

T.R.
ISTANBUL SABAHATTIN ZAIM UNIVERSITY
GRADUATE SCHOOL OF EDUCATION
DEPARTMENT OF ISLAMIC ECONOMICS AND FINANCE

SHARIA COMPLIANCE OF FINANCIAL
ENGINEERING:
A THEORETICAL AND PRACTICAL EVALUATION

Ph.D. DISSERTATION

Ibrahim Zuhair Hasan SAWALHA

Istanbul
December, 2025

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Supervisor
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December, 2025

This research has been accepted in partial fulfilment of the prerequisites for Ph.D. Degree in Department of Islamic Economics and Finance.

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DECLARATION OF SCIENTIFIC ETHICS AND ORIGINALITY

I hereby declare that the PhD dissertation entitled “**Sharia Compliance of Financial Engineering: A Theoretical and Practical Evaluation**” has been independently prepared by me under the supervision of Prof. Dr. Turan EROL. The analysis, arguments, and conclusions presented in this work are entirely my own, except where proper academic citations have been provided.

I affirm that this dissertation has not been submitted, in whole or in part, for any other academic degree or qualification at this or any other institution. I further confirm that the dissertation fully complies with the academic integrity, ethical research principles, and regulations of Istanbul Sabahattin Zaim University.

This dissertation was prepared solely by the author and reflects the author’s original work, analysis, and academic contribution.

I accept full responsibility for the content and scholarly integrity of this dissertation.

Ibrahim Zuhair Hasan SAWALHA

Istanbul, December 2025

PREFACE

This dissertation, “Sharia Compliance of Financial Engineering: A Theoretical and Practical Evaluation,” represents the culmination of a long academic and personal journey. The research grew out of my interest in understanding how Islamic financial principles can be systematically integrated into modern financial engineering practices. The work reflects both a theoretical commitment to advancing Islamic economic thought and a practical need for structured evaluation tools that can support real-world decisions. Throughout the preparation of this dissertation, I received invaluable guidance and academic support. I am deeply grateful to my supervisor, Prof. Dr. Turan EROL, whose insights, direction, and steady academic guidance shaped the development of this work. I also extend my appreciation to the faculty members of the Islamic Economics and Finance Department at Istanbul Sabahattin Zaim University for their encouragement and scholarly contributions.

This work carries a deeply personal meaning for me. My late father, Zuhair SAWALHA, who passed away before seeing this moment, always believed in my academic path and encouraged me to pursue higher studies. His memory has been a source of strength throughout this journey. My mother has been waiting for this day with great pride, and her prayers have supported me at every stage. My wife has been the strongest support in my life, providing patience, motivation, and stability during the long and demanding phases of this research. My sons have also been waiting for this achievement, and their presence has been a constant reminder of the responsibility I carry as a father and a role model. I am equally thankful to my family members and close friends whose encouragement sustained me during challenging periods. The process of writing this dissertation has been both intellectually demanding and personally transformative. Balancing theoretical depth with practical relevance required extensive reflection, continuous effort, and perseverance. It is my hope that this work contributes meaningfully to the literature and offers a structured approach that future researchers and practitioners can build upon.

Ibrahim Zuhair Hasan SAWALHA

ABSTRACT

SHARIA COMPLIANCE OF FINANCIAL ENGINEERING: A THEORETICAL AND PRACTICAL EVALUATION

Ibrahim Zuhair Hasan SAWALHA

Ph.D. Dissertation, Islamic Economics and Finance

Supervisor: Prof. Dr. Turan EROL

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This study develops a rigorous methodological foundation for constructing an integrated evaluation framework for Islamic financial products, addressing the longstanding absence of standardized, replicable, and analytically coherent assessment tools in the field. Existing literature largely separates Shariah compliance analysis from economic performance evaluation, resulting in fragmented methodologies and inconsistent regulatory practices. This study adopts a mixed-methods design that combines deductive reasoning rooted in Islamic jurisprudence with inductive refinement derived from empirical contract analysis. The methodological structure integrates qualitative tools—such as clause-based checklists and structured suspicion scoring—with quantitative financial indicators capturing risk, liquidity, return, and capital preservation. The paper demonstrates how theoretical assumptions are transformed into conceptual components and operational procedures within a dual-pillar system comprising Shariah compliance and economic efficiency. This methodological contribution provides an academically defensible and practically applicable pathway for developing a comprehensive evaluation framework that is internally coherent, transparent, and adaptable to diverse Islamic financial instruments.

