption should therefore be that the operational risk controls of Islamic banks must be more sophisticated than those of conventional banks since Islamic banks must respond to a much wider variety of legal issues than conventional banks. However, it is shown below that this assumption is unfounded given that there is no legal motivation to comply with the principles of the Shariah. Conventional banks also operate Islamic windows and rely on their own Shariah Boards to determine whether their Islamic products and transactions are Shariah-compliant.

This chapter places emphasis on what is done in banks in the KSA to manage compliance risk, and related operational, liquidity, credit, and market risks, in accordance with the law, and whether Islamic banks manage risk better because of the nature of Islamic banking. Thus, the focus is on compliance risk management. Given the wide variety of risks that are must be controlled, it may be argued that this is similar to enterprise risk management. This is because it is not simply a question of developing a compliance plan to enable the bank to comply with the law,⁵⁹³ This is most likely unique to the KSA and other jurisdictions where there is a strong focus on micro prudential regulations that seek to regulate individual banks. An attempt is also made below to determine whether this regulatory approach actually impacts the risk management processes of banks of the KSA, and whether it contributes to their resilience.

6.3 The Compliance Function

Assessing the compliance function is important in determining whether the bank is effectively managing exposure.⁵⁹⁴ The compliance function comprises the staff who are tasked with compliance responsibilities. Every bank naturally has its own organisational

⁵⁹³ Cf KJ Johnson and ZW Anson, 'Quantifying Legal Risk: A Method for Managing Legal Risk' (2007) 9 *Management Accounting Quarterly* 22, 23.

⁵⁹⁴ BCBS, note 578 above, 7-8.

structure that reflects its environment. In the same vein, the compliance function staff may be located in one department or within the operating business lines, depending on the bank's exposure and risk management strategy. Islamic banks and conventional banks that operate an Islamic window generally have a Shariah Board or Shariah Committee that oversees the Shariah compliance and research functions. However, its role is limited to Shariah compliance risk management, although they cooperate with other functions within the bank to ensure that the same standards on compliance are maintained in all units of the bank. Nonetheless, many Islamic governments have issued specific rules guiding the role and operation of the Shariah Board or Advisor.⁵⁹⁵ Given that SAMA does not specifically regulate Shariah risk, Islamic banks or conventional banks operating an Islamic window in the KSA are expected to self-regulate with regard to this specific risk.

Nonetheless, as shown below, the compliance function of Islamic banks and conventional banks is required to be independent and provided with resources necessary for effective operation. It should equally be subject to independent review on a regular basis by the internal audit function. This will ensure that the compliance function's management of compliance risk is consistent with the bank's risk management strategy.

The next section critically assesses specific compliance risk management strategies and structures of the two Islamic banks and two conventional banks in the KSA. The comparison is made on the basis of principles of compliance risk and the compliance function in banks issued by the BCBS, and the principles of corporate governance for banks in the KSA issued by SAMA. The rationale for using these principles as the basis for comparison is that the BCBS seeks to promote convergence toward common standards and approaches. Thus, its guidelines must be particularly helpful in a jurisdiction where Islamic banks and conventional banks are required to comply to the same laws and regulations. As shown in Chapter 5, SAMA has adopted the BCBS's supervisory standards and guidelines because of their neutrality. This also explains why the principles of corporate governance for banks issued by SAMA largely reflects the principles of compliance risk and the compliance function in banks issued by the BCBS.

It must be noted that organisations, whether Islamic or conventional, approach compliance holistically. They evaluate compliance practices by taking into account the total cost of

⁵⁹⁵ See J Ercanbrack, *The Transformation of Islamic Law in Global Financial Markets* (Cambridge University Press 2015) 258.

compliance as well as the benefits of compliance efforts in order to plan for the long term. Cost-benefit analyses have been examined in depth across several disciplines in diverse contexts. However, they generally centre on the assessment of strengths and weaknesses of alternatives. In the context of compliance, the alternatives include estimating the costs of observing the relevant rules and regulations, as well as the cost of non-compliance. Organisations may be reluctant to comply with the law where the cost of non-compliance is less than the cost of complying. Nonetheless, this may be true only in cases where the costs and benefits can be monetised or quantified. It may be difficult or sometimes impossible to monetise or quantify the cost and benefits of managing compliance risk.⁵⁹⁶ The costs are sometimes complex and very difficult to estimate. They may include costs incurred by both regulators and banks due to changes to oversight and enforcement in addition to the human resources and time required. Nonetheless, Robert Hahn noted that the cost-benefit analysis ‘does not require that costs and benefits be expressed in the same units or that agencies monetize benefits that may not be quantifiable.’⁵⁹⁷ He then stated that the analysis should simply ‘be careful to reflect those uncertainties and account for qualitative factors.’⁵⁹⁸ As such, the cost-benefit analysis is important because it helps to specify baselines and alternatives within the compliance function, enabling organisations to determine, at least conceptually, the costs and benefits of compliance by relying on evidence rather than intuitive judgement solely.⁵⁹⁹ What is important is that organisations can use the cost-benefit analysis on a voluntary basis, without any form of legal compulsion.

6.4 Assessing the Compliance Risk Management of Banks in the KSA

The supporting guidance issued by the BCBS is intended to assist individual banks to manage and mitigate compliance risk.⁶⁰⁰ However, all banks licensed by SAMA to carry out banking business in the KSA and their foreign branches must apply the principles issued by SAMA. They are not mere guidelines. The regulator notes that the principles “complement the

⁵⁹⁶ W Shahin and E El-Achkar, *Banking and Monetary Policies in a Changing Financial Environment: A Regulatory Approach* (Routledge 2017) 55.

⁵⁹⁷ RW Hahn, ‘The Economic Analysis of Regulation: A Response to the Critics’ (2004) 71 *University of Chicago Law Review* 1021, 1049-1050.

⁵⁹⁸ *Ibid.*

⁵⁹⁹ See E Posner and EG Weyl, ‘Benefit-Cost Analysis for Financial Regulation’ (2013) 103 *American Economic Review Papers and Process* 393, 397.

⁶⁰⁰ BCBS, note 578 above, 7-8.

regulations, rules and circulars” it has issued, as well as regulations issued by the CMA.⁶⁰¹ Thus, a bank licensed in the KSA may not follow practices other than those outlined in the guidance issued by SAMA. This is because this is the way this regulator determines whether the compliance function of a bank is effective. As noted above, the fact that SAMA has imposed these best practices on banks in the KSA implies that the compliance or legal risk may also involve liquidity risk, credit risk and market risk. Thus, this section also assesses the management of these risks by the four banks named above in order to determine whether they comply with the regulations or are likely to suffer financial loss due to non-compliance. Nonetheless, it is only logical to take into account the fact that the nature of the bank’s activity, as well as its size and complexity determines the way in which the principles are implemented. The four banks that were part of the survey include Al Rajhi Bank, Albilad Bank, National Commercial Bank (NCB), and Samba Financial Group.

Al Rajhi Bank, previously known as Al Rajhi Banking and Investment Corporation, was ranked the largest fully Shariah-compliant bank in the world by capital in 2015.⁶⁰² Thus, it has the largest market for Shariah-compliant bank products. In order to ensure compliance with the Shariah, it has established a Shariah Authority that reviews the products and activities. Its first branch was opened in 1957 and it became a joint stock company under Royal Decree No. M/59 of June 29, 1987 and Article 6 of the Council of Ministers’ Resolution No. 245 of June 23, 1987. The following year, it was established as a share holding company of the KSA. It is also one of the largest joint stock companies in the KSA. It is traded on the Saudi Arabian Stock Exchange, Tadawul, and has branches in Jordan and Kuwait, and a subsidiary, the Al Rajhi Corporation Ltd in Malaysia.

Albilad Bank, a much smaller fully Shariah-compliant bank, was established as a joint stock company in the KSA under Royal Decree No. M/48 of November 4, 2004. It operates through several segments that are fully Shariah-compliant, including retail, corporate, treasury, investment, and brokerage. It has branches and exchange and remittance centres in the KSA.

NCB, also known as Al Ahli Bank, is the largest bank in the KSA by asset and the first licensed local bank of the KSA. It was established following the Royal Decree of December

⁶⁰¹ SAMA, *Principles of Corporate Governance for Banks Operating in Saudi Arabia* (SAMA 2014) para 2.

⁶⁰² J DiVanna and J King, ‘A Bump on a Path of Progress’ (2015) *The Banker* (November) 1, 3.

26, 1953. In 1999, the government through the Public Investment of Fund of the Ministry of Finance acquired a majority holding of the bank. In March 2014, the bank made an Initial Public Offering for 15 per cent of its share capital, and 10 per cent of its share capital was allocated to the Public Pension Agency. Since then, the bank's shares have been trading on the Tadawul. It is also one of the first modern banks to offer Islamic products. It is a conventional bank that operates an Islamic window, although there are plans to make the bank fully Shariah-compliant in the next five years.

Lastly, Samba Financial Group was previously a branch of Citibank, established in Jeddah in 1955. It became a separate company in 1980 following a Royal Decree. It was then known as the Saudi American Bank. In 1999, it merged with the United Saudi Bank, and in 2003, its name was changed to Samba Financial Group when the technical management agreement with Citibank ended. Like most conventional banks in the KSA, it also offers a mix of conventional and fully Shariah-compliant products and services. It has a branch in the UK, Qatar, and the United Arab Emirates, as well as a subsidiary with 28 branches across Pakistan.

6.5 Responsibilities of the Board of Directors and Senior Management

The BCBS assumes that banks generally have a governance structure that comprises a Board of Directors and senior management.⁶⁰³ The corporate governance structures of the banks in the KSA match this description. However, SAMA requires that the members of the Board of Directors be qualified to perform their tasks. It further requires the Board to disclose the CVs of all its members in order for investors and shareholders to assess their competence and ability to perform the respective tasks assigned to them.⁶⁰⁴ Also, the Board must disclose the mechanism it uses to monitor the performance and evaluate the integrity of its members.⁶⁰⁵ However, there are no guidelines on the acceptable level of integrity and how the effectiveness of the mechanism may be assessed. The BCBS recommends that the Board of Directors should be tasked with ensuring that a suitable policy is implemented to manage compliance risk, as well as other categories of risk. The Board and senior management should then oversee the implementation of this policy and coordinate with the compliance function

⁶⁰³ BCBS, note 578 above, 8.

⁶⁰⁴ SAMA, note 590 above, para 15.

⁶⁰⁵ Ibid.

to resolve all compliance issues in an expeditious manner.⁶⁰⁶ In the same vein, SAMA requires the Board to clearly set out lines of accountability and responsibility at all levels. The Board must then approve and oversee the implementation of an appropriate risk strategy, ensure the soundness and solvency of the bank, as well as the compliance of the senior management and all employees with relevant policies and procedures.⁶⁰⁷ The Board must also guarantee the independence of auditors, internal and external, and ensure the fulfilment of requirements of transparency and disclosure regarding financial reports.⁶⁰⁸ Interestingly, the Board has an obligation to inform SAMA about any penalty or sanction within five days of the date of the penalty or sanction that any other regulatory, supervisory or judicial body has imposed on the Board.⁶⁰⁹ Although SAMA does not state the consequence of this penalty or sanction from its regulatory perspective, the penalty or sanction is evidence of the failure of the compliance function and compliance risk management in the bank. Thus, an attempt is also made to determine the penalties or sanctions that have been imposed on the respective banks.

6.5.1 Al Rajhi Bank

As noted above, this is the largest fully Shariah-compliant bank in the world by capital. Thus, it has developed a wide range of Islamic products in an attempt to develop diversity in Islamic finance. It follows that the Shariah risk confronted by the bank is even bigger. However, given that the only authority that assesses its Shariah products is the bank's Shariah Board, it may be argued that the bank does not confront Shariah risk per se. It is nonetheless uncertain whether the same rules that apply to the Board of Directors should apply to the Shariah Board.

The Board of Directors of the bank comprises eleven individuals elected every three years by the General Assembly. However, only a very brief account of six members' education and qualifications is provided on the bank's website. Nothing is provided in the annual reports of 2007, 2014 and 2016 that were examined for this study. Thus, this bank does not comply with SAMA's requirement that the Board must disclose the CVs of all its members in order for the

⁶⁰⁶ BCBS, note 578 above, 9.

⁶⁰⁷ SAMA, note 590 above, paras 34-39.

⁶⁰⁸ Ibid, 46.

⁶⁰⁹ Ibid, para 40.

investors and shareholders to assess their competence and ability to perform the respective tasks assigned to them. Also, the bank does not comply with SAMA's requirement to disclose the mechanism that it uses to assess the integrity and performance of the members of the Board of Directors. It is therefore uncertain whether the bank has been sufficiently diligent not to nominate a member who has been convicted of a crime that involves moral turpitude.

Notwithstanding, the Board of Directors develops or approves policies governing risk management,⁶¹⁰ as required by SAMA. Risk management is essentially performed by a separate unit called the Credit and Risk Management Group. The Board and senior management ensure that the risks identified are mitigated. The Board has for example set limits on the level of mismatch of commission, as well as commission rate gal limits for specific periods to ensure that positions are maintained within the limits to mitigate the profit rate risk.⁶¹¹ It is however uncertain whether the Board oversees the implementation of an appropriate risk strategy by the Credit and Risk Management Group, as well as whether it is the duty of the Board to ensure the soundness and solvency of the bank.

6.5.2 Albilad Bank

This smaller Islamic bank operates through several segments that are fully Shariah-compliant and has a much more independent Shariah Board that assesses all products and transactions. The bank's Board of Directors comprises eleven members. Unlike Al Rajhi Bank, this bank complies with SAMA's requirement that the Board must disclose the CVs of all its members in order for the investors and shareholders to assess their competence. Thus, the CV of each member is provided on the company's website. However, there is no information on the mechanism used to monitor the performance and evaluate the integrity of the members. The Board approves and certifies risk measurement mechanisms and procedures, and the senior management reports exposures and violations to the Board and the Asset and Liabilities Committee on a regular basis.⁶¹² The Board nominates members of the Risk Committee and assigns tasks to the Committee. The Board and the Asset and Liabilities Committee review periodic reports on risk management. Thus, beyond reviewing and approving broad risk strategies, it is uncertain whether the Board effectively oversees the implementation of the

⁶¹⁰ Al Rajhi Bank, *Annual Report 2016* (Al Rajhi Bank 2016) para 26.

⁶¹¹ Ibid, para 26-3.

⁶¹² Albilad Bank, *Annual Report 2015* (Albilad Bank 2015) 35.

strategies. It is also uncertain which measures are taken by the Board and senior management to ensure the soundness and solvency of the bank, as well as the compliance of the senior management and all employees with relevant policies and procedures. On the other hand, the Shariah Board is more involved in the mitigation of Shariah risk. It is for example empowered to compel the bank to exclude revenues obtained in contravention of the principles of the Shariah.⁶¹³

6.5.3NCB

The Board of Directors of this conventional bank comprises nine members appointed by the General Assembly every three years. Like Al Rajhi Bank, only a very brief account of nine members' education and qualifications is provided on the bank's website. Hence, it does not comply with SAMA's requirement that the Board of Directors must disclose the CVs of all its members in order for the investors and shareholders to assess their competence and ability to perform the respective tasks assigned to them. However, it complies with SAMA's requirement to disclose the mechanism that is used to assess the integrity and performance of these members. In 2015, it published a document briefly outlining the policies, standards and procedures for nominating members of the Board of Directors.⁶¹⁴ It also subsequently noted that it has adopted SAMA's guidelines on corporate governance.⁶¹⁵ Thus, the Board oversees the operation of the internal controls system. It has several sub-committees with defined roles and responsibilities. They generally support the senior management in monitoring and managing the wide range of risks to which the bank is exposed. The Board also conducts periodic reviews of the reports on the internal audit, internal control, and risk management. This enables the Board to determine the effectiveness of the internal control system.⁶¹⁶

Unlike the Islamic banks discussed above, the Board of the NCB plays a more active role in overseeing the implementation of the risk strategy and ensuring the soundness of the Bank. This is because the Board has a Risk Committee that ensures that the senior management understands and manages the significant risks to which the bank is exposed. This Committee also ensures that the bank's policies and procedures to manage the risks comply with all

⁶¹³ Ibid, 96.

