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Islamic Finance and Conventional Banking: A Comparative Analysis of Risk Management Practices

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Abstract:
Background*: Islamic finance has experienced remarkable growth in recent decades, operating alongside conventional banking in the global financial system. This research aims to systematically compare risk management practices between Islamic finance and conventional banking systems, focusing on credit, market, operational, and liquidity risks.*
Materials and Methods*: To compare and contrast the risk management strategies of the two industries, the study uses a literature review and comparison of the current practices in the two industries. The study uses academic articles, industry publications, and regulatory documents to analyze risk management in both banking systems.*
Results*: The results suggest that there are differences in the risk management practices in relation to different risks. This research identifies the challenges that Islamic banks encounter in credit risk assessment because of the profit and loss sharing contracts and restrictions on collateral. The management of market risks in Islamic banks is limited by the non-acceptance of interest and some derivatives; hence there is a need for the creation of Islamic solutions. This research also identifies some specific features of operational risk management in Islamic banks, including the issue of Shariah compliance. The management of liquidity risk is a major problem in Islamic banks because they are not able to use conventional money markets and there are few liquid assets that are Shariah compliant.*
Conclusion: *Islamic banks are exposed to unique risks related to Shariah compliance and profit–loss sharing, but they are also endowed with risk sharing mechanisms and Islamic financing techniques. The study concludes with the need to keep on innovating Islamic financial products and risk management techniques and to tailor regulatory frameworks to the specific features of Islamic banking.*
Key Word*: Islamic finance; Conventional banking; Risk management; Sharia compliance; Comparative analysis*

I. Introduction

Over the past few decades, Islamic finance has enjoyed impressive growth and development in the global financial landscape, which has given rise to a number of specific issues and opportunities related to the management of risk. In Islamic banking, which operates entirely on Shariah law, these banking principles govern: profit and loss sharing, prohibition of interest, and ethical investment (Parashar et al., 2010). Islamic financial institutions are different from conventional banking from a fundamental point of view and therefore need specialized risk management approaches.

With the remarkable growth of Islamic finance, risk management issues in Islamic Financial Services (IFS) institutions have received more attention (Cebeci, 2012). Since Islamic banks run in the same universal financial system as conventional banks, a comparative review of risk management practices between the two systems is vital for proper regulation and equilibrium of Islamic finance inside the international financial structure. The objective of this research is to compare risk management practices between Islamic and conventional banking systems holistically, with the intention to enhance the existing knowledge base, and to provide practitioners and regulators with insights into the field (El-Hawary et al., 2006).

II. Material And Methods

Study Design:

Using a comparative analysis approach, this research looks at risk management practices in Islamic and conventional banking systems. The design of the study is mostly qualitative, which includes a review and analysis of the current industry practice. This method makes it possible to probe deeply the parallels and disparities in risk management techniques, devices and regulatory outlines between the two banking systems. The comparative method helps identify the special challenges and opportunities of Islamic finance in risk management and evaluates innovative solutions to these challenges.

Study Location:

The study is a global view of Islamic and conventional banking practices. Special attention is paid to those areas in which Islamic finance is particularly present, such as the Middle East, Southeast Asia, and emerging Islamic financial markets in Western countries.

Study Duration:

This research looks at the recent advances and current challenges in Islamic and conventional banking risk management practices over the last two decades. That design permits consideration of the evolution of risk management practice as the world of global finance continues its evolution since events and regulatory change.

Subjects & selection method:

This study focuses on risk management practices, tools and regulatory frameworks in Islamic and conventional banking systems. A systematic review of peer reviewed research articles, books, industry reports and regulatory guidelines are used as selection method for literature and industry practices. The selection criteria are relevance to risk management in banking, focus on Islamic or conventional banking practices and publication in the last two decades. Particular emphasis is placed on sources offering comparative risk management analyses or unique aspects of the risk management in Islamic finance. Such an approach allows a full and up to date coverage of the material.

Inclusion criteria:
1. Focus on risk management in banking
2. Address Islamic or conventional banking systems
3. Provide insights into credit, market, operational, or liquidity risk management
4. Discuss regulatory frameworks relevant to banking risk management
5. Present comparative analyses or unique challenges in Islamic finance

Exclusion criteria:
1. Literature published before 2000, unless seminal to the field
2. Sources focusing solely on banking products without risk management context
3. Non-peer-reviewed or non-authoritative sources
4. Studies on non-banking financial institutions
5. Literature not available in English or without reliable translations

Procedure methodology

The research methodology takes a structured form starting with a very comprehensive literature review. It consists of an academic and systematic search of academic databases, industrial publications, and regulatory documents. A comparative analysis is conducted to identify key similarities and differences in risk management practices between Islamic and conventional banking systems, following the literature review. A thematic analysis process is performed to categorize the findings into major themes including categories of credit risk, market risk, operational risk, and liquidity risk management.