Keywords: Economic Efficiency; Shariah Compliance; Mixed-Methods; Islamic Financial Product Evaluation; Suspicious Elements; Evaluation Frameworks.

ÖZET

FINANS MÜHENDİSLİĞİNİN ŞERİAT UYUMLULUĞU: TEORİK VE PRATİK BİR DEĞERLENDİRME

İbrahim Zuhair Hasan SAWALHA

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Bu çalışma, İslami finansal ürünlerin değerlendirilmesine yönelik bütünlük bir değerlendirme çerçevesinin oluşturulması için sağlam bir metodolojik temel geliştirmeyi amaçlamakta ve alandaki uzun süredir devam eden standartlaştırılmış, tekrarlanabilir ve analitik açıdan tutarlı değerlendirme araçlarının eksikliğini ele almaktadır. Mevcut literatür, Şer ‘î uygunluk analizini ekonomik performans değerlendirmesinden büyük ölçüde ayrı ele almakta; bu durum parçalı metodolojilere ve tutarsız düzenleyici uygulamalara yol açmaktadır. Bu çalışma, İslam fıkına dayalı tımdengelsel akıl yürütmeyi, ampirik sözleşme analizinden elde edilen tümevarımsal iyileştirme ile birleştiren karma yöntemli bir araştırma tasarımı benimsemektedir. Metodolojik yapı; madde bazlı kontrol listeleri ve yapılandırılmış şüpheli puanlaması gibi nitel araçları, risk, likidite, getiri ve sermayenin korunmasını ölçen nicel finansal göstergelerle bütünlüklemektedir. Çalışma, teorik varsayımların Şer ‘î uygunluk ve ekonomik etkinlikten oluşan çift sütunlu bir sistem içinde kavramsal bileşenlere ve operasyonel prosedürlere nasıl dönüştürüldüğünü ortaya koymaktadır. Bu metodolojik katkı, içsel olarak tutarlı, şeffaf ve farklı İslami finansal araçlara uyarlanabilir, kapsamlı bir değerlendirme çerçevesinin geliştirilmesi için akademik açıdan savunulabilir ve pratikte uygulanabilir bir yol sunmaktadır.

Anahtar Kelimeler: Ekonomik Etkinlik; Şer ‘î Uygunluk; Karma Yöntem; İslami Finansal Ürün Değerlendirmesi; Şüpheli Unsurlar; Değerlendirme Çerçevesi.

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LIST OF ABBREVIATIONS

AAOIFI — Accounting and Auditing Organization for Islamic Financial Institutions

BCR — Benefit–Cost Ratio

CAPM — Capital Asset Pricing Model

CFCR — Cash Flow Coverage Ratio

CPI — Consumer Price Index

DSCR — Debt Service Coverage Ratio

EMH — Efficient Market Hypothesis

ESG — Environmental, Social, and Governance

HQLA — High-Quality Liquid Assets

IFRS — International Financial Reporting Standards

IRR — Internal Rate of Return

LIBOR — London Interbank Offered Rate

LTV — Loan-to-Value Ratio

NPV — Net Present Value

PI — Profitability Index

SAIBOR — Saudi Arabian Interbank Offered Rate

SAR — Saudi Riyal

SEC — Saudi Electricity Company

SOFR — Secured Overnight Financing Rate

SPV — Special Purpose Vehicle

WACC — Weighted Average Cost of Capital

CHAPTER I

INTRODUCTION

1.1. Background of the Study

Islamic finance represents a distinctive and dynamic sector of the global financial marketplace to incorporate some measure of ethics into new and creative financial products to address contemporary economic challenges. Islamic finance has a particular structure where financial engineering - the development of financial products that do not potentially infringe any Shariah principles - is the mechanism for facilitating Shariah principles and modern market mechanisms towards the goal of sustainable development (Abbas, 2015: 12). While the Islamic finance sector has had considerable growth, one of the complex challenges faced by the Islamic finance market is to remain consistent with the tenets of Islamic jurisprudence while being 'nimble' enough to be a competitive force on the global financial marketplace (Yilmaz, 2018: 10). The attention given to financial engineering in any product that promotes equity, risk-sharing, and social justice is even more valuable in a competitive financial marketplace that focuses on retaining its investors (Fisol et al., 2017: 30).