⁶¹⁴ See NCB, *Policies, Standards and Procedures of Nominating for the Membership of the Board of Directors* (NCB 2015).

⁶¹⁵ NCB, *Annual Report 2016* (NCB 2016) 28.

⁶¹⁶ Ibid, 27.

relevant laws and regulations.⁶¹⁷ Also, the Board has overall authority for developing market risk management policies and reviews their implementation by the Risk Group on a daily basis.⁶¹⁸ The Board may equally set limits on positions by currency in order to mitigate currency risk.⁶¹⁹

Given that it operates an increasingly large Islamic window and intends to become a fully Shariah-compliant bank in the near future, it has a Shariah Board with similar extensive powers as the Shariah Boards of the Islamic banks discussed above. The Shariah Board for example confirmed that subscription for the bank's shares traded on the Tadawul is Shariah-compliant.⁶²⁰ However, there is no information on the criteria that were used to determine the conformity to the principles of the Shariah. Also, as will be shown below, there is no information on how the portfolio of Shariah-compliant stocks will fare during a financial crisis.

6.5.4 Samba Financial Group

This conventional bank's Board of Directors also comprises nine members appointed by the General Assembly every three years. Like Al Rajhi and NCB, only a very brief account of nine members' education and qualifications is provided on the bank's website. Hence, it does not comply with SAMA's requirement that the Board must disclose the CVs of all its members in order for the investors and shareholders to assess their competence and ability to perform the respective tasks assigned to them. Also, like in all the banks discussed above, the Board of Directors is directly responsible for the risk management function. Its structure is very similar to that of NCB's Board given that it comprises sub-committees that manage different risks within the overall policies approved by the Board.⁶²¹ The relevant committees in this regard include the Country Risk and Compliance Committee, the Management Credit Committee, the Asset and Liability Committee, and the Integrated Risk Management Committee. The Board and senior management also play a very active role in overseeing the implementation of the risk strategy by setting maximum exposure limits for obligors and in terms of portfolio composition in order to mitigate credit risk and avoid excessive

⁶¹⁷ Ibid, 46.

⁶¹⁸ Ibid, 115.

⁶¹⁹ Ibid, 119.

⁶²⁰ Ibid, 38.

⁶²¹ N Schoon, *Islamic Banking and Finance* (Spiramus 2010) 92.

concentration. They also set standards for the origination and maintenance of extensions of credit.⁶²²

Interestingly, this bank operates an Islamic window, but the buying and selling of Islamic products is considered by the Board of Directors to be a separate financial and operational system. The Board is therefore not directly involved in the management of Shariah risk. This task has been assigned to the Shariah Supervisory Board which has extensive duties and more powers than the Shariah Boards of the other banks discussed above. It operates like a Shariah Board of Directors. Nonetheless, as noted above, it is difficult to contend that this bank faces the Shariah risk since it is up to the Shariah Supervisory Board to determine whether the bank is compliant with the principles of the Shariah.

6.6 Compliance Function in the KSA

The BCBS recommends that the compliance function of the bank must have formal status and be independent.⁶²³ It also recommends the appointment of a head of compliance or group compliance officer who is tasked with managing the overall compliance risk of the bank. Also, neither the compliance officer nor the compliance staff should be placed in a position where there is a potential conflict of interest between their compliance duties and other duties or commitments. The Board must then ensure that they have access to information necessary to perform their duties. In the same vein, SAMA requires all banks to have a compliance function, in addition to the internal audit function, risk management function, and a Chief Risk Officer.⁶²⁴ It also requires the Board to ensure that the heads of these functions are independent and have sufficient resources to perform their tasks. Their independence may be undermined where their remuneration is tied to the performance of the business. The Board must also have a written policy governing conflicts of interests.⁶²⁵ The policy must outline ways of identifying possible conflicts of interests. SAMA notes that conflicts of interests may arise where the bank routinely communicates and shares information with its holding company or subsidiaries. Where related party transactions are carried out,⁶²⁶ the Board must ensure that they are fair and neither party is subject to any pressure from the other party.

⁶²² Ibid, 93.

⁶²³ BCBS, note 578 above, 10.

⁶²⁴ SAMA, note 590 above, para 44.

⁶²⁵ Ibid, para 49.

⁶²⁶ For an analysis of related party transactions and agency problems that might occur, See Hiller et al, *Corporate Finance* (2nd edn, McGraw-Hill Education 2013) 34-35.

Where the transaction is not at such an arm's length basis, the Board must disclose the transaction to SAMA within two business days.⁶²⁷

However, it must be noted that the banks need not necessarily have a designated compliance unit or compliance department. Compliance duties may be carried out by personnel in different units. The legal department may for example be tasked with assisting the senior management in managing compliance risk. Members of this department may also monitor compliance with the relevant policies and regulations and report to management. However, what is important is the lines of responsibility and accountability are clearly drawn, and the bank complies with the relevant laws and regulations.

The BCBS also recommends that the compliance function should identify and assess the compliance risks that are embedded in the activities of the bank.⁶²⁸ As noted above, these risks include Shariah risk, liquidity risk, credit risk, operational risk, and market risk. This is because SAMA imposes duties on banks to manage these risks. Hence, the compliance function must for example identify and document risks associated with the development of products or adoption of innovative business practices, the change of the nature of customer relationships, whether the bank meets the Basel III standard liquidity coverage ratio, adopts a contractual loss absorption mechanism that may be activated by their non-viability or trigger events where it seeks to issue any additional Tier 1 or Tier 2 capital instruments, and builds up a capital conservation buffer of 2.5 per cent (comprised of Common Equity Tier 1) outside of periods of stress.⁶²⁹ These are only some of the Basel standards that SAMA has imposed on banks in the KSA, to the effect that failure to comply with the standards attracts corrective measures or fines.

It is therefore important that the compliance function should be able to use performance indicators or other indicators to measure compliance risk. The measurements enhance risk assessment. The compliance function should also evaluate the compliance procedures and guidelines on a regular basis, and swiftly mend any deficiencies identified or make suitable

⁶²⁷ SAMA, note 590 above, para 52.

⁶²⁸ BCBS, note 578 above, 14.

⁶²⁹ The compliance function must therefore be adopted to each bank. See A Ergys Mishal, 'The Compliance Function in Banks and the Need for Increasing and Strengthening its Role – Lessons Learned from Practice' (2016) 5 *European Journal of Sustainable Development* 171, 178; Jonathan Edwards and Simon Wolfe, 'The Compliance Function in Banks' (2004) 12 *Journal of Financial Regulation and Compliance* 216, 216-224; Emil Asenov, 'Characteristics of Compliance Risk in Banking' (2015) 4 *Economic Alternatives* 20, 24-28.

proposals to the senior management and the Board. The effective management of compliance risk also requires regular compliance monitoring and testing. The head of compliance must always report the results of the tests to the Board and senior management. The report must also include any changes in the bank's risk profile on the basis of relevant measurements. The compliance function must then liaise with the regulator when required by the law.

Interestingly, SAMA does not impose any test on banks in the KSA. It simply requires the compliance department to continuously monitor and test compliance and establish a periodic review programme of test controls that correspond with the level of potential risks to which the bank is exposed.⁶³⁰ As noted in Chapter 5, unlike the Dodd-Frank Act that imposes the stress testing of each bank's capital structure in the United States, there is no regulatory stress testing in the KSA. Hence, different banks are free to use variants of the stress test since they are simply required to comply with the capital adequacy rules under Basel II and Basel III. Also, there is no regulatory requirement to publish the results of the test. This creates much uncertainty as regards the stress scenarios used by individual banks, whether they are sufficiently severe, what the true bank capital level is, and which capital buffer is needed to resist a severe shock.

The next section critically examines the regulatory functions of the four banks introduced above. It seeks to determine the extent to which the banks have followed the recommendations of the BCBS and SAMA, and whether they comply with the relevant laws, regulations and compulsory standards.

6.6.1 Al Rajhi Bank

As a fully-fledged Islamic bank, it has a dual compliance function. This is because it is foremost required to comply with the principles of the Shariah, and then with the laws, standards, rules, and regulations outlined above. The staff who have the skill to assess how the principles of the Shariah and new interpretations may affect the bank do not necessarily have the expertise regarding conventional laws and regulations. Thus, Al Rajhi Bank has a Shariah Authority that assesses all the bank's products and activities with regard to their compliance with the principles of the Shariah. The bank has a separate risk management

⁶³⁰ See SAMA, note 590 above, paras 7-8.

function and compliance function. The risk management is performed by the Credit and Risk Management Group. It is tasked with identifying and assessing financial risks. The bank notes that the most important financial risks to which it is exposed include market risk (currency risk, profit rate risk, and price risk), operational risk, liquidity risk, and credit risk.⁶³¹

The compliance function is the preserve of the Compliance Group established in 2005.⁶³² The bank notes that the Group monitors and assesses compliance risks and reputation risk. Emphasis is placed on the risks of money laundering and terrorist financing. However, it seems the Group's duties do not extend to financial risks, although they constitute compliance risks in the KSA as shown above. Nonetheless, given that the Group seeks to prevent legal or administrative penalties and damage to the bank's reputation caused by the failure to comply with relevant laws, rules and regulations, it may be assumed that its activities are closely coordinated with those of the Credit and Risk Management Group. This is because SAMA imposes penalties for the failure to manage financial risks in specific ways.

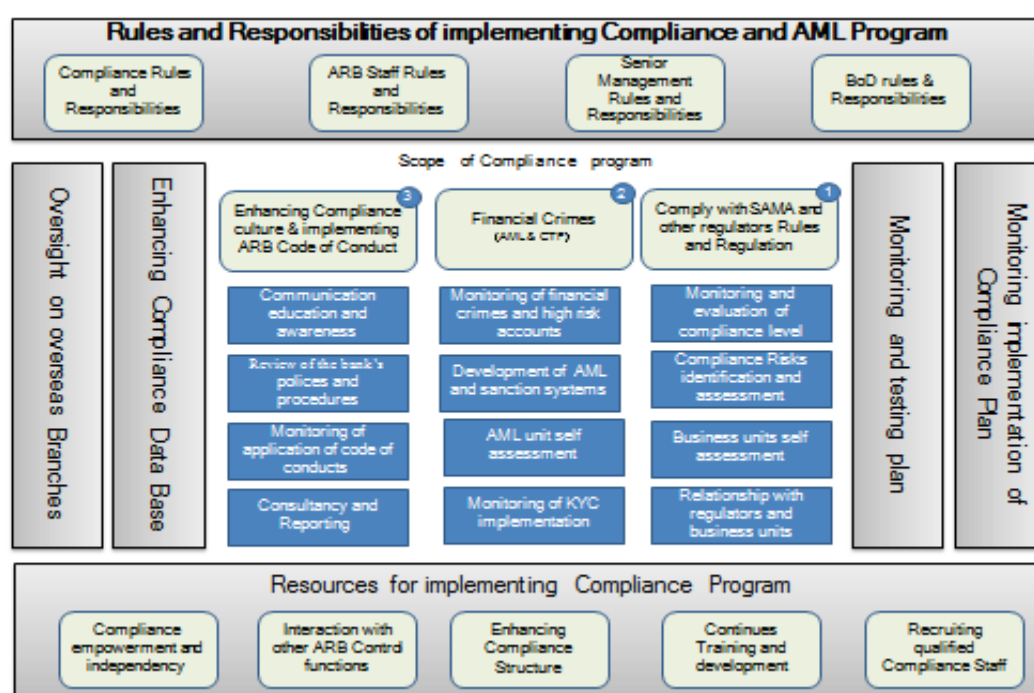
The Compliance Group supports the Board and the senior management in managing and mitigating the impact of compliance risks. Thus, the Chief Compliance Officer reports to the Chief Executive Officer, as well as the Audit Compliance Committee. There is no information about the independence of the Chief Compliance Officer, only general guidelines on compliance empowerment and independency in the implementation of the compliance programme. There is equally no information about the remuneration of staff in the Compliance Group in order to assess their independence, as well as no written policy governing conflicts of interests. Regarding the risk-based approach used by the bank, they place emphasis on monitoring and analysing risks of money laundering and terrorism financing. The bank also has a monitoring and testing program. However, due to the fact that it is not required to publish information about the tests, it is difficult to access accurate and verifiable information about stress scenarios and capital buffers for example. It is shown below that this study was compelled to rely on qualitative data obtained from questionnaires.

⁶³¹ Al Rajhi Bank, note 599 above, para 26.

⁶³² Information about the Compliance Group and the Chief Compliance Officer is only found on the bank's website. There is no information on these in the bank's annual reports.

The bank did not report any fine imposed on it in 2007, 2014 or 2016. However, the New York Department of Financial Services imposed a fine of \$255 million on Habib Bank for facilitating billions of dollars in transactions with Al Rajhi Bank without any appropriate safeguards to prevent money laundering or terrorism financing.⁶³³ Al Rajhi Bank has no operations in the United States. It is uncertain whether it would have been fined as well if it had any operations in the United States. Nonetheless, the fine was not imposed for money laundering or terrorism financing but for the failure to establish appropriate safeguards. In light of the above, it is unlikely that Al Rajhi Bank would have been fined. It is also important to note that the Supreme Court of the United States dismissed a suit as Al Rajhi Bank, holding that the civil remedy provision of the Anti-Terrorism Act does not support claims against the bank based on theories of secondary liability, and the plaintiffs had failed to establish that the bank provided support to the terrorist organisation that attacked the United States in 2011.⁶³⁴ Box VI.I below provides a snapshot of the bank's compliance programme as presented on its site.

Box VI.I: Al Rajhi's Compliance Programme



⁶³³ Glen Blain, 'Pakistan-based Habib Bank Slapped with \$225 Million Fine' (2017) New York Daily News. Available at: <http://www.nydailynews.com/news/crime/habib-bank-slapped-225m-fine-forced-shutter-nyc-branch-article-1.3478389> [04 December 2017].

⁶³⁴ See *O'Neill et al v Al Rajhi Bank*, 134 S.Ct. 2870 (2014). A similar suit has been filed by several insurance companies in the New York Southern District Court. See *The Charter Oak Fire Insurance Co et al v Al Rajhi Bank et al* (Case No. 1:17-cv-02651).

6.6.2 Albilad Bank

As a fully compliant Islamic bank, it also has a dual compliance function. Thus, the bank has an independent Shariah Board that ensures that all products, activities, agreements, and decisions are in compliance with the principles of the Shariah. It also provides training on Shariah compliance. It must be noted that the decisions of the Shariah Board bind the bank and cannot be overruled by the senior management and Board of Directors. The Shariah Board has a Preparatory Committee that assesses the legality of new products and examines enquiries from the bank's employees and customers. The Shariah Board also works with the Shariah Group that comprises 11 employees from the Shariah Board Secretariat Department, the Shariah Audit Department, and the Research and Development Department.