The study also includes a review of relevant regulatory standards and guidelines for both banking systems and a review of specific examples and innovations in risk management practices in Islamic and conventional banks. Various sources of insights are synthesized to develop a comprehensive understanding of the current state and future directions in risk management for both Islamic and conventional banking. A critical evaluation is then carried out to evaluate the strengths, weaknesses and opportunities for development in risk management practice for both banking systems. This approach to methods guarantees careful, thorough, and nuanced treatment of the topic, making possible meaningful comparison and insight.

Statistical analysis

This comparative study is qualitative in nature so traditional statistical analyses cannot be used. The research uses qualitative analysis techniques to synthesize and interpret the collected information. We adopt a policy of content analysis that categorizes and interprets textual information from different sources systematically. The thematic analysis enables to identify and explore the repeating 'thematic risk management practices' in both sovereign and banking systems. A comparative analysis approach provides a systematic way of comparing risk management strategies, and of pointing out similarities and differences, and unique challenges. Trend analysis is carried out to investigate how practices and emerging issues in risk management for Islamic and conventional banking have evolved over time. Through these analytical approaches, we have a wide and detailed understanding of the risk management landscape of the Islamic and conventional banking systems.

III. Result

Comparative analysis of risk management practices in Islamic and conventional banking systems shows major differences and similarities in different risk categories. The findings indicate distinct challenges and opportunities of Islamic finance in the realm of risk management.

Credit Risk Management

For conventional banking, credit risk assessment is fundamentally driven by models based on quantitative factors and financial information of the past. The probability of default is determined and lending decisions made by banks that apply statistical techniques such as discriminant analysis and logistic regression (Altman et al, 2010). Such models normally come up with credit scores based on financial ratios and borrower characteristics.

Unlike Islamic banks, conventional credit risk assessment models are difficult to apply for these Islamic banks as they are against the nature of the Islamic financial contracts, which are based on the profit and loss sharing principles. Islamic banks have to develop alternative approaches to products such as mudarabah and musharakah, which instead emphasize on project feasibility and borrower characteristics rather than purely financial ratios (Zainol & Kassim, 2012).

Finally, the two systems differ in the use of collateral in credit risk mitigation. Unlike conventional banks, Islamic banks are bound by Sharia principles, and so cannot use any form of collateral, such as interest bearing securities. As a result of such a restriction, Islamic banks tend to use more of tangible assets as collateral (Ahmed and Khan, 2007).

Another major difference is in the treatment of non-performing loans. Traditional banks usually charge interest on late payments and have well defined rules on loan write offs and recoveries. Also, Islamic banks are not allowed to carry out charging of additional amount on overdue payments and they need to come up with other means for handling delinquent account within Sharia principles (Zainol & Kassim, 2012; Parashar et al., 2010).

Market Risk Management

Because Islamic finance prohibits interest and certain types of derivatives, market risk management practices are quite different in Islamic banking system compared with conventional banking system. Interest rate swaps, futures contracts and options are the most widely used financial instruments and hedging strategies used by conventional banks to manage market risks. Market risk exposure and risk management decisions are commonly quantified and guided by the use of Value-at-Risk (VaR) models (Jorion, 2011).

Also, most conventional market risk management techniques are not applicable to Islamic banks, which are constrained by Shariah law. In order to tackle this challenge, Islamic banks have designed Shariah compliant derivatives to mitigate market risks. For instance, Islamic forwards (wa'd) are used to hedge currency risk, and profit rate swaps based on the wa'd concept are utilized to hedge profit rate risk. Nevertheless, these instruments are still heavily undertraded and illiquid compared to traditional derivatives markets (Lucas et al., 2001).

It also sets Islamic banks apart in their dealing with assets and liabilities by prohibiting interest. Conventional banks can use interest rate derivatives to hedge asset liability mismatches but Islamic banks have to be content with natural hedging and careful matching of assets and liabilities. Since conventional interest rates remain a key factor in the world financial system, this is a special problem in managing profit rate risk (Ariss & Sarieddine, 2007).

The two types of banks also differ in measurement and monitoring of market risk. Also, VaR models can be easily applied to trading portfolios of conventional banks, but they need to be adjusted significantly when applied to Islamic financial assets. Other scholars have suggested alternative risk measures that are more suitable for Islamic banks, including Profit-at-Risk (PaR), which considers profit sharing investment accounts and other distinctive investment arrangements (Ariffin et al., 2009).

Operational Risk Management

For practices of operational risk management, there are similarities between Islamic and conventional banking system. Still, there are differences when it comes to Sharia compliance and product feature of Islamic banking system (Sufian, 2007). Both use internal control, risk assessment and operational risk management frameworks as prescribed by Basel II and Basel III regulatory bodies. They include risk mapping, risk identification and the use of Key Risk Indicators (KRIs) to measure operational risk exposure (Allen & Saunders, 2012).