On the other hand, the Islamic finance industry is constantly criticized for its nonchalant acceptance of so-called “Shariah-Compliant” products, which are really just conventional finance vehicles rebranded to have some triviality to the wider rationale for Islamic law, short Maqasid al-Shariah (Abbas, 2015: 40). Critics argue that Tawarruq and similar financial products and services show a lack of understanding of the ethical and socio-economic implications of Islam (Yilmaz, 2018: 22). However, industry stakeholders might better explain such issues and re-frame the criticisms so the industry can focus on ethical and socio-economic compliance, instead of mere legal compliance. The lack of focus on social justice, as well as equitable systems of economic redistribution and stability, suggests a misplaced emphasis on understanding the Maqasid al-Shariah. The precise social and economic principles espoused by Islamic finance elude most industry players. Hence, we have a wide gulf between the real world and the theoretically sound principles that Fisol et al. (2017: 35).

The lack of focus on social justice, as well as equitable systems of economic redistribution and stability, suggests a misplaced emphasis on understanding the Maqasid al-Shariah. The precise social and economic principles espoused by Islamic finance elude most industry players. Hence, we have a wide gulf between the real world and the theoretically sound principles that Fisol et al. (2017: 35). Compared to traditional finance, the Islamic finance world enjoys the advantage of being most compliant with legal regulations. This legal compliance opens the door to the unique opportunities presented by regulatory-compliant Fintech. Fintech has also presented new possibilities and challenges in this space. Fintech aspires to provide a more accessible, more efficient, and more innovative form of Islamic finance. On the downside, it raises issues of Shariah compliance, including with the new innovative financial products. Following Uzzaman (2023: 14), Fintech products should be assessed according to halal-haram bases as determined by Maqasid al-Shariah. Nonetheless, as Abbas (2015: 60) noted, the viability of fintech in an Islamic paradigm is not guaranteed without supervisory ethics and Islamic assurance.

Therefore, Islamic financial products should develop and grow to reflect these concerns. As Abbas (2015: 80) points out, this innovation is not systematic, and it is not unusual to see products that are Shariah compliant in terms of structure, but not in intention. Authentic Shariah-Compliant financial products should seek to provide Maqasid al-shariah, for example, addressing issues in society, such as inequality of wealth distribution and social wealth. Similarly, Yilmaz (2018: 40) argues to holistically embed the values of Shariah into financial processes within capital so that the forms of capital can invest in positive social needs, instead of benefiting from inequities. Each perspective makes an argument for a paradigm shift in the industry proposition: to put societal-economic issues above short-term profits.

For further progress in the industry, the enactment of standards and regulations and the overarching practices of governance in any sphere of economic activity remain crucial. Undoubtedly, the Shariah governance structure puts important ethical boundaries in Islamic banking. It fills the gaps in Islamic banking by undertaking Shariah checks in banking practices and minimizing the discord with the Maqasid. The mere value of compliance is not the only advantage of a Maqasid framework approach; it will also encourage the generation of innovative products and services. Islamic Financial

Institutions possess and will continue to possess great opportunities in sustainable finance. It will create trust, transparency, and ethical confidence in Islamic finance, and ensure that Islamic Financial Institutions will be accountable to their stakeholders (Uzzaman, 2023: 15).

In summary, Islamic Financial Engineering is still relatively new, and while work on Shariah-Compliant products is underway, the integration of Maqasid al-Shariah continues to be a challenge. Proponents of the synergism of development models for fintech, governance models, and other frameworks will help the industry come to a more productive equilibrium between market and economic relevance and the ethical dimension of Islamic Financial Engineering. Adding the ethical dimension will be a key pillar on which the industry's sustainability rests, along with the expansion of Islamic finance as a more readily available ethical and equitable finance alternative on the international stage.

1.2. Problem Statement

The emergence of Islamic Financial Institutions (IFIs) is likely to highlight other roadblocks to financial innovation in the context of Shariah compliance as well. The industry strives for the Maqasid al-Shariah of economic justice, fair wealth distribution, and the general welfare of society, but in many cases, the products offered by IFIs do not demonstrate this. This is particularly true of debt-based instruments, Tawarruq, for example, where the products are simply a derivative of the existing products through conventional finance, and with no intention to meet the higher ethical, socio-economic objectives of Islamic finance (Abbas, 2015: 40). This raises questions about whether 'Islamic finance is actually achieving its benefit of social justice and development' (Yilmaz, 2018: 22). While Shariah governance frameworks constitute the main mechanism of demonstrating the legitimacy of IFIs, these frameworks have not been consistently implemented. Grassa (2013: 65) notes that insufficient governance frameworks have led to different Shariah-Compliant practices in various jurisdictions, leading to confusion and inefficiency. Shariah boards work as independent entities with no universal guidelines, rather than working collaboratively, which further contributes to the inconsistency bias. Yaacob (2012: 76) believes that

without coherence among governance bodies, stakeholders may be dissuaded from engaging with different products that have been approved for use by different Shariah boards based on inconsistent compliance with Shariah laws.