The compliance function is also performed by the Risk Committee and the Compliance and Governance Committee of the Board of Directors. There is no independent compliance function. The role of the Compliance and Anti-Financial Crime Division is quite limited and almost ceremonial. It is generally required to assess the bank's compliance with laws, regulations, directives, mandatory guidelines, and policies.⁶³⁶ It must also ensure that the policies and procedures of the bank, as well as work programmes are updated on a regular basis. It is expected that all departments and the Senior Executive Management, can repair deficiencies in the controls system identified by the auditors. Surely, this ought to be the task of the head of compliance or group compliance officer as recommended by BCBS and SAMA. The ultimate responsibility for assessing and managing overall compliance risk is with the Compliance and Governance Committee of the Board of Directors. Although two of the three members are independent external experts, the Chairperson and third member of the Committee is also a member of the Board of Directors.⁶³⁷ This raises questions about independence and conflict of interest. This Committee develops the risk strategy, makes risk management decisions, and monitors the risk level. The latter tasks should have been delegated to the Compliance and Anti-Financial Crime Division.

⁶³⁵ See <http://www.alrajhibank.com.sa/en/investor-relations/about-us/pages/anti-money-laundering.aspx> [08 January 2018].

⁶³⁶ Albilad Bank, note 601 above, 18.

⁶³⁷ Ibid, 19.

Also, the senior management, and not any of the units the perform the compliance function, is responsible for monitoring the maturity portfolio and ensuring adequate liquidity. Although the bank notes that it conducts stress tests on a regular basis to monitor its liquidity positions,⁶³⁸ it is uncertain which unit conducts the tests. There is no information about the multiple scenarios used and the results of the tests. The bank simply states that the stress tests are conducted through the Internal Capital Adequacy Assessing Procedures (ICAAP) to ensure capital adequacy in stressful economic conditions.⁶³⁹ Nonetheless, the Assets and Liabilities Committee reviews all policies related to liquidity.

It must be noted that in the year of 2015 alone, 134 fines were imposed on the bank by SAMA, CMA, and the Ministry of Municipal and Rural Affairs and the General Authority for Civil Aviation. The total amount the bank paid in fines was SAR 649,200, which is roughly £128,000. In 2014, 98 fines were imposed on the bank by SAMA and the Ministry of Municipal and Rural Affairs.⁶⁴⁰ The bank did not specify the reasons for the fines. Nonetheless, given its size, this demonstrates a high risk of non-compliance, given that the much larger Al Rajhi Bank received no fine during the same period.

6.6.3 NCB

Although this bank is not fully Shariah-compliant, it has an independent Shariah Board that assesses the products provided through its Islamic window. Nonetheless, the bank states that all its services comply with the Shariah.⁶⁴¹ Thus, its Shariah Board performs the compliance function almost as much as the Shariah Authority of Al Rajhi Bank and the Shariah Board of Albilad Bank.

Given the size and importance of this bank, it is surprising that the compliance function does not have a formal status within the bank. Also, there is no group compliance officer or head of compliance who is tasked with coordinating the management of the institution's compliance risk. This task has been assigned to the Audit Committee of the Board of

⁶³⁸ Ibid, 4.

⁶³⁹ Ibid, 5, 7, 13.

⁶⁴⁰ Albilad Bank, *Annual Report 2014* (Albilad Bank 2014) 64.

⁶⁴¹ NCB, note 604 above, 11.

Directors.⁶⁴² Although the Committee comprises at least three non-executive members, the Chairman is a member of the Board of Directors. This raises questions about the Committee's independence. Also, the Committee coordinates compliance risk management with the Internal Audit Division and the Compliance Division.⁶⁴³ It is uncertain what the latter unit actually does, apart from host the staff that assist the Audit Committee. All material findings are reported to the Committee which ensures that risks identified are managed and internal control system remains efficient. However, it is uncertain whether the Committee's four members constitute sufficient resources to ensure that a bank of this size and complexity complies with all relevant laws, regulations and standards.

The bank then notes that due to the limitations of the value at risk (VaR) technique as regards sensitivity structures and concentration risks in each trading book,⁶⁴⁴ it supplements the tool with stress tests.⁶⁴⁵ These enable the bank to ascertain the financial impact of extraordinary market scenarios on the bank's trading position. The liquidity position is also assessed using these tests. However, as Al Rajhi Bank and Albilad Bank, NCB does not provide information about the variety of scenarios and stress factors that it employs. Also, there is no information about the results of the tests.

With regard to fines and penalties, in 2016 alone, NCB exceptionally received 31 fines from SAMA amounting to SAR 14,104,660 (roughly £2,700,000).⁶⁴⁶ Some of the fines include 1 fine for non-maintenance of the minimum liquidity reserve ratio of deposit liabilities, 14 fines for supplying false banknotes, 5 fines for non-compliance with anti-money laundering rules, and 1 fine for providing SAMA with false information in the follow-up report regarding comprehensive examination observations in 2013.⁶⁴⁷ In 2014, a total of 8 fines were imposed by SAMA, including a fine for using false banknotes and a fine for failing to report suspicious activity.⁶⁴⁸ This shows a comparatively high level of non-compliance which is understandable given the fact that the bank's conventional compliance function does not have a formal status, and the unit and person in charge of the overall management of compliance risk is not independent. On the other hand, the Shariah compliance function has a formal

⁶⁴² Ibid, 45.

⁶⁴³ Ibid, 19.

⁶⁴⁴ Some of the limitations of VaR are discussed in Chapter 3.

⁶⁴⁵ NCB, note 604 above, 117.

⁶⁴⁶ Ibid, 29.

⁶⁴⁷ Ibid.

⁶⁴⁸ NCB, *Annual Report 2014* (NCB 2014) 22.

status and the Shariah Board is independent. Nonetheless, it is not thanks to the Shariah Board that none of the 31 fines relates to non-compliance with the principles of the Shariah. It is simply because the regulators do not enforce the principles of the Shariah.

6.6.4 Samba Financial Group

The Shariah Supervisory Board is not only independent, but it directs activities relating to Islamic banking. As noted above, Board of Directors is ultimately responsible for risk management, and has created several sub-committees to formulate overall policies and oversee the process, including the Integrated Risk Management Committee and the Country Risk and Compliance Committee. The senior management of this bank is responsible for ensuring that adequate controls are maintained, and all operations are efficient and comply with the relevant laws, regulations, and standards.⁶⁴⁹ The compliance function is performed by the Board of Directors, the Compliance and Operations Risk Management Department (ORMD), and the Audit and Risk Review. The Board of Directors has issued the Code of Corporate Governance in order to comply with the requirements of the Pakistan Stock Exchange Limited (Rule No. 5.19) where the Samba Group is listed. The Board of Directors is responsible for ensuring that all departments apply the Code. It further issued a Statement of Compliance showing how the departments comply with the Code's provisions. The Audit and Risk Review and ORMD monitor compliance with all regulatory requirements, and together with the Risk Management Group, review processes and operations to identify and manage compliance risks.⁶⁵⁰ They have also identified key risk indicators for different control areas with tolerance limits.

Samba Financial Group uses more tools to measure risk factors than the other banks. These include factor sensitivities, gap analysis, market access report, volatility and correlation calculations, VaR, liquidity ratio, back testing and stress testing.⁶⁵¹ The risk management function reviews the methodologies and ensures that they are reasonable and consistent. Nonetheless, no information is provided on the results of the analyses carried out by the bank. It is therefore uncertain whether they are used in a manner that is effective with regard to establishing standards for measuring and reporting risks.

⁶⁴⁹ Samba Financial Group, *Annual Report 2016* (Samba Financial Group 2016) 30.

⁶⁵⁰ Ibid, 31.

⁶⁵¹ Ibid, 102-104.

Regarding penalties or sanctions, this bank has not incurred as many penalties as NCB or even Albilad Bank. However, in 2015, the CMA imposed a fine of SAR10,000 (roughly £2000) on the bank for failure to issue a Corporate Governance Code approved by the Board of Directors before June 30, 2013. This was in violation of Article 10(c) of the Corporate Governance Regulations.

6.7 Risk Management and Resilience

The four banks have a governance structure that comprises a Board of Directors and senior management. Although there is always further scope for closer cooperation between the various units, they are largely integrated, and it seems their collaboration is functional. The Board of Directors are tasked with ensuring that policies are implemented to manage compliance risk, as well as other related categories of risk. The Board and senior management in all the banks, except Al Rajhi Bank, generally oversee the implementation of these policies and coordinate with the compliance function to resolve all compliance issues in an expeditious manner. The role of the Board of Directors of Al Rajhi is unclear in this regard. Also, of all four banks, only Albilad Bank complies with SAMA's requirement that the Board must disclose the CVs of all its members in order for the investors and shareholders to assess their competence and ability to perform the respective tasks assigned to them. Also, only NCB complies with SAMA's requirement to disclose the mechanism that it uses to assess the integrity and performance of the members of the Board of Directors. It is therefore generally uncertain whether these banks are sufficiently diligent in nominating members of their respective Boards.

With regard to the compliance function, all the banks, except NCB, have a clearly designated head of compliance or group compliance officer who is tasked with managing the overall compliance risk of the bank. In NCB, the compliance function does not have a formal status within the bank and the management of the institution's compliance risk has been assigned to the Audit Committee of the Board of Directors. Al Rajhi Bank has the most sophisticated compliance programme with lines of accountability and responsibility and targets clearly set out at all levels, as shown in Box 5.1. However, like the other banks, its compliance function is not independent. Although there is not sufficient information about remuneration to determine whether the compliance officer and staff confront a potential conflict of interest

between their compliance duties and promoting the bank, they mostly work with the Board of Directors and cannot conduct an independent review in such circumstances. Hence, the role of the Board of Directors in these banks is execution rather than monitoring and oversight. Interestingly, the Islamic compliance function performed by the Shariah Authority or Boards of all four banks is effectively independent. The Shariah Boards assess the legality of new products and mitigate the Sharia risk, and they cannot be overruled by the senior management and Board of Directors. However, although the Islamic banks offer only Islamic products, they do not necessarily have better compliance risk management systems. This is because none of the banks actually confront a Shariah risk. This is because the regulators in the KSA do not enforce the principles of the Shariah against the banks. Hence, the only authority that assesses a bank's Shariah products is the bank's Shariah Board. It follows that the compliance risk management of Islamic banks is assessed in light of how the banks comply with the laws, regulations and standards that apply to all banks, regardless of the nature of their activities. In this light, it is difficult to contend that Islamic banks manage risk better than conventional banks. As shown above, Al Rajhi Bank, an Islamic bank, and Samba Financial Group, a conventional bank, did not receive any penalties or sanctions in 2007, 2014 and 2016. On the other hand, NCB (conventional bank) and Albilad Bank (Islamic bank) demonstrated relatively high levels of non-compliance with several fines imposed by the regulators.

What is also surprising is the dearth of information about the management of risk embedded in PLS modes of financing in the reports of the banks. They all offer Islamic products and enter into these transactions, and two of the banks are fully Shariah-compliant. NCB intends to become fully Shariah-compliant in the near future. However, there is very little information about how these banks use PLS modes of financing to mitigate compliance risk. In fact, Al Rajhi Bank, which is fully Shariah-compliant treats Mudarabah transactions as restricted investments and off-balance sheet items.⁶⁵² This implies that Mudarabah funds can be used only for a limited number of transactions, and they are not included in its balance sheet. Albalid Bank, another fully Shariah-compliant bank, states that Murabaha transactions are not collateralised and usage of purchased protection to insure purchases remains negligible.⁶⁵³ In the report of Samba Financial Group, which operates an Islamic window,

⁶⁵² Al Rajhi Bank, *Annual Report 2014* (Al Rajhi Bank 2014) 20.

⁶⁵³ Albilad Bank, note 609 above, 159.

Murabaha investments are so small that they are simply included ‘other investments held at amortised cost.’⁶⁵⁴

6.8 The Stress Test

The question of what constitutes a stress test may be answered in different ways depending on the context. From a regulatory context, it is a simulation technique that is used to gauge how certain stressors or hypothetical financial situations will affect certain asset and liability portfolios in order to enable banks to formulate contingency plans to mitigate risk.⁶⁵⁵ Stress testing is therefore a conceptual fit for financial regulation. Regulators are mainly concerned with financial failure, the insolvency of important financial institutions or inability of the market to perform in a reliable manner.⁶⁵⁶ They seek to prevent both institutional and systemic failures. Effective supervision helps to limit the use of government guarantees such as state insurance guaranty funds and deposit insurance. Hence, stress testing is endorsed by many regulators because it enables the senior management and Board of Directors to engage directly with the failure.⁶⁵⁷ Where banks have not experienced a failure, events that may cause the failure are created and their impact assessed. Regulators usually require banks to focus on the failures that result in them seeking help from the safety nets of government.

Banks may use the stress test to determine how specific future events may impact on their balance sheets or simply determine outcomes that may cause serious harm to the banks.⁶⁵⁸ However, SAMA recommends the stress tests only for large banks because of their complex operations and the ripple effect of their failures.⁶⁵⁹ The regulator notes that efficient large banks must provide quantitative measures of the effect of disruptions.⁶⁶⁰ The senior management of banks in the KSA are therefore guided towards developing and using stress tests to support their management of operational, market and credit risks. SAMA places

⁶⁵⁴ Samba Financial Group, note 638 above, 17.

⁶⁵⁵ See Richard S Carnell, Jonathan R Macy and Geoffrey Miller, *The Law of Banking and Financial Institutions* (Wolters Kluwer 2009) 53-61.

⁶⁵⁶ JP Sabourin, ‘The Deposit Insurer’s Role in Maintaining Financial Stability’ in Douglas D Evanoff and George C Kaufman (eds), *Systemic Financial Crises: Resolving Large Bank Insolvencies* (World Scientific 2005) 59.

⁶⁵⁷ Robert Weber, ‘A Theory for Deliberation-Oriented Stress Testing Regulation’ (2014) 98 *Minnesota Law Review* 2236, 2249-2250.

⁶⁵⁸ Jimmy Skoglund and Wei Chen, *Financial Risk Management* (John Wiley & Sons 2015) 522.

⁶⁵⁹ SAMA, *Guideline Document on the Internal Capital Adequacy Assessment Plan* (SAMA 2008) 11.

⁶⁶⁰ *Ibid.*

emphasis on the references under Pillar 1 and Pillar 2 of the Basel II guidelines.⁶⁶¹ The objective as noted above is to determine appropriate ways of responding to and coping with important stressors. Stress tests should therefore enhance a bank's resilience to financial crises. Given the importance of the test, SAMA expects banks in the KSA to build stress testing into their risk management strategies. This is equally the case with regulators in many countries.⁶⁶² That is why it is part of the Basel II guidelines.

Banks which meet the minimum conditions and disclosure requirements of the internal ratings-based approach (IRB) are required to 'put in place sound stress testing processes for use in the assessment of capital adequacy.'⁶⁶³ It is noted further that examples of scenarios include economic or industry downturn, market risk events and liquidity conditions. The scenarios may be historical, involving large losses experienced by the banks; historical with simulation, involving simulations of crises; and effects of events on individual portfolio characteristics of the banks (sensitivity). The banks are required to perform credit risk stress tests to determine the impact of specific outcomes on their IRB regulatory capital requirements. The stress test may for example consider the impact of a mild recession scenario such as determining how two quarters of no growth may impact their probability of default, exposure at default, and loss given default.⁶⁶⁴ The latter are risk parameters used to calculate capital requirements of bank exposures.