But Islamic banks have more operational risks associated with Sharia compliance than conventional banks. Therefore, establishment of Sharia supervisory boards, Sharia compliance checks periodically and the creation of internal controls that are Islamic law principles based are required in the entire organization's daily operations (Hasan, 2012).

A new dimension of operational risk management in Islamic banking is introduced by the Sharia supervisory board. They are responsible for approving all bank products and services, to make sure they conform to Sharia laws. Even so, this process can generate additional operational risks including possible different interpretations of Sharia law and delays in product approval (Matoussi & Grassa, 2012).

Liquidity Risk Management

The unique nature of Islamic financial products and the restrictions by Sharia principles lead to significant diversities in liquidity risk management practices between Islamic and conventional banking systems. Still, conventional banks are able to use a broad range of liquidity management instruments including interbank markets, central bank operations or a variety of money market instruments. Slight fluctuations in liquidity can easily be handled by borrowing or lending in short-term money markets and can use asset securitization and repo for it (Allen & Saunders, 2012).

Also, Islamic banks encounter a number of liquidity management issues. As a result, their participation in conventional money markets or the use of interest based central bank facilities is prohibited. In order to deal with these problems, Islamic banks have created alternative liquidity management instruments, namely commodity Murabaha transactions. Although, these instruments have higher transaction costs and are less flexible than traditional money market instruments (Parashar et al., 2010).

In addition, Islamic banks are faced with liquidity management difficulties as a result of the lack of a well-developed Islamic interbank market. Despite attempts to establish Islamic interbank markets in different jurisdictions, those markets are still small and shallow relative to conventional interbank markets (Ismail & Ahmad, 2006).

A second marked difference is in the character of deposits. All deposits are treated as liabilities by conventional banks and can very easily calculate cash outflows based on interest rates and maturities. Though, Islamic banks handle other types of deposits, namely, profit sharing investment accounts (PSIAs) which have features of both deposits and investments. As PSIAs have a dual nature, it adds to the complexities in the Islamic banks' liquidity risk management (Zainol & Kassim, 2012).

Islamic banks are faced with the scarcity of Shariah-compliant High Quality Liquid Assets (HQLA) to meet regulatory liquidity ratios (such as the Liquidity Coverage Ratio (LCR) under Basel III). Conventional banks have a number of government securities and other liquid assets available to them to meet these requirements, but Islamic banks have fewer such Shariah compliant assets available (Ali, 2004).

In an effort to surmount these challenges, some Islamic banks have decided to create innovative products to improve liquidity management. For example, interbank Islamic banks commodity Murabaha transactions can be used to deal with the short term liquidity needs in a Shariah compliant way. Furthermore, some jurisdictions have also created Shariah compliant equivalents of conventional repurchase agreements, for example Islamic repos that are based on wa'd (promise) concept (Lucas et al., 2001).

These results indicate that risk management in Islamic banking is multifaceted and dynamic, showing both the special problems that Islamic financial institutions confront and the inventive solutions being created to overcome these problems within the Shariah framework.

IV. Discussion

Comparative analysis of the risk management practices between Islamic and conventional banking systems brings out the implications for regulatory frameworks, industry practices, and future developments in the Islamic finance industry.

Regulatory Challenges

Islamic finance has distinct features that pose significant challenges for regulators to lay down supervisory measures that accommodate these features while maintaining financial system stability in general. The calculation of capital adequacy ratios is one of the key areas of concern and as such the risk sharing nature of profit sharing investment accounts (PSIAs) in Islamic banks must be accounted for. This need has been recognized by the Islamic Financial Services Board (IFSB) which has developed guidelines tailored to the calculation of capital adequacy for Islamic financial institutions (Archer et al., 2010). These guidelines mark an important step in the evolution of a regulatory framework that is Shariah compliant whilst reflecting international banking standards.

Adaptation is also needed in liquidity regulation for Islamic banks. To address the scarcity of Shariah compliant high quality liquid assets and the special features of Islamic financial products, the Basel III liquidity standards i.e. Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) need to be adapted (Ali, 2004). The challenge for regulators is to develop liquidity standards that are both stable for Islamic banks and recognize operational constraints.

Islamic banks are also governed by an additional regulatory consideration of their governance structure and the role of Shariah Supervisory Boards. In this context, these boards are essential in guaranteeing Shariah compliance, but their place in the general corporate governance system and their relationship with other governance bodies must be clearly defined from a regulatory point of view (Matoussi & Grassa, 2012). If so, it may be necessary to develop specific governance standards for Islamic financial institutions that supplement present corporate governance regulations.