In addition to these issues, perhaps the second most concerning shortfall is a lack of qualified Shariah auditors. Tuzzahroh and Laela (2022: 81) state that compliance is the function of auditing; however, many institutions indicate the lack of qualified individuals who combine the knowledge of Islamic jurisprudence and contemporary finance, along with relevant auditing practice. Shahar et al. (2018: 60) further elaborate on these ideas by explaining that the absence of standardized frameworks for substantive audits and the lack of ongoing education for auditors and audit firms are part of the reason for their governance frameworks' poor returns.

In addition, the attempts by the industry to imitate conventional financial services have produced very little innovative development. As Abbas (2015: 80) notes, the development of authentic Shariah-Compliant products should use the Maqasid al-Shariah as the primary and guiding principle. This imitation mentality is what hinders Islamic Financial Institutions (IFIs) from creating innovative products that address the socio-economic problems of Muslim communities. This lack of innovation is further exacerbated by the rise of financial technology (fintech). Technology and financial innovation will offer many unprecedented opportunities; however, they must be adequately controlled to ensure the respect of Islamic ethical principles (Grassa, 2013 :40).

Islamic law (fiqh) provides a plethora of guidance for the development of financial solutions for communities that previously operated on largely simple economies. These simple past economies provided simplicity to undertake simple transactions, typically without the ramifications of applying Islamic principles to the transactions. However, as financial systems evolved to more complicated and expansive systems, there was now an acute reliance by practitioners of Islamic finance on Islamic fiqh to address modern financial products. Recognizing and relying on a body of guidance means Islamic finance practitioners need to know Islamic law and the modern financial undertaking. Understanding the modern financial undertaking often left Islamic scholars unable to render solutions that had practical application. Practitioners of the financial world who did not comprehend Islamic principles risked knowingly or

unknowingly engaging in empirical deceptive practices of the conventional financial world. Both understanding of Islamic financial ethics and understanding the general financial world an important prerequisite for practitioners to contend with modern financial problems while improving conduct aligned with Maqasid al-Shariah for the highest ethical integrity of Islamic finance.

In summation, Islamic finance continues to face both practical and theoretical challenges due to issues such as poorly developed governance frameworks, the scarcity of competent auditors, and the tendency to recycle conventional finance frameworks, which are used as proxies for Islamic finance and restrain the Islamic finance sector from reaching its full potential. These challenges can only be addressed through a more comprehensive focus on the governance of the Maqasid al-Shariah, rationalised governance, and the creation of genuine innovative products. Moreover, to redesign Islamic finance as an alternative to conventional finance, practitioners will need to think about its incorporation with contemporary finance and the realities of the Islamic finance industry, which will remain unrealized without Islamic finance's full potential and a practitioner's balanced expertise in finance and Islamic studies.

1.3. Research Objectives and Questions

Apart from the challenges raised in the problem statement, this research paper will aim to close the gap between Shariah compliance and financial engineering. This might involve outlining practical frameworks to integrate Islamic law and the economics of Islamic finance with the contemporary global financial architecture. This research will focus on articulating a feasible framework that enables the Islamic finance industry to grow sustainably in accordance with the Maqasid al-Shariah.

1.3.1. Main Research Question

The main research question addressed by this study is:

Can a generic and dynamic framework be developed to assess the efficiency and Shariah compliance of diverse investment vehicles in Islamic finance?

This broader question defines the primary goal of the study and sets the foundation for investigating the specific objectives as well as the specific questions that follow.

1.3.2. Research Objectives

In addressing the major research question, this study is organized around the following objectives:

1. Analyze the fundamental concepts of Shariah compliance in the context of contemporary finance.
2. To discuss the ethical and operational issues that arise due to the implementation of Shariah-Compliant financial products.
3. To assess the economic efficiency of existing Islamic financial products and determine possible areas for enhancement.
4. To suggest a dual framework that reconciles Shariah compliance with economic efficiency.
5. To examine the practicality of the proposed framework on different investment vehicles.