SAMA does not issue further guidance on the design of stress tests apart from the Pillar 1 and Pillar 2 guidance and the recommendations contained in Section B.5 of the Basel Market Risk Amendment of 1996.⁶⁶⁵ Thus, the large banks in the KSA which are required to conduct stress tests must meet the following qualitative criteria:

- Establish a comprehensive stress testing programme
- The programme should cover all relevant factors which can create exceptional losses or gains in trading portfolios

⁶⁶¹ Ibid, 21-23.

⁶⁶² Lynn C Thomas, *Consumer Credit Models: Pricing, Profit and Portfolios* (Oxford University Press 2009) 349.

⁶⁶³ SAMA, note 648 above 21.

⁶⁶⁴ Ibid.

⁶⁶⁵ Ibid.

- The programme should seek to assess the bank's capacity to absorb potential large losses and identify steps for reducing risk and conserve capital
- The results of the tests should be communicated to the senior management and Board of Directors frequently
- Policies should be formulated, and limits set in light of the results
- The senior management must undertake prompt action such as hedging or reducing the size of exposures to mitigate the risks identified

SAMA reviews the Pillar 1 stress testing requirement for credit and market risk under the supervisory review process. However, it also recommends the large banks of the KSA to adopt the recommendations contained in Pillar 2. These include the following:⁶⁶⁶

- The management of the bank is primarily responsible for ensuring that the bank has sufficient capital to support the risks identified, as well as the trading function
- The bank should manage market risk with its own standardised approach or measure of value-at-risk
- The bank should frequently conduct stress tests of its major credit risk concentrations in order to identify potential changes in market conditions that may impact its performance in an adverse manner.
- The bank may conduct stress tests to determine pool performance and take appropriate action to respond to unanticipated changes.

The stress test may also include general stress testing, specific credit risk test and liquidity test, and scenario analysis.⁶⁶⁷ The test may be classified as either a sensitivity test or scenario test.⁶⁶⁸ The sensitivity test focuses on the impact of large variations of portfolio values regardless of the causes of the variations. The scenario test involves developing adverse macroeconomic scenarios on the basis of concentrations in their portfolios and the risks to which the banks are exposed.

⁶⁶⁶ Ibid, 22-23.

⁶⁶⁷ David Murphy, *Understanding Risk: The Theory and Practice of Financial Risk Management* (Taylor & Francis 2008) 233.

⁶⁶⁸ Dimitris N Chorafas, *Stress Testing for Risk Control Under Basel II* (Elsevier 2007) 48.

SAMA assesses the extent to which the credit risk concentrations are considered in the bank's internal assessment of capital adequacy, and the regulator may take appropriate action if it considers that the policies adopted by a bank is not adequate. It may therefore review the bank's stress results and require that the bank obtains a dedicated liquidity line or raises early amortisation credit conversion factor in order to increase its capital requirements. SAMA may also require that tasks are allocated fairly to avoid putting a strain on any unit, and the bank uses competent employees to perform the tasks.⁶⁶⁹

6.8.1 Stress Testing by Islamic Banks

As noted above, SAMA expects all large banks in the KSA to build stress testing into their risk management strategies. It guides towards developing and using stress tests to support their management of operational, market and credit risks, and places emphasis on the references under Pillar 1 and Pillar 2 of the Basel II guidelines. Although SAMA does not impose a methodology on banks in the KSA, Chapter 5 shows that the regulator has generally reproduced and imposed on the banks the Basel II (as amended) and Basel III requirements to enhance the management of credit risk, market risk, operational risk, and liquidity risk. Thus, all banks are legally obliged to apply the standards of Basel II (as amended) and Basel III. Also, it is noted that Islamic banks in the KSA, including Al Rajhi Bank and Albilad Bank, have not challenged SAMA on the grounds that these standards are not tailored to Islamic finance. In the same vein, SAMA recommends stress testing to all large banks in the KSA without regard to whether the banks are Shariah-compliant or not.

Nonetheless, it is logical to expect Islamic banks to develop scenarios that capture the Sharia risk and compliance risk. However, this depends on whether there are specific adverse scenarios that may affect the resilience of Islamic banks and not conventional banks. Given that SAMA uses the same structured process to compare banks operating in the KSA, it may logically fail to capture some of the specificities that emerge from Islamic banking. That is why a detailed oriented internal risk management is crucial for Islamic banks in the KSA. Reverse stress testing and risk integration may for example help to identify the peculiarities of Islamic banks. Reverse stress testing begins from an adverse outcome in the past and deduces scenarios that could lead to such an outcome in the future. This informs the bank's

⁶⁶⁹ Discussions between the researcher and an official at SAMA.

risk mitigation programme. Adverse outcomes include losses that compel depositors to withdraw their funds before the agreed-upon maturity date. Such outcomes are particularly devastating for Islamic banks given that they largely rely on PLS schemes. They must therefore anticipate withdrawals and manage the liquidity risk associated with withdrawals.⁶⁷⁰ A change in the behaviour of depositors may increase the probability of default, especially where the banks have no protection against a bank run.⁶⁷¹

The IFSB recently observed that stress testing is among the most underdeveloped areas of Islamic banking.⁶⁷² It equally recommended the development of techniques that are unique to Islamic banking given that the operational, market and credit risk profiles of Islamic banks are markedly different from those of conventional banks.⁶⁷³ Also, Islamic banks are exceptionally exposed to rate of return risk and equity investment risk and have limited access to short-term funding that is compliant with the Shariah.

Thus, it is important that stress testing is tailored to the nature of Islamic banking because it enables Islamic banks to demonstrate the strength of their unique risk management strategies, and also that they have adequate capital to absorb losses that may be caused by shocks that impact on their activities more than those of conventional banks. However, expectations of effective stress testing methodologies have increased around the world since the financial crisis of 2007-09.⁶⁷⁴ In this light, Pillar 1 of the Basel II framework focuses on the use of the internal models and the IRB approach to assess market, credit and operational risks. They were summed to determine a bank's overall risk weighted assets. In order to assess additional capital buffers, Pillar 2 (supervisory review process) requires the supervisor to assess the bank's management of residual risk, which includes all other risks apart from credit, operational and market risks that are quantifiable for Pillar 1. SAMA therefore requires Islamic banks to also employ the IRB approach to assess their internal capital adequacy by

⁶⁷⁰ Wassim Rajhi and Slim Ahmed Hassairi, 'Unconventional Banking System in Distress' (2011) 3 *International Journal of Economics and Finance* 70, 73. See also, Muhamad Abduh, Jarita Duasa and Mohd Azmi Omar, 'Factors that Influence Depositors' Withdrawal in Islamic Banks: A Theory of Reasoned Action' (2011) 5 *International Journal of Economics and Management Engineering* 813, 813-814.

⁶⁷¹ See Stuart Greenbaum, Anjan V Thakor and Amoud Boot, *Contemporary Financial Intermediation* (3rd edn, Academic Press 2016) 287.

⁶⁷² IFSB, *Technical Note on Stress Testing for Institutions Offering Islamic Financial Services* (IFSB 2016) 2.

⁶⁷³ Ibid.

⁶⁷⁴ Pavel Kapinos et al, 'Stress Testing Banks: Whence and Wither?' (2015) Working Paper Series, Center for Financial Research, FDIC CFR WP 2015-07. Available at: <https://www.fdic.gov/bank/analytical/cfr/2015/wp2015/2015-07.pdf> [05 January 2018] 13-15.

conducting capital stress tests under the Individual Capital Adequacy Assessment Process (ICAAP).

It is important to note that, despite the fact that SAMA has adopted Basel standards, banks in the KSA are still allowed to use their own stress models to assess their capital needs. Accordingly, Islamic banks in the KSA can design stress tests that reflect the unique risks that they confront. Also, there is little evidence that the global financial crisis of 2007-09 and the oil crisis of 2014 changed regulatory expectations of the stress testing capabilities of banks in the KSA. This may be attributed to the fact that the impact of the crisis in the KSA was not as severe as in other countries.⁶⁷⁵ Nonetheless, it is uncertain why SAMA does not require regular and comprehensive stress testing of all banks despite the importance of determining whether specific future events may cause serious harm to the banks and the market. It has adopted Basel standards and reinforced them in order to ensure that all banks in the KSA, including and especially the Islamic banks, identify and mitigate risks in an efficient manner. It is submitted here that it may in the same vein adopt the Comprehensive Capital Analysis and Review (CCAR) of the United States⁶⁷⁶ or the Comprehensive Assessment by the ECB or the European Banking Authority (EBA) and modify them to suit the local industry, taking into account the unique challenges confronted by Islamic banks.

It has been established that an effective asset quality, risk assessment and stress testing regime may improve transparency over the balance sheets of banks.⁶⁷⁷ This is especially important in Islamic countries where there is an unfounded comfort from the rules governing Islamic banking. As shown in Chapter 2, many commentators hold that Islamic banks manage risk better and are more resilient to financial crises. However, there is no unique tool used by Islamic banks to identify emerging risks and set adequate bank capital levels. The Islamic banks in the KSA equally use the stress testing technique.

As such a survey was conducted of two Islamic Banks and two conventional banks to assess how Islamic banks model scenarios across Islamic portfolios or evaluate the sensitivity of

⁶⁷⁵ See Laura El-Katiri, 'Vulnerability, Resilience and Reform: The GCC and Oil Price Crisis 2014-2016' (2016) Center on Global Energy Policy. Available at: <http://energypolicy.columbia.edu/sites/default/files/Vulnerability.%20Resilience%20and%20Reform%3A%20The%20GCC%20and%20the%20Oil%20Price%20Crisis.pdf> [03 May 2018] 7-11.

⁶⁷⁶ See section 5.3.2.2 above.

⁶⁷⁷ Li Lian Ong and Ceyla Pazarbasioglu, 'Credibility and Crisis Stress Testing' (2014) 2 *International Journal of Financial Studies* 15, 50-53.

portfolios compared to conventional banks. The results of this survey, discussed in the next section, provide a unique insight into the resilience of Islamic banks in the KSA. The objective is to determine whether Islamic banks in the KSA have developed specific stress tests and risk management strategies that take into account the unique risks embedded in their products.

6.8.2 The Survey

The survey was conducted in November 2017 in the KSA. Data was collected in a standardised form using a questionnaire.⁶⁷⁸ It was designed to enable the researcher to capture a snapshot of how things were at the participating banks at the specific time.⁶⁷⁹ The responses were submitted on a no-name basis to the researcher. They were then merged into a common database. All four banks that participated in the survey report to SAMA. Thus, it was also important to obtain information from SAMA about how it gauges the potential vulnerability of banks in the KSA to exceptional but plausible financial crises. The surveyed banks include, Al Rajhi Bank, the largest fully Shariah-compliant bank in the world by capital, Albilad Bank, a fully Shariah-compliant bank that has operated since 2004, NBC or Al Ahli Bank, the largest bank in the KSA by asset and the first licensed local bank of the KSA, and Samba Financial Group which as operated as a conventional financial institution since 1955. The questions of the survey sought to assess and compare how Islamic banks and conventional banks in the KSA determine risk exposures and use common scenarios to learn about a specific risk or combination of risks. It also seeks to determine whether the stress testing conducted by Islamic banks may provide SAMA with sufficient information to implement pre-emptive measures to avoid systemic crises. In this light, the questions were focused on the engagement of the Board of Directors and senior management, and the integration of stress testing in the risk management strategies of the banks.

It must be noted that some respondents did not answer all the survey questions. In order to determine the impact of the survey nonresponse, an attempt was made to measure the nonresponse and the effects of the nonresponse.⁶⁸⁰ The researcher did not abandon all the

⁶⁷⁸ See Appendix I.

⁶⁷⁹ Kate Kelley et al, 'Good Practice in the Conduct and Reporting of Survey Research' (2003) 14 *International Journal for Quality in Health Care* 261, 261.

⁶⁸⁰ In dealing with partial nonresponse, the analysis was guided by S Fisher et al, 'A Qualitative Study of Nonresponse Factors Affecting BLS Establishment Surveys: Results' (2008) Bureau of Labor Statistics.

partially filled entries. Instead, the answered fields in these entries were analysed. Prior to that, the differences in the item non-response rate across the group of respondents was determined. The average item nonresponse rate was 5-10 per cent. The item nonresponse rate was higher regarding questions that required information on specific strategies used by the banks to mitigate the risks in Islamic portfolios and how these portfolios fare during the periods of financial crises. The positions of the respondents varied from bank to bank. In some banks, the compliance officers had access to more information or had already conducted the required analysis and had specific answers to the questions before the survey was conducted. Thus, all the respondents did not have the same level of authority, capacity (access to data) as well as motivation.⁶⁸¹ The nonresponse may therefore be due to the fact that these questions may have required more information and assessments than the respondents envisaged. Hence, some respondents were unable to synthesise the data available to them and provide concise answers in the time allowed for answering the questions. It follows that the group differences in the likelihood of response could be explained by the time burden.⁶⁸²

6.8.2.1 Board and Senior Management Engagement

It is noted above that SAMA requires the Board of Directors of each bank to clearly set out lines of accountability and responsibility at all levels. The Board must then approve and oversee the implementation of an appropriate risk strategy, ensure the soundness and solvency of the bank, as well as the compliance of the senior management and all employees with relevant policies and procedures. Also, the analysis of the annual reports of the four banks in the survey revealed that their Boards oversee the implementation of their risk management strategies. Thus, the survey sought to determine whether the Boards and senior management were involved in the use of stress testing as a management and supervisory instrument and were engaged with the results. It is important that they are involved in the design of the scenario and formulation of the actions in response to the stress testing. The

Available at: <https://www.bls.gov/osmr/abstract/st/st030230.htm> [20 November 2018]; ED De Leeuw, J Hox and M Huisman, 'Prevention and Treatment of Item Nonresponse' (2003) 19(2) *Journal of Official Statistics* 153, 157-158.

⁶⁸¹ D Tomaskovic-Devey, J Leiter and S Thompson, 'Organizational Survey Nonresponse' (1994) 39 *Administrative Science Quarterly* 439, 339-454.

⁶⁸² Regarding the link between time burden on item nonresponse, see AL Miller and AD Lambert, 'Open-Ended Survey Questions: Item Nonresponse Nightmare or Qualitative Data Dream?' (2014) 7(5) *Survey Practice* 1, 11.

IFSB states that the commitment of the Board and senior management to stress testing sends an important signal that it is an important management tool and taken seriously in the bank.⁶⁸³ The IFSB also noted that the Board of Directors should establish an integrated and comprehensive stress testing exercise and the senior management should keep internal summaries of the test results.⁶⁸⁴ The summaries should be available to the regulator which should document them and propose follow-up actions.

The participants were asked to indicate the involvement of the Board of Directors and senior management in the scenario design, modelling, management actions and the analysis of the results. Their responses are summarised in Table VI.II.

Table VI.II: Board and Senior Management Engagement of Banks in the KSA

Stages	Al Rajhi	Albilad	NCB (Al Ahli)	Samba Group
Scenarios	High	Very High	Low	Very Low
Modelling	High	Very High	Low	Very Low
Management actions	High	Very High	High	High
Results	High	Very High	High	Very High

All four banks have comprehensive stress testing regimes and recognise the importance of the regime. However, they are not all consistent with the perspectives of SAMA and the IFSB regarding the engagement of the Board of Directors and the senior management. The Board of Directors and senior management of the Islamic banks are actively involved in the scenario design, modelling, management actions and the analysis of the results, while the Board of Directors and senior management of the conventional banks are not. In NCB, the involvement of Board of Directors and senior management is rated as low in scenario design

⁶⁸³ IFSB, note 661 above, 6.