Risk Measurement and Reporting

Due to the differences in products and risk profiles, Islamic and conventional banks require particular risk measurement and reporting techniques to be developed. Traditional measures such as probability of Default (PD), Loss Given Default (LGD) may not be appropriate for Islamic financial products governed by the principles of profit and loss sharing. To properly assess credit risk of mudarabah and musharakah products, Islamic banks are required to improve their project appraisal techniques and cash flow analysis (Zainol & Kassim, 2012). To achieve this, it's not just technical expertise that's required, but a real in depth understanding of the business ventures and the likelihood of those businesses' success.

Conventional Value-at-Risk (VaR) models are difficult to apply in Islamic finance because derivatives are limited and interest is prohibited in the context of market risk management. Other scholars have developed alternative risk measures suitable for Islamic banks, for eg., Profit-at-Risk (PaR) that incorporates the characteristics of profit and loss sharing investment accounts (Ariffin et al., 2009). Yet these measures are early in their development and further refinement, industry wide acceptance are needed.

In the case of operational risk, Islamic banks need to determine Key Risk Indicators (KRIs) and develop loss event databases that cover Shariah non-compliance risks and other risks that are particular to the Islamic banking operation (Archer et al., 2010). As a result, there is an urgent need for a thorough review of operational processes, and for the creation of risk taxonomies that capture the specific features of Islamic banking.

Product Development and Innovation

The differences in risk management practices make a huge difference to product development and innovation in Islamic banking. In the area of liquidity management and risk mitigation, Islamic financial institutions are always looking to develop Shariah compliant alternatives to conventional financial products. The result is innovative products like Islamic Repo based on commodity Murabaha and Islamic profit rate swaps based on the wa'd (promise) concept. But many of these products are met with standardization and market acceptance challenges (Lucas et al, 2001).

Likewise, the requirement for Islamic financial services has driven conventional banks to extend their offerings by means of Islamic windows or as a different Islamic auxiliary. The need for such integrated risk management frameworks arises because of this trend, which requires them to consider the risks of both conventional as well as Islamic financial products within the same organization (Parashar et al., 2010).

Among the major innovations of Islamic finance, Sukuk (Islamic bonds) create new opportunities for investment and liquidity management (Shubbar, 2010). Anyways, the creation of a solid secondary market for sukuk is still a challenge, and they are not as effective as conventional bonds as a liquidity management tool.

Risk Governance and Shariah Compliance

Implementing Shariah principles in risk governance in Islamic banking is more complex than in the case of conventional banking. Shariah supervisory boards are therefore necessary as they check whether all operations, even the risk management practices, are following Islamic principles. These boards are key to product approval, risk assessment and risk management policy formulation. The integration of Shariah governance into the overall risk governance framework has both challenges and opportunities for Islamic banks (Matoussi & Grassa, 2012).

The formation of internal Shariah audit departments is another dimension for operational risk management in Islamic banks. It is solely established to monitor and keep Shariah compliance continually, containing a different degree of risk that is not contained through conventional banking (Hasan, 2012). Shariah non-compliance risk is to be managed through the development of special guidelines, staff training programs and organizational structures to minimize the probability of Shariah violations (Greuning & Iqbal, 2008).

These findings are discussed in the context of the complex interrelationship between Islamic finance principles, risk management practices and regulatory requirements. This shows that Islamic banking still needs to continue to innovate and adapt and how it must do so in order to tackle the important challenges, both unique and general, that a Shariah compliant financial operation faces, while maintaining competitiveness and stability of the global financial system.

Sustainable growth of Islamic finance industry will be critical to deal with these challenges through ongoing dialogue between Islamic financial institutions, regulators and Shariah scholars. Leveraging the risk-sharing and ethical finance principles of Islamic banking, there is opportunity to create more solid and value creating financial practices that could expand and strengthen the global financial system.

V. Conclusion

Gaps in credit risk, market risk, operational risk and liquidity risk management in Islamic and conventional banking systems are analysed. Still, these differences are a result of Islamic finance basic tenets of partnership, prohibition of interest and Sharia laws compliance. There are some problems and opportunities for Islamic banks. This is due to the fact that Islamic banking must exclude interest and remain Sharia compliant while also creating the right risk management instruments. Many Islamic financial products share elements from profit and loss sharing, which may enhance the relationship between banks and their customers, (and reduce moral hazard and adverse selection).Anyways, the Islamic banking industry continues to encounter great difficulties in developing Sharia compliant risk management tools and measures commensurate with standard setting in conventional banking. Continued challenges faced by Islamic banks in managing the market and liquidity risks include one of a limited availability of Sharia compliant liquidity management instruments and tools of hedging. Islamic banks have unique features which must be accommodated in regulatory frameworks that continue to evolve to foster stability in the overall financial system. It may include making suitable specialized capital adequacy and liquidity standards and dealing with governance aspects of Sharia supervisory boards.

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