1.3.3. Subsidiary Research Questions

The research will also answer the subsidiary questions to address the objective goals:

1. What are the necessities of Shariah compliance, and how can they be applied to modern financial engineering?
2. What are the critical barriers to the success of Shariah Compliance in contrast to economic efficiency in Islamic finance?
3. How should, or can, the economic efficiency of these Islamic financial products be constructed or improved?
4. Components of a dual structure in terms of Shariah compliance and economic efficiency?
5. How does the structure perform when applied to the various vehicle investments in Islamic finance?

The research will respond to the main and sub-research questions and provide a constructive answer to Islamic Financial Engineering theoretical and practical problems. The potential contribution will prompt discussion for researchers, scholars, practitioners, and policymakers to have their input to create a trustworthy and ideally sustainable Islamic finance as an alternative to traditional finance.

1.4. Previous Studies

A detailed review of the literature summarizes various interesting contributions to Islamic finance, but it also identifies the challenges that still need to be addressed. This section discusses the core literature that reviewed Shariah compliance, economic efficiency, and financial engineering to identify research opportunities for addressing gaps in the literature and in justification of future research on related topics.

Factors Affecting Islamic Banking Sustainability (Abedeem & Salman, 2024: 15). This study considers factors, both internal and external, governing the sustainability of Islamic banking, including the influence of governance frameworks and approaches to risk-sharing. In addition to the importance of Islamic banking as an ethical alternative to conventional financing, the study points to the unsustainable nature of Islamic banking due to governance gaps as well as the delays in the implementation of Shariah. It is for this reason that the study suggests an alignment of the finance mechanisms with the sustainability objectives of Maqasid al-Shariah.

Towards Authenticity: Improvement of Shariah Compliance for Home Financing Products (Badeeu & Muneeza, 2023: 25). They focus on the most dominate form of Tawarruq contracts in Malaysia. The authors recognize Tawarruq contracts as Shariah compliant, but argue it ‘violates’ Maqasid al-Shariah. The authors argue Tawarruq contracts undermine the socio-economic objectives of Islamic finance and propose equity-based contracts as suitable replacements. The study suggests a gap between financing and the cost of an initiative, and the ethical and moral aspects that must be addressed.

Shariah Compliance of Islamic Finance Applications (Hailu & Tekdoğan, 2023: 20). In Ethiopia, the authors analyze the implications of Shariah governance and the

demand for centralized governance frameworks for compliance. They discuss the challenge of Shariah compliant practice emergence in developing markets and the need for coherent governance frameworks to address challenges and mitigate inconsistencies. Concerningly, little attention is paid to the regulation of Shariah compliance levels adds to the growing discourse and to the captured literature.

Sharia Audit and Shariah Compliance of Islamic Financial Institutions: A Bibliometric Analysis (Tuzzahroh & Laela, 2022: 15). This study elaborates on the role and relevance of Shariah audits within Islamic Financial Institutions and the core challenges of its implementation, namely: the absence of a uniform auditing framework and the under-preparedness of auditors in the fields of Islamic and financial intermediation. Thus, the authors propose shifting the focus of Shariah audits to facilitate the uniform enhancement of monitoring and compliance across the spectrum of Islamic Financial Institutions.

On the Ethicality of Islamic Banks' Business Model (Ali, 2023: 13). Given the observation that Islamic banks prioritize profit maximization over the ethical and social implications of their operations, the business model of Islamic banks is called into question. Research calls for a change in the business model of banks, so Islamic banks ought to have a focus on social welfare, and this will entail a re-arrangement of how they prioritize their business model from profit motivation to having a motive to improve society through their ethical motivations.

Assessing the Compliance Research of Islamic Banking Products with Maqasid Shariah (Shahwan et al., 2023: 11). The study examines Islamic banking products for compliance with the Maqasid Shariah framework. The authors of the study report significant discrepancies in the achievement of social outcomes, although they recommend a more holistic, combined criteria to assess compliance to align products more with ethical and socio-economic dimensions. The analysis provides an understanding of how the Maqasid Shariah may offer a framework to assess products.

Islamic Finance and Sustainability: Rethinking Socio-Ecological Notions of Shariah Compliance (Putra, 2023: 12). In the previously mentioned study, Putra argues that the understanding of Shariah compliance should be broadened significantly to include socio-ecological sustainability, and that socio-ethical-ecological considerations should

be compulsory elements of the transaction in Islamic finance. This position also aligns with the sustainability goals of the global jurisdiction.