⁶⁸⁴ Ibid, 7.

and modelling, while in the Samba Group, it is very low. This may explain why in Al Rajhi Bank (Islamic bank), the Credit and Risk Management Group that reports directly to the Board of Directors is responsible for stress testing programme, and in Albilad Bank (Islamic bank), it is the Basel Unit of the Risk Committee nominated by the Board. In NCB, the respondent noted that it is the responsibility of the Chief Executive Officer, while in the Samba Group, it is the legal department that is tasked with conducting the tests. Thus, the Islamic banks have a more collaborative approach and the Boards are directly involved in the process.

The failure of conventional banks to meet expectations may be due to the fact that SAMA does not challenge the stress testing processes of banks in the KSA. Thus, there are no bilateral interactions between SAMA and the banks in designing appropriate scenarios and modelling. Given that Islamic banks confront unique risks and the Basel standards that were imported by SAMA are based on conventional banking, Islamic banks are more likely to conduct stress testing on a regular basis to determine risk exposures and the sensitivity of their portfolios.

6.8.2.2 The Integration of Stress Testing in the Risk Management Strategy

SAMA also recommends that the banks should integrate stress testing in their risk management strategies. An attempt was therefore made to determine the extent to which the four banks integrated stress testing processes with other disciplines, including internal risk management, contingency or recovery planning, resolution planning, and reverse stress testing. The responses of the banks are shown in Table VI.III.

Table VI.III: Integration of Stress Testing

Disciplines	Al Rajhi	Albilad	NCB	Samba Group
Internal risk management	Integrated	Integrated	Partially-integrated	Integrated
Contingency or recovery planning	Partially-integrated	Integrated	Partially-integrated	Partially-integrated
Resolution planning	Separate	Integrated	Partially-	Partially-

			integrated	integrated
Reverse stress testing	Integrated	Integrated	Separate	Partially-integrated

The results show that unlike the stress tests conducted by the Islamic banks, the stress tests conducted by conventional banks are siloed processes. In NCB, stress testing is only partially aligned with disciplines such as internal risk management, contingency or recovery planning, and resolution planning. It is also separate from reverse stress testing in spite of the similarities between the processes. On the other hand, in Albilad, they are closely aligned. It may also be contended that the conventional banks do not meet expectations because SAMA does not impose a methodology on all banks, and Islamic banks confront unique risks that are not necessarily reflected in the Basel standards that were imported by SAMA.

6.8.2.3 The Portfolios and Scenarios

Despite the stark differences in the stress tests of the Islamic banks and conventional banks, the respondents of all four banks indicated similar hypothetical scenarios or plausible events that may impact on the balance sheets of the banks. The table below categorises the scenarios reported.

Table VI.IV: Portfolios and Scenarios

Traded Market Portfolio	Al Rajhi	Albilad	NCB	Samba Group
Commodities	Commodity price shock	Commodity price shock	Commodity price shock	Commodity price shock
Interest rates	Upward interest rate shift	N/A	Sharp rise in long-term interest rate	Interest rate rise with economic downturn
Equities	Decline in equity prices	Sharp increase in equity market	Plummeting equity prices	Equity investment losses

		volatility		
Exchange rates	Changes in foreign exchange rates	N/A	Changes in foreign exchange rates	Changes in foreign exchange rates
Deposits	Increased withdrawals	No rolling over of short-term deposits	N/A	N/A
Islamic Portfolios	Decline of house prices and commercial real estate prices	Reduction in anticipated returns on equity exposures	Substantial decline in the market values of Sukuk investments	Fall in the value of assets used for PLS schemes

The four banks submitted seventeen stress test scenarios that focused on standardised variations of related risk factors. TableIV shows the scenarios. There is little difference between the focus of Islamic banks and the focus of conventional banks. The banks were asked to list the trading portfolios that may be affected by crisis scenarios and changes in underlying parameters. They listed the portfolios in the order of importance, starting with the most important. The importance was based on financial impact. Thus, the banks would be more exposed where the traded market portfolio was affected. Their responses enabled the researcher to determine which trading portfolios may be grouped together in regard to which are most affected by the hypothetical scenarios. The description of the trading portfolios also includes the risk factor and the magnitude of the risk factor shock.

The above portfolios were the subject of stress testing because their market prices change on a regular basis, and disruptions in their markets may harm the balance sheets of banks. The commodity price risk for example is the potential loss that may be caused by changes in the market prices of the assets and liabilities of the bank due to commodity price changes.⁶⁸⁵ This risk impacts on the loan portfolios of the banks where their borrowers increasingly become unable to repay their debts as a result of shocks to commodity prices. This is very important

⁶⁸⁵ Maria Peria et al, *Stress Testing of Financial Systems: An Overview of Issues, Methodologies* (IMF 2001) 34-35

because banks in the KSA lend to importers of commodities and exporters of commodities. The commodities include *inter alia* gold, silver, crude palm oil, natural gas and crude oil.

Surprisingly, all of the banks placed Islamic portfolios at the bottom of their lists, despite the fact that all four banks offer Islamic products, and two of the four banks offer only Shariah-compliant products. Thus, the risks embedded in Islamic instruments such as the commodity Murabaha transactions were comparatively low despite the fact that it is often used to structure financing products that are not secured for clients and they face high instances of non-performance in stress events.

It is shown in Chapter 3 that theoretically, it is not probable for a crisis related to interest rate risk (IRR) to be triggered by Islamic financial institutions because the Shariah prohibits *Riba* or the charging of interest, and debt is permitted only when it is related to real transactions, and not used for speculative purposes. It is also difficult for the regulator to ensure that banks are motivated to engage in excessive risk-taking due to low interest rates. Nonetheless, both the conventional banks and Al Rajhi Bank, the largest Islamic bank, conduct stress testing on interest rates. This is because although Al Rajhi Bank does not have interest income, its balance sheet may be affected by significant changes in the market interest rates. The reduction in earnings caused by interest rate fluctuations affects the bank's customers and partners who are compelled to cut back on spending. Also, stock prices generally fall when interest rates rise. This explains why Al Rajhi Bank is concerned about IRR. It is listed on the Tadawul and more than 75 per cent of its shares are publicly owned, unlike the other Islamic bank in the survey, Albilad Bank, which has only a small percentage of publicly owned shares.⁶⁸⁶ The conventional banks logically stress test the interest rate because their capital and risk-weighted assets are affected by interest rate rise and reduction of net interest income.

The stress testing also focuses on the impact of declining equity prices or a stock market crash caused by high equity market valuations. This is very important for the banks given that

⁶⁸⁶ In 2012, 36% of Albilad Bank's shares are owned by two families. Fahad Al-Majed, *A Conceptual Framework for Reforming the Corporate Governance of Saudi Publicly Held Companies* (Unpublished PhD Dissertation, University of Manchester 2012) 302. At the time, the Al Rajhi family held 44% of the shares of Al Rajhi Bank, but this dropped to 25% by 2017.

the Tadawul is the largest and most liquid stock market in the Middle East, and foreign investors in GCC countries are increasingly investing in companies of the KSA via derivative instruments and exchange-traded funds. All four banks equally run equity crash scenarios especially when equity market valuations are historically high. Also, they seek to determine how they will be impacted by a global equity crash that is accompanied by strong comovements in equity prices in the major markets around the world.

All the banks, except Albilad Bank, conduct foreign exchange rate stress tests. They all run weak dollar, euro, and pounds sterling scenarios due to the risk of widening credit spread caused by the depreciation or appreciation of these currencies. However, the scenarios are regional. They focus on the impact on foreign exchange rate movements due to rising interest in the GCC. They calibrate the shock that may be caused by currency depreciation and determine how their capital and risk-weighted assets are affected by the shock. They also assess their net position in foreign exchange in order to determine whether it is long or short. Lastly, unlike the conventional banks, the Islamic banks place emphasis on deposit placements. This is because they are used by Islamic banks to raise funds and in many cases, they are based on Mudaraba contracts. When the deposits reduce, they adversely affect the banks' funding position. It follows from the problematic nature of the Shariah-compliant deposit insurance schemes. Also, deposits often run-off on maturity and have short tenors and require the depositor to specifically consent to the rolling over of the deposit. Thus, the tests enable the banks to determine whether they have a sufficient and constituent supply of liquid assets of high quality.

It may be noted that stress testing is a standard risk management tool for all the banks in the survey. The running of the tests, formulation of scenarios, and interpretation of the results are however based on the banks' position in the market and strategies for managing identified risks. They use it to understand their risk profile and determine limits. Nonetheless, none of the banks indicated that the results of the tests guide the senior management or Board of Directors to set limits. None of them indicated that the tests are used for capital allocation or unwinding or hedging certain positions. They all state that the decisions are made on the basis of the circumstances of each case. Also, the tests are not run as part often. They all run them on monthly and quarterly bases. This may be attributed to the cost of running the tests.

6.9 Do Islamic Banks Manage Risk Better?

An analysis of the stress test scenarios used by the banks in the survey reveals that there is a perceived asymmetry in risks with regard to conventional banks. They were more likely than the Islamic banks to run tests on crashes that result in sharp rises of equity prices, as well as increases in IRRs and credit spreads. This may be due to asymmetric exposures. The conventional banks in the survey are exposed to IRR and more exposed to declining equity prices, as well as widening credit spreads. Also, historical experience of shocks may explain the stress testing by conventional banks given that the global financial crisis of 2007-09 and the crisis of 2014 had a stronger adverse impact on conventional banks than Islamic banks.

However, the Islamic banks in the survey give more importance to stress tests although the risks embedded in Islamic products may be inadequately determined by statistical risk measures. The Board of Directors and senior management of the Islamic banks are actively involved in the scenario design, modelling, management actions and the analysis of the results, while the Board of Directors and senior management of the conventional banks are not. Equally, stress testing is more integrated in the risk management strategies of Islamic banks than conventional banks. This does not imply that Islamic banks manage risk better. The Islamic banks did not indicate any major changes in policy that could be attributed to the results of stress testing. Given the lack of standardised risk measures, as well as the difficulty of estimating exposures, it would be more logical for Islamic banks to rely on stress tests. Nonetheless, they place Islamic portfolios at the bottom of the list of traded portfolios impacted by adverse scenarios. Also, the responses of the banks did not enable the researcher to determine the sensitivity of each portfolio to changes given that they are complex.

Notwithstanding, it must be noted that the stress tests run by Islamic and conventional banks are very similar, despite their different historical experiences. For example, they all run tests on commodities in order to assess the ability of their borrowers to repay their debts as a result of shocks to commodity prices. Also, they all seek to determine the impact of declining equity prices or a stock market crash caused by high equity market valuations. Then they place Islamic portfolios at the bottom of list of portfolios impacted by unexpected events. In fact, Al Rajhi Bank's stress tests are more similar to those conducted by the conventional banks than the tests conducted by the other Islamic bank, Albilad Bank. Nonetheless, it is surprising that the Shariah Boards are not involved in or do not conduct specific stress tests.

Also, SAMA has no policy of examining the internal summaries of stress test results conducted by even the large banks, as well as documenting the nature and extent of the stress testing activities of the banks and outcomes as recommended by the IFSB. It is therefore uncertain whether SAMA regularly proposes follow-up actions. SAMA did not give any examples of proposed follow-up actions in correspondence with the researcher.

It may be important for SAMA to impose tougher stress testing rather than simply import Basel standards. SAMA noted in correspondence with the researcher that banks in the KSA need to dedicate more resources to stress testing than they currently do.⁶⁸⁷ SAMA must require the Boards and senior management of all banks in the KSA to change the operating model and ensure that stress testing is fully integrated with strategic planning. The models used to project risk data under stress ought to meet a higher standard of reliability, and the same rigorous controls of financial reporting should apply to the stress testing process. It is only then that analyses of the stress tests and their results would enable researchers to determine whether one bank manages risk better than another.

6.10 Conclusion

In light of the above, it is difficult to determine whether the Islamic banks studied are easier to regulate and more resilient to financial crises. All four banks are very confident about meeting the regulatory requirements reasonably well, despite the volume and complexity of the laws, regulations and standards. Nonetheless, an assessment of their annual reports of 2007, 2014 and 2016 reveals that they effectively meet some requirements, while they are seriously lagging with regard to others. Also, there is generally no difference in approach to measuring risk between the conventional banks and the Islamic banks. Also, with regard to Shariah risk, the Boards of Directors rely on the Shariah Boards and staff, although there is little information about the tools used to measure Shariah risk.

It also seems that all four banks report about risk measuring tools as a formality. It is uncertain whether they actually do what is required to effectively use these tools. That is why they do not disclose detailed information about the use of these tools, including the results of tests. It is noted in Chapter 5 that since there is no regulatory requirement to publish the

⁶⁸⁷ The questions submitted to SAMA are shown in Appendix B.

results of stress tests for example, it is generally uncertain which stress scenarios are used by individual banks, and whether the capital buffers used by the banks can actually resist a severe shock. The analysis of the annual reports of the four banks confirms this statement. It is also uncertain whether the banks have revised their compliance risk management strategies or reinforced the compliance function in response to the results of these tests. Prior to this study, the researcher expected that these banks should have developed appropriate stress models and carried out specific assessments of their capital levels during and after the financial crises of 2007-09 and 2014. However, the annual reports of 2007 and 2014 do not reveal any particular emphasis on developing appropriate stress models.

It is therefore submitted that the disclosure and transparency requirement by SAMA⁶⁸⁸ should be interpreted broadly to the effect that banks have an obligation to publish all information about the stress tests they conduct, including the results of the tests. SAMA notes that the disclosure and transparency principle applies to all operations and activities of the bank, and the Board of Directors is required to publish all financial and non-financial information which concerns investors, depositors, shareholders, and market dealers. The information should be disclosed in the annual report of the bank, website or other appropriate channel. There is no doubt that information about stress tests conducted by banks could assist the above stakeholders in identifying the bank's strategic plans and future trends. It is important to know which scenarios were modelled on which portfolios. In order to determine whether Islamic banks are more resilient to financial crises, it is also important to determine how the portfolio of Shariah-compliant assets fare during a financial crisis.

Also, it is interesting that only a small number of staff are dedicated to the use of these tools. Hence, small teams generally measure risks and conduct stress tests and report to a sub-committee of the Board of Directors of the banks. The resources allocated by banks using stress tests such as the Comprehensive Capital Analysis Review (CCAR) are much greater than what the four banks have.⁶⁸⁹ This demonstrates a certain lack of commitment given that in other jurisdictions such as the United States, the banks use significantly more personnel.⁶⁹⁰ The increasing number of regulations imposed by SAMA and CMA, and the standards

⁶⁸⁸ SAMA, note 590 above, paras 84-86.

⁶⁸⁹ See MM Haddad and S Hakim, 'Can Gulf Banks Pass the CCAR Stress Tests?' (2017) 19 *Journal of Applied Business and Economics* 44, 44-58.

⁶⁹⁰ *Ibid.*

recommended by these regulators require banks of the KSA to significantly increase regulatory staff levels.