Aspirations for Maqasid-e-Shariah and Socio-Economic Well-Being in Islamic Finance (Alam & Haider, 2022: 15). Within this review article, the authors delineate a chronology of the emergence of Islamic Finance and locate the rise of socio-economic welfare within Islamic Finance as "the most important means of achieving Maqasid al-Shariah." In this review, the authors are as critical of the industry as they are an academic call for a framework that considers ethical imperatives alongside commercial viability.

1.4.1. Notable Arabic Studies

Financial Engineering: A Conceptual Study. Suelem presents an overview of the conceptual basis for financial engineering with emphasis on its potential opportunity in Islamic finance. The research examines the reasons behind the development of financial products, the challenges they may present, and how to conform to Islamic principles. It identifies that financial engineering products must still meet Islamic jurisprudential requirements, while continuing to address the complexities of the financial markets today (Sami Suelem, 2006: 11).

Derivatives and Their Role in Risk Management. Ridwan investigates derivatives as a means of controlling financial risk, specifically looking into the application and Shariah compliance of derivatives, and yet, by way of a critique of conventional derivatives, informally, with a demonstration of relevance. He notes the necessity of Shariah-Compliant derivatives and wants to ultimately have Shariah-Compliant derivatives that meet the expectations of all aspects of Shariah as derived from the Maqasid al-Shariah, and recognizes that there is increasing public demand for these derivatives (Sameer Ridwan, 2005: 21).

Financial Engineering Between Theory and Practice. Qandouz evaluates the concrete application of financial engineering in Islamic finance and how it develops a pathway between theory and market applications. The author highlights the appropriate application of compliance with Shariah with economic efficiency and origination in proposing a model for future product development (Abdulkareem Qandouz, 2008: 30).

1.4.2. Research Gaps and Necessity for this Study

Whilst all the studies examined above inform us and are valuable in clarifying important aspects of Islamic finance, there remain some very serious gaps. Although there have been important challenges raised by existing research, consideration of limited governance, product, or operational challenges prevails in most. Little has been presented in terms of a total framework to incorporate Shariah compliance and economic efficiency. Limited work has also been done with reference to a wide and broad dynamic framework across different investment vehicles.

This study will attempt to fill these gaps by providing a framework where Shariah compliance and economic efficiency can be reconciled. A framework will be key to ensuring that Islamic finance continues to be a viable, credible, and ethical solution to modern finance challenges.

1.5. Significance of the Study

This study makes a significant contribution to Islamic Financial Engineering by presenting a systematic method to assess and develop Sharia-compliant financial products. The frameworks we present are in response to the increasingly recognized challenge of needing a systematic, repeatable, and standardized mechanism to measure compliance and reasonableness of Shariah financial goods and products. This could have far-reaching implications for Shariah compliant financial product design and implementation within Islamic finance.

1.5.1. Theoretical Contributions

This research builds on the academic spirit of Islamizing Islamic finance by presenting a systematic framework to assess Islamic finance products, in line with wider academic efforts devoted to assessing compliance and usability of products. The intentions of the research and this study are twofold. Firstly, the intention is to provide and submit a systematic framework for assessing and evaluating financial products in the Islamic finance market. Secondly, to infuse Islamic finance, a field as yet, next to no context for a systematic framework for action. The study also considers future possibilities of

product evolution, which consider theory construction on the basis of standardizing and transparency in Islamic finance.

1.5.2. Practical Implications

The findings of the study can provide useful reflections for the parties involved in Islamic finance. Institutions, investors, and Shariah scholars can reference this focus in relation to the desirability of designing and/or assessing products which may be compatible with administering guidelines developed for a particular market system. The framework, given its procedural reference, allows the participants to explain Shariah compliance rulings predictably. This can enhance an institution's potential to assess and mitigate compliance risk. This matters positively, however, as the framework responds to product governance. This governance approach will generally be viewed positively and inspire confidence in all participants while fostering a dynamic, innovative, and collaborative centre of industry.

1.5.3. Policy Impact

Ultimately, the study's systematic approach may be utilized to subject products, users, communities, and policymakers to review by policymakers and regulators. In terms of Shariah compliance, compliance framework can be stance based within the limitations of compliance-forge geos and likely will yield the anticipated desire for increased Shariah compliance. This elevates Shariah finance credibility to the financial market case and creates an even playing field for all parties. This framework aims to promote the creation of Shariah compliance driven products and to be fortified financially with Shariah-compliant products in the development of new products. Thus, regulatory bodies can promote the expected development of guidelines and procedures.