Although the banks use a variety of tools to measure risk factors, stress testing is increasingly recommended as the primary tool to identify risks and determine the adequate capital levels to resist shock. In fact, since the introduction of Pillar 2 of Basel II, the results of such tests are increasingly linked to the trust of banks and the financial system. stress testing is a conceptual fit for financial regulation given that regulators are mainly concerned with financial failure, and stress testing is a simulation technique that enables banks to engage directly with the failure by formulating contingency plans to mitigate risk. However, SAMA recommends the stress tests only for large banks in the KSA because of their complex operations and the ripple effect of their failures. Also, they meet the minimum conditions and disclosure requirements of the IRB. As such, large banks in the KSA must for example perform credit risk stress tests to determine the impact of specific outcomes on their IRB regulatory capital requirements. SAMA expects these banks to build stress testing into their risk management strategies and places emphasis on the references under Pillar 1 and Pillar 2 of the Basel II guidelines. It is problematic that the regulator does not issue further guidance on the design of stress tests apart from the Basel II guidelines and the recommendations contained in Section B.5 of the Basel Market Risk Amendment of 1996. Given that banks in the KSA are legally obliged to apply standards of Basel II and Basel III, it may be contended that they have a legal obligation to conduct stress tests, although they allowed to use their own stress models to assess their capital needs. Since there is nothing in the annual reports of the four banks to support the positive outlook regarding their existing capabilities to resist financial crises, more detailed information was obtained from the banks directly. Thus, qualitative data was obtained from compliance officers and staff in the compliance units of the four banks.

It is interesting that SAMA recommends stress testing to all large banks in the KSA without regard to whether the banks are Shariah-compliant or not. The freedom to choose the appropriate methodology or stress models implies that Islamic banks may develop scenarios that capture the Sharia risk and compliance risk. The IFSB has observed that stress testing is among the most underdeveloped areas of Islamic banking. It equally recommends the development of techniques that are unique to Islamic banking given that the operational, market and credit risk profiles of Islamic banks are markedly different from those of

conventional banks. Nonetheless, given that SAMA uses the same structured process to compare banks operating in the KSA, this also implies that the regulator may logically fail to capture some of the specificities that emerge from Islamic banking.

The above notwithstanding, the survey revealed that all four large banks have an overarching stress testing framework, although they acknowledge that enhancements are required. SAMA also notes that banks in the KSA ought to invest further in stress testing to meet expectations. Despite the fact that a picture emerges of banks setting a low bar, the frameworks of the conventional banks may be rated worse than those of Islamic banks. The Board of Directors and senior management of the Islamic banks are actively involved in the scenario design, modelling, management actions and the analysis of the results, while the engagement of Board of Directors and senior management of the conventional banks is more limited. The stress tests conducted by conventional banks are siloed processes while the tests of Islamic banks are more integrated in their risk management strategies. However, this does not imply that Islamic banks manage risk better and are more resilient to financial crises. Given the lack of standardised risk measures, as well as the difficulty of estimating exposures of Islamic banks, it would be more logical for these banks to place reliance on stress tests. Interestingly, all four banks place Islamic portfolios at the bottom of the list of traded portfolios impacted by adverse scenarios. Also, the responses of the banks did not enable the researcher to determine the sensitivity of each portfolio to changes given that the latter are complex. It was therefore not possible to determine how the portfolio of Shariah-compliant assets fare during adverse scenarios. Also, the banks did not show how the results of the stress tests have wider use in informing and running the business. Lastly, it is quite surprising that the Shariah Boards of the banks are not involved in or do not conduct specific stress tests. It is therefore important that SAMA should formulate a policy of examining the internal summaries of stress test results conducted by all the large banks, as well as documenting the nature and extent of the stress testing activities of the banks and outcomes as recommended by the IFSB.

Chapter 7: Conclusions

7.1 Introduction and Scope

Following the global financial crisis of 2007-09, many questions were asked about the effectiveness of the regulatory and supervisory approaches adopted in the affected countries. These were followed by questions about how to strengthen the resilience of banks. Many studies examined bank resilience within specific jurisdictions, while others considered ways in which international standards may promote financial stability at the national and international levels. However, surprisingly, the researcher was unable to find any study that sought to determine whether the adoption of Islamic banking models may strengthen the resilience of conventional banking systems. This is pertinent given that an impressive number of studies have concluded that Islamic banks are more resilient to financial crises than conventional banks. This study therefore seeks to fill that gap in the extant literature.

At first instance, this thesis has sought to determine whether the contention that Islamic banks are more resilient is justified. A critical review of the literature in Chapter 2 reveals that the contention is not justified given that the studies do not demonstrate that Islamic banks match the profile of institutions that are generally resilient to financial crises. However, it also reveals that resilience is a function of how banks manage risks. An assessment of the risk management strategies in Chapter 3 further reveals that Islamic banks are less likely to trigger instability through the accumulation of risks because the financing structures they use carry lower risks. In Chapter 4, a critical assessment of the financing structures of Islamic banks using PLS schemes shows that they match the profile of institutions that are generally more resilient to financial crises. However, they are not regulated by any tangible standards based on common interpretations of the principles of the Shariah. Also, only a small proportion of the assets of most Islamic banks constitute equity. Thus, many Islamic banks were not affected by the financial crisis of 2007-09 due to limited exposure. These findings are confirmed in Chapters, 5, 6 and Chapter 7 following the analysis of the regulation of Islamic banks in the KSA and the assessment of the risk management strategies and techniques used by four Saudi banks to determine their ability to deal with financial crises.

This Chapter concludes by offering a brief summary of these findings. It also shows how the research aim and objectives have been achieved, discusses limitations of the study, and makes recommendations for further studies.

7.2 Summary of the Results

It is noted in Chapter 2 that despite the depth of scholarship in Islamic finance, it remains uncertain why many commentators contend that Islamic banks are more efficient, robust, stable and reliable than conventional banks. A critical review was conducted of studies that examine the differences between Islamic banking and conventional banking, and the impact of financial crises on Islamic banks and conventional banks. A synthesis was then made of the findings of these studies. The objectives were to identify and integrate factors that account for the efficiency, robustness, stability and reliability of Islamic banks, and determine whether there are Islamic banking principles and standards that may be used to strengthen the resilience of conventional banks. This systematic review therefore also establishes the extent to which existing studies have progressed towards clarifying the link between the Shariah-compliant banking and resilience to financial crises.⁶⁹¹ It also helps to formulate a new conceptualisation that accounts for the resilience of Islamic banks.

Table VII.1 is a digest of the methodologies and findings of the key studies on the differences between Islamic banking and conventional banking and the impact of financial crises. The methodologies are identified here in order to show that the methodology used may account for some of the contradictory findings. Nonetheless, what is important is that the review shows that factors identified in the literature do not sufficiently demonstrate the link between Islamic banking and resilience to financial crises. They submit diverse reasons for the resiliency of Islamic banking, making it difficult to determine what specific features of Islamic financial institutions may explain under normal circumstances their resilience to financial crises when compared to conventional institutions. Although Islamic banks in a specific sample may have performed better than conventional banks, it does necessarily imply that the principles of the Shariah are causally linked to performance of financial institutions. In the jurisdictions examined by the studies, regulations (which are not solely

⁶⁹¹ See HM Cooper, 'Editorial' (2003) 129 *Psychological Bulletin* 3, 3-9; RF Baumeister and MR Leary, 'Writing Narrative Literature Reviews' (1997) 3 *Review of General Psychology* 311, 311-320.

based on the principles of the Shariah) determine how the financial institutions operate and manage risks, and therefore ensure their safety and soundness.

Hence, the studies that conclude that Islamic banks are more efficient and reliable than conventional banks do not demonstrate that where Islamic banks and conventional banks operate within the same jurisdiction, the regulator may strengthen the resilience of conventional banks by requiring the latter to offer Shariah-compliant products and services. In other words, they do not provide any cogent answer to the question of whether the adoption of Shariah-compliant standards may promote financial stability.

Table VII.1: Key Studies on the Resilience of Islamic Banks

Author(s) and year	Methodology	Findings
Cihak and Hesse, 2010	Z-score was used as a primary dependent variable to measure individual bank risk and soundness	Small Islamic banks are more stable than large Islamic banks and conventional banks. However, conventional banks are more stable than large Islamic banks.
Hasan & Dridi, 2010	Analysis of bank-level data collected from Islamic and conventional banks	Certain factors related to the Islamic business model such as adherence to the Shariah principles preclude Islamic banks from investing in instruments that triggered the global crisis in 2007.
Shafique, Faheem and Abdullah, 2012	Literature review	Islamic banks performed better during the global financial crisis of 2008 than conventional banks due to the interest free nature of Islamic banking.
Boumediene and Caby, 2012	Measure the level of stability of 12 Islamic banks and 71 conventional banks in Indonesia using the z-score indicator	Large Islamic banks generally have a lower degree of stability compared to conventional banks. But during the global financial crisis, they had the same degree of stability.

Imam and Kpodar, 2010	Assessed the diffusion of Islamic banking using two proxies: the number of Islamic banks, and the share of the assets of Islamic banks in the entire banking system. They also use econometric estimation techniques to model the way Islamic banking diffuses.	Rising interest rates compromise the diffusion of Islamic banking because they increase the opportunity costs for potential non-Muslim customers. Islamic banking simply complements conventional banking by providing devout Muslims with Islamic products that conventional banks do not offer.
Hassan, Mohamed and Bader, 2009	They use the Stochastic Frontier Approach to measure and compare the cost and profit efficiency of 37 conventional banks and 43 Islamic banks in OIC countries.	There are no significant differences between the overall efficiency results of Islamic and conventional banks.
Abduh, Omar and Duasa, 2011	Cointegration test and vector error correction model are used to ascertain the relationship between macroeconomic variables and financial crises	Depositors trust Islamic banking to be more resilient to financial crises. Thus, deposits to Islamic banks were not affected by the global financial crisis of 2008
Zarrouk, 2012	Literature review and analysis of annual reports	The global financial crisis of 2008 only significantly affected adversely the performance of Islamic banks when the crisis hit real economic activity.
Abdulle and Kassim, 2012	Ratio analysis of six Islamic banks and nine conventional banks between 2006 and 2010 using three performance indicators: profitability, liquidity, and credit risk	There is no significant difference in the way the financial crisis affected the profitability of Islamic and conventional banks. Islamic banks are less exposed to the liquidity risks created by the crisis because they hold more liquid assets than conventional banks
Tabash and Dhankar, 2014	Trend analysis is used to determine the liquidity ratios and capital adequacy ratios of Shariah-compliant banks in the KSA	Islamic banking sector is more stable regarding the capital adequacy and liquidity.

It may be difficult to generalise the findings of the key studies in the above table given that the researchers use studied specific Islamic banks in particular contexts. Thus, it may be submitted that the researchers were misguided in generalising their findings. Also, the margin of variability for the various findings is beyond that tolerated in qualitative research as it is unlikely that the methodologies used will consistently yield data that are similar.⁶⁹² It follows that small Islamic banks may be more stable than large Islamic banks and conventional banks in certain contexts and not in others. Also, conventional banks may be more stable than large Islamic banks in another context, implying that financial stability is not necessarily causally related to compliance with the principles of the Shariah.

One study concluded that Islamic banks performed better during the global financial crisis of 2008 than conventional banks due to the interest free nature of Islamic banking. Another study found that rising interest rates compromise the diffusion of Islamic banking because they increase the opportunity costs for potential non-Muslim customers. Hence, the banks that suffered more losses during the financial crisis are those that had higher levels of capital and were more likely to invest in riskier transactions with higher interest rates, thereby increasing the likelihood of defaults. The common thread that runs through the findings is therefore that Islamic banks have performed better than conventional banks because Islamic banks are less exposed to risks. This explains why small Islamic banks are more stable than large Islamic banks. It also explains why Islamic banks are less likely to have traded in instruments that triggered the global financial crisis in 2007. This may justify the trust of depositors in Islamic banks during the crisis, and the decision to maintain deposits in these banks while many conventional banks suffered runs at the same time. Thus, some studies found that Islamic banks were only significantly affected when the financial crisis hit the real economy. This is because Shariah-compliant banks are largely involved in the financing of investments in real assets. Also, since they mostly operate in Muslim countries with emerging economies, their intermediation role is associated with the financing of trade in goods and services.

As such, although the studies cited in Table VII.1 hold that Islamic banks are more resilient to crises, they provide only approximative factors accounting for the efficiency, robustness,

⁶⁹² For assessing the reliability and generalisability of qualitative research, see DH Grosseohme, 'Overview of Qualitative Research' (2014) 20 *Journal of Health Care Chaplaincy* 109, 110-122; M Carcary, 'The Research Audit Trail – Enhancing Trustworthiness in Qualitative Inquiry' (2009) 7 *The Electronic Journal of Business Research Methods* 11, 11-24.

stability and reliability of Islamic banks. The fact that in one study Islamic banks are relatively more stable than conventional banks only when they operate on a small scale surely implies that Shariah-compliance banking does not strengthen resilience. It is true that adherence to the Shariah principles precludes Islamic banks from investing in instruments embedded with systemic risks; as well as the fact that the interest free nature of Islamic banking reduces exposure to some liquidity risks such as those related to funding from foreign Shariah non-compliant institutions. However, it remains that only Islamic banks with an important source of liquidity and effective risk management strategy would be able to resist shocks caused by systemic liquidity risks. In order to be more resilient, there must be evidence that Islamic banks operate a sounder gearing process, establish a better credit-risk environment, maintain, measure and monitor appropriate credit administration, and ensure better risk control. Also, there must be evidence that Islamic regulators have established stricter eligibility criteria for capital in Islamic banks.

Logically, other studies reviewed have concluded that both Islamic banks and conventional banks are vulnerable to financial shocks, and what is important is the level of exposure of the individual bank, regardless of whether their products and services are Shariah-compliant or not. Three key studies with findings in this regard are cited in Table VII.2.

Table VII.2: Key Studies on the Impact of the Financial Crisis

Author(s) and Year	Methodology	Findings
Parashar and Venkatesh, 2010	Compares Islamic banks and conventional banks in the GCC using five performance parameters, including capital adequacy, efficiency, liquidity, leverage and profitability.	During the global financial crisis, Islamic banks suffered more than conventional banks regarding leverage, return on equity and capital ratio, while conventional banks suffered more regarding return on average assets and liquidity.
Smolo and Mirakhor, 2010	Literature review	The global financial crisis had a limited impact on Islamic banks because they were less exposed but there is not sufficient empirical data showing the true impact
Turk, 2010	Uses the impulse response	Both Islamic and conventional

	function and VAR to analyse Malaysian data covering the financial crises of 1997 and 2008, and the non-crisis period in between,	banks are vulnerable to financial shocks. What is important is the level of exposure of the individual bank.
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Table VII.2 shows further that the profitability and efficiency of banks during the financial crisis is not related to adherence with the principles of the Shariah. It follows that the regulator may not strengthen the resilience of conventional banks by requiring them to offer Shariah-compliant products and services.

Given that the literature does not demonstrate that Islamic banks are more resilient to financial crises, an attempt was made to map the profile of the generic financial institution that is more resilient to financial crises. The objective was to determine whether it matches the profile of Islamic banks that are deemed by studies cited in Table VII.1 to be generally more resilient than conventional banks. It is also expected that this will guide the regulator in regard to determining how to strengthen the resilience of banks.