1.5.4. Overall Significance

This study's implications are not limited to Islamic finance. This study provides a structured approach to understanding the existing opportunities within the frameworks for building an ethical global finance system. The opportunities described within the

procedural implications of the frameworks underline the potential for a procedural approach to product evaluation aimed at triggering transformative thought within sectors that encourage the ethical design of financially embedded products. Methodically and explicitly evaluating a product for designed ethical transformative thought embedded within it permeates a culture of accountability, fosters the imaginative thought needed for innovation, and fosters the culture of self-imposed discipline needed for sustainability.

This study's main contribution is to the development and design of Sharia-compliant financial products. The proposed framework will provide the industry with a mechanism to close the existing gaps in standardisation and product governance, which will enhance transparency, innovation, and trust in Islamic finance, positively contributing to Islamic finance as a sustainable, credible, and viable alternative to conventional finance.

1.6. Scope and Limitations

This study aims to lay out a clear and reproducible strategy for designing and evaluating Sharia-compliant financial products. The value in this research to the discipline is a documented methodological approach intended to lead an integrated and systematic Islamic finance product development approach towards consistency and transparency, and increased product innovation. Since this study covers a particularly broad task as designing and evaluating financial products, it is useful to state some limitations for the sake of clarity and focus. About the scope of the study in the development and evaluation of the financial product, the study chose to focus on the procedural dimensions of the design and evaluation.

Sharia-compliant financial products. The research aims to resolve some of the standardization challenges in Islamic finance, specifically the development of a product development and evaluation framework in relation to the range of financial products and tools. In terms of the intended industry concentration, the study similarly attends to the primary stakeholders of Islamic finance, which comprise the financial institutions, Shariah scholars, and regulators, who are tasked with augmenting their

capacity to develop and launch new Sharia-compliant products in an expanding market.

The framework is based on the theoretical aspects of Islamic jurisprudential practices (Fiqh), but is mindful of the current realities of financial markets, making efforts to remain relevant globally and to Shariah standards.

The framework is indeed generalized and flexible enough for broad application, but is most suitable for the contexts and intended use, for jurisdictions with and those developing Islamic finance systems; it could be adopted in both contexts, those with significant Islamic banking and investment activity.

It is understood that, while Shariah perspectives vary in different parts of the world and different jurisdictions, the framework accommodates this as a generic design, while the specific aspects of the framework will need to be adjusted in support of intentional congruence with a locally appropriate situation.

Regarding the empirical study, time and logistical issues meant that, while focusing on the context, the empirical study was only able to test the framework through case study situations as opposed to a wider array of financial products. This may explain some of the issues around the generalizability of findings to the specific context.

Financial products are complex. While the framework seeks to include a variety of financial products, it does not address the even greater complexities of the more complex and niche financial instruments, such as derivatives and hybrids. The study does examine some non-financial issues, but the primary focus is on financial issues and Shariah compliance. The larger socio-economic and environmental contexts, while significant, are not the intended subject for this study.

Given the limitations of capacity and resources, the fluid nature of financial markets places a limitation on our ability to continually revise the framework to include new innovations and changes. At some point, the framework will also need to be revised to remain relevant. Conformance to Research Goals The scope and boundaries ensure the research stays on a focused, relevant track. This research is focused on evaluating and developing products with Islamic finance and is relevant given the research goals and intended aims, and literature contribution to the research, practitioner, and policy goals. The boundaries ensure that there is a point of reference and, along with the

findings, contribute to the trustworthiness and relevance of the research, while representing potential future timelines.

1.7. Methodology Overview

The study uses a mixed-methods approach to develop, implement, and evaluate a two-part framework for evaluating Islamic finance products for Shariah compliance and economic efficiency. This involves combining a qualitative evaluation based on Islamic law and a quantitative evaluation of the economic performance of Islamic finance, resulting in a comprehensive, rigorous, and applicable evaluation that is also replicable. The structure is established upon a pair of components, which, despite their separation, have been crafted to be fully integrated modules.

The two modules are:

- Shariah Compliance Assessment
- Economic Efficiency Assessment

While separate, each contributes to the overall assessment, which itself serves as a structured, coherent, integrated evaluation. The focus of your evaluation should be on the integrated evaluation as a totality, as it reflects more accurately the integrated ethical and financial components of the evaluation from multiple perspectives, instead of simply the summative arithmetic total of the two separate scores.

1.7.1. Research Design

The study draws on a design science approach organized around the academic iterative cycle of producing, talking through, putting into practice, and refining a new framework that is primarily associated with the development of evaluation frameworks and decision-support systems.