Table VII.3: The Profile of the Generic Resilient Bank

Features of Resilient Banks	Explanation
Securitisation	Banks that are active in the securitisation market have been noted to have better capitalisation, higher profitability and lower insolvency risk. Securitisation is also an important factor, because it helps banks offload loans from the asset side to finance their investments, unless it results in increased bank leverage and looser lending rates, which becomes systematically riskier.
Capital Structure	A bank with higher capital reserves has a stronger buffer to withstand losses. More capital means less leverage, which in turn

	may reduce risk-shifting incentives towards excessively risky projects. Banks that exercise caution are more likely to maintain stronger buffers.
Funding	Banks that are able to raise large funds swiftly at a relatively low cost in the interbank market have better capitalisation and higher capital reserves.
Diversified income sources	A diversified portfolio is financially beneficial, although only for specific minor risks

Table VII.3 shows that banks with higher capital reserves generally have a stronger buffer to withstand losses, thereby demonstrating once again that more capital means less leverage, which in turn reduces risk-shifting incentives towards excessively risky projects. However, this may sometimes be problematic where the banks are more likely to invest in riskier investments or in large numbers of different investments, thereby increasing their chance of experiencing defaults and suffering losses.

It follows that the resilience of a bank is a function of the efficiency of its risk management strategy. This explains why the common thread through most of the studies reviewed in Chapter 1 and Chapter 2 is that the vulnerability of the financial institution or system depends on its exposure to risk. It follows that regulators and policymakers should place emphasis on risks concentrated in the most levered banks and the way they manage the risks. Thus, the important regulatory and supervisory challenges confronted by all regulators are related to ensuring that financial institutions are not overexposed to liquidity and credit risk, and over-reliant on one source of funding. Given that Islamic financial institutions operate within the Shariah regulatory framework that requires the sharing (rather than transfer) of risk and essentially shuns toxic assets and derivatives, and also rely on retail funding within the domestic economy, it may be said that they are less exposed rather than more resilient to crises. . In other words, they do not manage risk better than conventional banks. The studies in the literature that hold that Islamic banks are more resilient do not suggest ways in which

the regulator can impose strategies employed by Islamic banks on conventional banks in order to strengthen the stability of the latter. What is clear is that Islamic and conventional banks play different roles in society, and the regulations ought to accommodate these different models in order to strengthen the stability of the system as a whole. Given that resilience is causally related to the management of risk rather than exposure, regulation ought to take into account the way in which Islamic banks manage the unique risks to which they are exposed.

It is shown in Chapter 3 that Islamic banks confront special credit risk, including *Mudarabah* investments and *Murabaha* transactions. They allocate a greater amount of financing and loans which increases their exposure to this risk. They are also confronted with greater challenges when it comes to market risk management given that they are required to comply with the principles of the Shariah and are unable to use risk management tools such as hedging and credit derivatives. However, it is shown that the contention that Islamic banks are less likely to trigger instability through the accumulation of risks is justified because the financing structures used by Islamic banks generally carry lower risks. Hence, it is not a question of Islamic banks using better risk management techniques. Their financing structures carry relatively low credit risk because their assets are generally of debt nature following sale-based financing, while deposits are on a profit and loss sharing basis. This means that Islamic banks may simply shift the risk of debt default to investment depositors. Equally, restrictions are eased by the fact that the *Gharar* interdiction limits the goods and services that Islamic banks can offer, therefore diminishing the risk they face.

As such, it is submitted that Islamic banks are not adversely affected by financial crises as conventional banks because Islamic banking is essentially based on different modes of PLS partnership that reduce the overall risk confronted by the financial institutions. Islamic banks are less exposed to risk but do not have better risk management strategies. Thus, they are less likely to trigger instability through the accumulation of risks, but they are not more resilient to financial crises. Also, each organisation, whether Islamic or conventional, has a risk management model that is based on how its managers foresee risks, assess impacts and define suitable responses. This implies that some Islamic banks manage risks better than others. Also, it is easier to compare the risk management strategies of banks where the regulator has created uniform standards for risk management. However, there are generally no uniform standards for Shariah governance. It is shown for example in Chapter 5 that international standards for accounting and auditing of Islamic banks are not mandatory, and SAMA does

not have specific regulations to cater to the unique risks of Islamic banking in the KSA. Also, the Shariah Board of each bank determines whether the bank's products and services are Shariah-compliant. Thus, in order to clarify the link between the Shariah-compliant banking and resilience to financial crises and determine whether Islamic banks are more resilient than conventional banks, the risk management strategies of Islamic banks are analysed at three levels, namely a generic level (Chapter 4), the level of the State (Chapter 5), and the level of individual banks (Chapters 6). The results of the analysis are discussed in the next section.

7.2.1 The Tripartite Analysis

At a generic level, it is shown in Chapter 4 that theoretically, PLS operations may mitigate liquidity and credit risks due to a number of reasons. First, the operations are on both sides of the balance sheet; the depositors sharing the risk with the bank on the liabilities side absorb the shocks on the assets side. Secondly, the operations are based on mutual trust and good faith which mitigate moral hazard, agency, and information asymmetry risks. Thirdly, where the bank is the Mudarib, the operational risk is lower given that the bank has the skill, expertise and experience in managing similar projects within the specific legal environment. Lastly, other risks embedded in equity-based transactions may be mitigated by the use of sales-based instruments such as the Murabaha and assets-based instruments such as the Ijara. The PLS is therefore a scheme that should be promoted by regulators given that banks using the scheme may be able to provide capital and generate profits with a low total risk load. Moreover, Islamic banks using these schemes match the profile of institutions that are generally more resilient to financial crises as shown in Chapter 2. They are less exposed to liquidity and credit risk, averse to excessive risk taking, and can sell their assets (such as Sukuk) and obtain liquidity from local sources in order to return to target leverage. Under the equity-based PLS modes, the clients deposit money with the bank and receive no interests but are entitled to a predetermined share in the bank's profits. What is important is that both parties agree on the sharing of the risk. The sharing of the risk establishes a moral difference between financing on PLS basis and loans or limited partnership modes of financing used by conventional banks.

There is a dichotomy between theory and practice. Islamic banking is largely centred on replacing interest in bank lending with the PLS, thereby compelling the lender and intermediaries to share the risks of enterprise with the borrowers. However, in practice,

financial institutions using PLS have been unable to match the innovation that underpins conventional financial services.

The most important flaw of the PLS equity-based schemes is the lack of ascertainable regulatory standards based on common interpretations of the principles of the Shariah. The uncertainty regarding the regulatory standards make it difficult to transpose these schemes to conventional banks, as well as other jurisdictions, especially non-Islamic jurisdictions. The uncertainty also makes it difficult for regulatory and supervisory authorities to compel all Islamic banks within their jurisdiction to conduct robust stress testing to identify and mitigate risks.

Another shortcoming is that the use of equity-based schemes as shown above focuses on resolving short-term liquidity problems and creates long-term illiquidity problems due to low returns and absence of interest. This may explain why only a small proportion of the assets of most Islamic banks actually constitute equity. As such, it may once again be argued that many Islamic banks were not affected by the financial crisis of 2007-09 due to limited exposure, especially to foreign counterparties in PLS equity-based agreements.

In order to assess the resilience of Islamic banking in practice, the risk management strategies of Islamic banks are analysed at the level of the State. It is shown in Chapter 5 that Islamic banks may be accommodated within the same legal and regulatory framework as conventional banks and perform better. Unlike conventional banks in the KSA, Islamic banks remained profitable during the global financial crisis. Also, the margins of Islamic banks remained high during the crisis because large proportions of deposits and loans were Shariah-compliant and did not receive interest. It is also shown that the causes of the financial crisis in the United States identified in the literature would not be operative if the banks complied with the rules of the Shariah that prohibit interest, speculation, and uncertainty, and used equity-based PLS agreements which are essentially *Ubberimae Fidei* contracts. However, it is important to distinguish between resilience and profitability. This is because although the margins of Islamic banks remained high during the crisis, conventional banks generally had higher margins before and after the crisis. Hence, the fact that large proportions of deposits and loans are Shariah-compliant may make Islamic banking less profitable in certain instances and more profitable in others. Notwithstanding, this study focuses on resilience. Islamic banks may have remained profitable during the crisis, but they are not necessarily

more resilient. There is no evidence that the regulator can impose strategies employed by Islamic banks on conventional banks in order to strengthen the resilience of the latter. It is true that Islamic financial institutions are less exposed to risks because they operate within the Shariah regulatory framework that requires the sharing (rather than transfer) of risk and essentially shuns toxic assets and derivatives. Also, they largely rely on retail funding within the domestic economy. However, they do not manage risk better than conventional banks. Since resilience is causally related to the management of risk rather than exposure, the analysis at this level also shows that Islamic banks are not more resilient to financial crises than conventional banks.

The resilience of Islamic banking in practice is also assessed at the level of the individual banks. The heuristic approach of the comparative case study is adopted in order to delimit the object of study to four banks in the KSA, two Islamic banks and two conventional banks. The risk management strategies of these four banks are then critically assessed in Chapter 6, and it is noted that it is difficult to determine whether the Islamic banks in the sample manage risks better and are therefore more resilient to financial crises. The analysis of their annual reports of 2007, 2014 and 2016 reveals that they effectively meet some requirements, while they are seriously lagging with regard to others. Nonetheless, it is noted that there is nothing in the annual reports of the four banks to support the positive outlook regarding their existing capabilities to resist financial crises. Hence, qualitative data was obtained directly from compliance officers and staff in the compliance units of the four banks. Emphasis was placed on stress testing which is increasingly recommended as the primary tool to identify risks and determine the adequate capital levels to resist shock.

Given the lack of standardised risk measures, as well as the difficulty of estimating exposures of Islamic banks, it would be more logical for these banks to place more reliance on stress tests. Chapter 7 discusses the results of a survey of the stress tests conducted by the four banks. It reveals that all four large banks have an overarching stress testing framework, although they acknowledge that enhancements are required. However, the frameworks of the conventional banks may be rated worse than those of Islamic banks. The stress tests conducted by conventional banks are siloed processes while the tests of Islamic banks are more integrated in their risk management strategies. Nonetheless, the Shariah Boards of the banks are not involved in or do not conduct specific stress tests.

Although the stress test is the primary tool to identify risks and determine the adequate capital levels to resist shock and the frameworks of the two conventional banks may be rated worse than those of the two Islamic banks, it is uncertain whether this may be generalised to all Islamic and conventional banks. This is because the four banks did not show how the results of the stress tests have wider use in informing and running the business. Then, it is also important to consider the context. In the KSA, the regulator, SAMA, does not examine the internal summaries of stress test results conducted by banks, as well as document the nature and extent of the stress testing activities of the banks. The regulator in the KSA is therefore unable to determine which banks are more resilient on the basis of their stress test frameworks.

7.3 Achievement of the Aim and Objectives

This study has sought to determine whether the adoption of Shariah-compliant standards may strengthen resilience to financial crises promote financial stability. It shows that this is unlikely given that there is no evidence that Shariah-compliant banks are more resilient than conventional banks, where they operate within the same regulatory environment. However, the results discussed above suggest that Islamic banks are less adversely affected by financial crises than conventional banks. The fact that they are less exposed to risks does not imply that they manage risks better. Thus, although there is a causal link between financial crises and risk management, there is no cogent link between Islamic banking and more efficient risk management. In this regard, the results may further be summarised as follows:

- The analysis at a generic level reveals that banks using the PLS scheme match the profile of institutions that are generally more resilient to financial crises, viz., they are less exposed to liquidity and credit risk, more averse to excessive risk taking, and often sell their assets and obtain liquidity from local sources in order to return to target leverage.
- The analysis at the State level reveals that where Islamic banks are accommodated within the same legal and regulatory framework as conventional banks, the Islamic banks are more resistant to financial shock. Thus, Islamic banks in all the studies on risk management in the KSA exceeded the minimum requirements. The few banks that did not remain profitable during the crises in the KSA were conventional banks. The margins of Islamic banks remained high because large proportions of deposits and loans were Shariah-compliant and did not receive interest.

- The analysis at the level of individual banks reveals that the stress testing frameworks of the conventional banks may be rated as less effective than those of Islamic banks.

7.3.1 Determining Whether Islamic Banks are More Resilient

In light of the above, it may be difficult to submit that Islamic banks are generally more resilient than conventional banks. Islamic banks have been able to withstand shocks or significant stresses during financial crises because they are less exposed to risk. The limited exposure (especially to foreign counterparties in equity-based transactions) explains why Islamic banks are less prone to withdrawals during panics, their lending decisions are not sensitive to deposits, and intermediation is asset-based rather than debt-based. Thus, Islamic banks generally rely on retail funding within the domestic economy. The interest-free nature of their products and services further reduces exposure to some liquidity risks such as those related to funding from foreign Shariah non-compliant institutions. Then, the Shariah regulatory framework that requires the sharing of risk essentially shuns toxic assets and derivatives that are embedded with risks. Lastly, although Islamic banks confront special credit risk, including *Mudarabah* investments and *Murabaha* transactions, the enforcement of the duty of utmost good faith mitigates these risks. This finding is in line with those of many studies cited in Chapter 1 and Chapter 2. Nonetheless, it is submitted here that this finding does not demonstrate that Islamic banks manage risk better than conventional banks. This is because resilience is causally related to the management of risk rather than exposure.

7.3.2 Clarifying the Links between Shariah-Compliant Banking and Resilience

It is important to note that limited exposure does not have the same connotation as better risk management and resilience to financial crisis. Thus, the studies cited in Chapter 2 are inaccurate in holding that Islamic banks have better risk management strategies and are more resilient to financial crises because they are less exposed to risk. Resilience implies resistance to macroeconomic shocks. However, limited exposure implies limited bank specific shock. Moreover, a resilient bank should have amongst other things a larger capital buffer, higher quality and depth of regulatory review, and the ability to clearly distinguish between traditional banking activities and proprietary trading activities. Neither the above analysis nor

previous studies have shown that Islamic banks are better equipped in these areas than conventional banks. It is true that a bank may be less resistant to a financial shock where it has made itself vulnerable through overexposure to risks embedded in asset categories such as real estate and equities. Nonetheless, the bank would be adversely affected by the crisis due to the low interest rate policy implemented by the central bank of the State. This is because the low interest rates increase liquidity and credit risks and negatively affect margin and profitability.

Hence, despite the fact that Islamic banks are not exposed to many risks due to the restrictions of the Shariah, they are often exposed to the specific asset categories of real estate and equities. Also, given that interest is prohibited, their margins and profitability simply remain constant during financial crises; that is until the crises spread to the real economy. Notwithstanding, what is important is the level of exposure of the individual bank, regardless of whether their products and services are Shariah-compliant or not. Regulators and policymakers should therefore place emphasis on risks concentrated in the most levered banks and the way they manage the risks. Thus, the important regulatory and supervisory challenges confronted by all regulators are related to ensuring that financial institutions, whether Islamic or conventional, are not overexposed to liquidity and credit risk.

The failure of the studies cited in Chapter 2 to notice that the limited exposure of many Islamic banks is due to the fact that they still rely on retail funding within their domestic economies is unfortunate. Such banks would be as adversely affected by financial crises as conventional banks if they have the same level of exposure to foreign sources of funding. As such, the difference in performances during financial crises is not sufficiently strong to support the hypothesis that Islamic banks are more resilient to financial crises.

7.3.3 Adopting Islamic Banking Standards to Strengthen Resilience

Notwithstanding, it is submitted here that the Islamic bank that ideally uses the PLS mode of financing is more resilient to financial crises than conventional banks. This is the bank that matches the profile of institutions that are generally more resilient to financial crises. As such, from a theoretical perspective, the regulator may strengthen the stability of conventional banks by requiring them to use similar modes of financing. This may be easier to implement in jurisdictions such as the KSA where Islamic banks and conventional banks

are required to comply to the same laws and regulations. In this light, the limited partnership mode of financing used by conventional banks may simply be modified into a PLS scheme. They are quite similar. The only differences are that the PLS has a limited contractual period and the liability of the partners is limited to their capital contribution. Thus, the fundamental difference between Islamic and conventional banking should not prevent conventional banks from using the PLS modes to supplement interest financing for example.

However, there is a disconnect between the above ideal and what obtains in reality. Due to the absence of regulatory standards based on common interpretations of the principles of the Shariah, it is uncertain whether some of the transactions in the PLS scheme are Shariah-compliant. In many transactions, the investee bank neither possesses nor owns the underlying asset of the Murabaha while selling to another broker at cost. This raises questions about the legitimacy of the transactions. It is Gharar for a seller to offer a product it does not own. Also, it is difficult to distinguish between interest (which is prohibited) and the guaranteed profit that the financier collects from the Murabaha transactions. Then the legitimacy of Ijara Sukuk may be questioned given that in many cases the underlying assets are not readily available, implying that there is no real sale transaction and the Sukuk holder only has an unsecured debt claim against the originator.

The analysis of the annual reports of the banks of the KSA in Chapter 6 shows that they provide very little information about the management of risks embedded in PLS modes of financing. The banks, Islamic and conventional, offer Islamic products and enter into these transactions, and two of the banks are fully Shariah-compliant. However, there is very little to suggest that they actually rely on PLS modes of financing to mitigate risks. In fact, one of fully Shariah-compliant banks treats Mudarabah transactions as restricted investments and off-balance sheet items.

7.3.4 Best Practices from Both Systems

It is shown in Chapter 5 that although Islamic banks are not more profitable and liquid than conventional banks, they are more stable and have a higher capitalisation ratio. It is argued that this may be attributed to the use of PLS modes of financing by Islamic banks. In Chapter 2, many commentators are cited to the effect that the appeal of Islamic banking lies in its use of PLS modes. However, it is shown in Chapter 4 that this argument is only true to the extent

that Islamic banks are able to provide capital and generate profits using PLS equity-based schemes, with a low total risk load, and use sales-based and lease assets-based contracts to mitigate the liquidity risk, market risk and credit risk emerging from equity-based schemes.

Also, in Chapter 5, many commentators are cited to the effect that the 2007-2009 financial crisis was caused by excessive risk-taking following a rise in interest rates, and speculation on rapidly increasing house prices, excessive amounts of short-term wholesale funding, and too few high-quality liquid assets. It is then argued that these causes would not have become operative had the banks complied with Shariah rules to prohibit interest, speculation and uncertainty. Additionally, excessive risk-taking can create a moral hazard. It is noted in Chapter 4 that excessive risk-taking is mitigated in Islamic banking through the use of equity-based PLS agreements, which are essentially *ubberimae fidei* contracts. Given that the bank and the client enter into a partnership or joint venture, it may be difficult for either party to undertake excessively risky investments.

Thus, where Islamic banks are concerned, a financial crisis can only be caused by a major confluence of different factors, none of which would be systemic in themselves. This would then imply regulatory failure. It is therefore important that the regulator should be tasked with consolidated supervision and is empowered to oversee systemic risk. Unlike in conventional systems such as the UK, where the regulatory reform following the financial crisis largely consisted of enhancing macro-prudential regulation by strengthening the Bank of England, in Islamic systems such as the KSA, the central bank was already the main regulator prior to the crisis. SAMA was therefore in a position to assess correlations and common exposures across banks in order to calibrate prudential controls. As such, conventional banks could enhance their resistance to shock by adopting the PLS mode of financing (as prescribed in Chapter 4) within a system where the regulator is sufficiently equipped to identify and prevent or mitigate systemic externalities and ensure the soundness of the system.

Nonetheless, this may be very problematic because the conventional institutions would be required to comply with Shariah rules that prohibit interest, the trading of loans and derivatives, and investment in *haram* products, such as gambling and prostitution. Conventional banks are generally required to invest only in interest-bearing securities and fixed income, in order to minimise exposure to risk. Also, it may be difficult for conventional banks to use sale-based contracts and lease asset-based contracts to effectively mitigate the

risks embedded in PLS equity-based contracts. Under a PLS agreement, the client or depositor shares in the losses with the financial institution. However, conventional banks must guarantee to return the invested principal. The deposit principal must be certain. Thus, the banks may be compelled to structure the PLS agreement in such a way that the client or depositor only shares in the profit and not in the loss. This would then deviate from the PLS mode of financing that is proposed as the suitable mode for strengthening the resilience of banks.

However, there is a disconnect between the PLS mode of financing prescribed in Chapter 4 and what obtains in reality. Due to the absence of regulatory standards based on common interpretations of the principles of the Shariah, it is uncertain whether some of the transactions in the PLS scheme are Shariah-compliant. For example, in many transactions, the investee bank neither possesses nor owns the underlying asset of the *Murabaha* while selling to another broker at cost. However, it is *Gharar* for a seller to offer a product it does not own. Also, it is difficult to distinguish between interest (which is prohibited) and the guaranteed profit that the financier collects from the *Murabaha* transactions. Unsurprisingly, there was little evidence to suggest that the two fully Shariah-compliant banks that were examined actually rely on PLS modes of financing to mitigate risks.

In practice, financial institutions using PLS have been unable to match the innovation that underpins conventional financial services. It is still very difficult to replace interest in bank lending by compelling the lender and intermediaries to share the risks of enterprise with the borrowers. Also, there is no sophisticated market on which the shares of such institutions can be floated. The secondary markets on which *Sukuk* or Islamic bonds are traded cannot handle variable return bonds based on *Mudarabah* and *Musharakah*. The investors would be too exposed given that there is no guaranteed value on redemption. It may therefore be important for Islamic banking to be based on devising suitable means of using conventional banking principles and procedures to serve the objectives of the Shariah rather than the establishment of a separate banking system. This is a more honest assessment of what obtains in the KSA. It explains why SAMA has adopted and implemented Basel Standards and approaches, and there has been no deviation from the Standards by fully Shariah-compliant banks in KSA.

Notwithstanding, each bank has a specific risk management strategy which determines how it identifies and manages risk. Also, the bank's underwriting standards determine its decision to

accept client and credit risk. Thus, the individual heterogeneity of each bank coupled with effective prudential regulation is more important than the nature of the banking or financing activity. It follows that each bank ought to place emphasis on developing specific risk management strategies, which take into account the unique risks embedded in its products and services, whether they are Shariah-compliant or not.

7.4 Limitations of the Study

There are certain limitations on this research that should be taken into account. While the researcher maintains that these limitations do not affect the overall validity, reliability and generalisability of the results and suggested reforms derived from this research, these obstacles and their effects on certain areas of the collection and analysis of the data should be noted.

One of the primary limitations of this study is the relatively little material written on this subject from the regulatory perspective. This study aims to understand how the banking regulations in both conventional and Islamic banking systems attempt to equip them with sufficient risk management procedures and effective tools for maintaining stability in the event of a financial crisis. However, the vast majority of existing studies on this topic are grounded in economic, financial, and political analyses, with little attention being given to the role of regulation in understanding the comparative outcomes. While this is also what makes this study a unique contribution to the literature, it leaves little to draw on outside of empirical and comparative analyses.

The second limitation for this study are the broad categories of conventional and Islamic banking. These systems are in effect models of banking that can be used throughout the various countries that subscribe to them, but each country will implement and tailor them according to their particular needs. The space constraints of this study do not permit consideration and comparison of a significant number of countries, thus only the most exemplary countries of each system, such as the United States for a conventional model and Saudi Arabia for an Islamic model, are analysed to identify the relevant attributes of each system. Moreover, given that the focus is on the risk management strategies of Islamic banks, the analysis of regulations that apply in the United States is very limited.

A final limitation to this study relates to the statistical sampling used for the qualitative survey. While best practices were followed to generate the survey results within the sample population, the sample is limited to Saudi perspectives on Islamic versus conventional banking models.

7.5 Recommendations for Further Studies

The experience of the KSA shows that Islamic banks may be accommodated within the same legal and regulatory framework as conventional banks. However, it is uncertain what specific role Islamic banking plays, if any, in strengthening the stability of the financial system. In this light, it may be important to further elaborate the ideal PLS scheme of financing that may be used by both Islamic and conventional banks (modified form of limited partnership) to show how the promotion of this scheme in the KSA may strengthen the resilience of financial institutions.

Despite the accommodation of Islamic banks, it is also uncertain the extent to which regulations reflect this accommodation. Since SAMA did not declare any intention to tailor regulations to suit the unique risks embedded in Islamic products and services, it may only be assumed that the honing of Basel standards and approaches was in a bid to achieve this result. Thus, although Base II encourages only banks using the basic indicator approach to comply with these principles, SAMA imposes compliance on all banks in the KSA, and requires all banks to comply with Principle 13 of the Sound Principles and disclose liquidity-related information to the public on a regular basis. Also, unlike Basel II, SAMA considers that only the sovereigns from the GCC should be risk-weighted at zero per cent. The stricter measures adopted by SAMA may explain why there has not been any deviation from the Basel standards by both Islamic and conventional banks in the KSA.

However, it remains that the Basel standards were developed for conventional banks and SAMA has not avowed that it has attempted to ensure that the implementation of the standards in the KSA takes into account the unique nature of Islamic banking. Thus, it is important to determine how these standards may be modified to suit the specific needs of Islamic banks. For example, clarity is required regarding Islamic instruments that may qualify

as additional Tier 1 and Tier 2 capital, and how Islamic bonds may be granted the status of high quality liquid assets.

Also, none of the banks in the KSA actually confront a Shariah risk. This is because the regulators in the KSA do not enforce the principles of the Shariah against the banks. Hence, the only authority that assesses a bank's Shariah products is the bank's Shariah Board. It follows that the compliance risk management of Islamic banks is assessed in light of how the banks comply with the laws, regulations and standards that apply to all banks, regardless of the nature of their activities. Thus, it is important to determine how the principles of the Shariah may effectively be enforced against Islamic banks in the KSA.

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Appendices

Appendix A: SHEET FOR QUALITATIVE SURVEY – BANKS IN THE KSA

Title of Research Study:

Are Islamic Banks More Resilient to Financial Crises? A Critical Analysis of Islamic and Conventional Banks with Particular Reference to Saudi Arabia

INFORMATION SHEET FOR PARTICIPANTS

Dear Sir/Madam,

You are invited to take part in a research study that seeks to assess the risk management mechanisms used by banks in the KSA. I would be grateful if you complete the attached Questionnaire on stress tests carried out as part of your risk management. This research is part of my PhD research at University of Sussex.

Before you decide whether to take part in the study, it is important that you understand what the research is for and what you will be asked to do. Please take time to read the following information and discuss it with others if you wish. It is up to you to decide whether or not to take part. If you decide to take part, you will be given this information sheet to keep. You can change your mind at any time and withdraw from the study without giving a reason. The standard of care you receive will not change whether or not you decide to participate in this study. You are welcome to phone me if you would like any further information.

The purpose of the research study is to compare the risk management strategies of Islamic banks and conventional banks in the KSA. I would like to ask questions about the tests you have conducted to gauge how certain stressors will affect your banking institution.

You have been chosen because your employer is among the most reputable banking institutions in the KSA. The study will involve 4 banks in the KSA, who will all be required to complete the attached questionnaire.

The information gained from this research will be used to make recommendations for best practices and offer insights into the tests conducted by the banks. The objective is to enhance the regulation of banks and their resilience to financial crises..

The questionnaires will be stored in a locked secure place at all times and the data will be protected from intrusion also. The questionnaires will be destroyed at the end of the study. Your response will be treated with full confidentiality, and anyone who takes part in the

research will be identified only by code numbers or false names. I will analyse the questionnaires. At the end of the research,. You can request a copy of the final report if you wish. No research participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at University of Sussex.

Please do not hesitate to contact me if you need further information

Thanking you in anticipation,

Yours sincerely,

Bader Aldosari

QUALITATIVE QUESTIONNAIRE

Section 1 - General

Identification of respondent

Q1: Please indicate the name of the institution for which you are completing the questionnaire.

Section 2 – Governance and Engagement

Q2: Please indicate by Very Low, Low, High or Very High the level of involvement of the Committees of the Board of Directors and the Senior Management in each of the following stages of the regulatory stress testing process.

Scenarios:

Modelling:

Management actions:

Results:

Q3: Which unit or person takes overall ownership of the regulatory stress testing process?

Q4: Please indicate the extent to which regulatory stress testing is a separate exercise to the following:

Internal risk management:

Contingency or recovery planning:

Resolution planning:

Reverse stress testing:

Q5: Please indicate the hypothetical scenarios that are regularly tested:

Q6: Please indicate by Yes or No whether these Islamic portfolios are used in the stress testing:

Islamic bond (Sukuk):

Stocks:

Money market funds (Murabaha):

Equity funds (Mudarabah and Musharakah):

Alternative investment funds (forex funds, real estate funds, hedge funds):

Q7: How did these Islamic Portfolios fare during the periods of financial crises?

Q8: Which hedging strategies were set to mitigate the risks in the Islamic portfolios?

Q9: How do you evidence to regulators the reasonableness of the assumptions used in your regulatory stress tests?

Q10: Please indicate by Low, High or Very High the extent to which additional operational staff are needed to complete regulatory stress tests:

Q11: What type of risk control actions have you taken in response to regulatory stress testing results?

THANK YOU

Appendix B: SHEET FOR QUALITATIVE SURVEY - SAMA

INFORMATION SHEET FOR PARTICIPANTS

Dear Sir /Madam,

You are invited to take part in a research study that seeks to assess the risk management mechanisms used by banks in the KSA. I would be grateful if you complete the attached Questionnaire on stress tests carried out as part of your risk management. This research is part of my PhD thesis at University of Sussex.

Before you decide whether to take part in the study, it is important that you understand what the research is for and what you will be asked to do. Please take time to read the following information and discuss it with others if you wish. It is up to you to decide whether or not to take part. If you decide to take part, you will be given this information sheet to keep. You can change your mind at any time and withdraw from the study without giving a reason. The standard of care you receive will not change whether or not you decide to participate in this study. You are welcome to phone me if you would like any further information.

The purpose of the research study is to compare the risk management strategies of Islamic banks and conventional banks in the KSA. I would like to ask questions about the tests you have conducted to gauge how certain stressors will affect your banking institution.

The information gained from this research will be used to make recommendations for best practices and offer insights into the tests conducted by the banks. The objective is to enhance the regulation of banks and their resilience to financial crises. The results of the study may also lead onto further studies on the use of stress tests tailored to Islamic banking.

The questionnaires will be stored in a locked secure place at all times and the data will be protected from intrusion also. The questionnaires will be destroyed at the end of the study. Your response will be treated with full confidentiality, and anyone who takes part in the research will be identified only by code numbers or false names. I will analyse the questionnaires. At the end of the research. You can request a copy of the final report if you wish. No research participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at University of Sussex.

Please do not hesitate to contact me if you need further information

Thanking you in anticipation,

Yours sincerely,

Bader Aldosari

QUALITATIVE QUESTIONNAIRE

Q1: What type of risk control actions SAMA taken in response to regulatory stress testing conducted by banks?

Q2: Has SAMA enacted any regulations that are tailored Islamic banking?

Q3: Is SAMA concerned about the risks embedded in any specific Islamic products or schemes?

Q4: Does SAMA believe that the Basel standards may be effectively implemented by Islamic banks?

Q5: Does SAMA regulate the management of Shariah risk?

THANK YOU