- Qualitative Research: The aspect of Shariah compliance falls into the qualitative dimension of the evaluation framework. This segment utilized primary sources, including the AAOIFI standard documents, classical fiqh

texts, contemporary fatwas, and scholarly consensus in constructing gates and checklists of the framework.

- **Quantitative Research:** This part is related to economic efficiency, one of the evaluation framework's pillars. As part of the quantitative evaluation of the products, this study provided baseline financial evaluation metrics - NPV (Net Present Value), liquidity ratios, risk and return, and conservation of capital. When constructing the systems and frameworks, they had to center around these parameters, given their recognized importance in structured financial analysis.

1.7.2. Evaluation Structure

Each pillar employs a two-tiered structure of evaluation system, which consists of Shariah Compliance and Economic Efficiency Pillars. For Sharia pillar the evaluation goes through two phases:

- During the gatekeeper phase, a product is evaluated for possible major Shariah violations, such as Riba, Gharar, and Maysir. If any violations are present, then the product is deemed unacceptable, followed by a cessation of any inquiry or product evaluation.
- The suspicion scoring phase begins once a product is determined acceptable after clearing the gatekeeper phase. During this phase, the product was analysed for violations as well as violations that were not clear, referred to in Shariah as Shubuhah. An ambiguous product characteristic checklist is produced based on the Likert scale of evaluation. The checklist item is an evaluative string about the product relative to Shariah compliance overall. The items are then scored, resulting in a compliance score to be totalled for compliance status.

In Economic Efficiency Pillar, the evaluation assesses the economic and financial quantitative analysis tools incorporated in the quantitative frameworks. The areas that will be assessed are:

- Risk-Return Trade-Off

- Cost-Benefit Measures
- Liquidity Measures
- Capital Preservation Capacity

The product receives a score for each of the outlined indicators, which are then summed to calculate a total efficiency score for the product. The product is then classified as either economically efficient or inefficient based on a predetermined cut-off point.

1.8. Overview of the Dissertation Structure

In this doctoral project, I am detailing ten interrelated chapters which collectively aim to develop a rigorous framework for analysing the Sharia compliance of Islamic financial products and the evaluation of economic efficiency.

Chapter I introduces the research, defines its aim, identifies the research questions, and provides information on methodology. Chapter I also situates the research in the literature, states the contribution and context of the research, and discusses the significance and limitations of the scope of the research.

Chapter II provides a comparison of conventional versus Islamic Financial Engineering. Chapter II discusses the historical development, philosophical foundations, and operational mechanics of both paradigms before finally identifying a gap that requires us to have a simultaneous framework.

Chapter III discusses the methodological approach to the development of the framework. The chapter discusses the relevant research designs, justifies the methodology used, and demonstrates how to transition between theoretical constructs and conceptual and action frameworks.

Chapter IV reviews the theoretical foundations for assessing Sharia compliance; discussions of Islamic finance are core to the evaluative framework under which actions are judged; this includes the permissibility of certain actions, prohibitions that should be avoided, and having to comply with one of the objectives of Sharia.

Chapter V discusses the theoretical foundation for economic efficiency within a framework of financial engineering. The chapter discusses different forms of efficiency – allocative, productive, dynamic, and informational – and discusses the usefulness of these aspects of efficiency in assessing financial products.

Chapter VI outlines the conceptual and procedural framework for Sharia compliance. The chapter outlines a compliance framework in structural dimensions, as well as primary screening and deeper assessment as surfaces using a scoring mechanism.

Chapter VII Outlines the conceptual and procedural framework for economic efficiency. It begins with definitions of core dimensions, assessment scales, and methodological frameworks for scoring and interpretation of the scoring. The chapter concludes with a presentation of how both pillars, Sharia compliance and economic efficiency, can operate simultaneously in a single model.

Chapter VIII the proposed structure is applied to real-world financial products through the use of case studies (e.g., Ijarah Sukuk), and it articulates operational feasibility and flexibility across varying instruments.

Chapter IX provides a critical reflection on current practices in the industry, and unfolds a few limitations to the frameworks that are most routinely used for evaluation. It continues by validating the proposed framework through an articulation of valuable benefits of a model, named obstacles that may be expected, and posing rebuttals to anticipated critiques.

Finally, Chapter X provides a wrap-up to the dissertation by narrating important points and goals of the research, presenting implications for practice, and inviting future research paths, and lastly, puts forward a reflection of values for the application of the model of Islamic Financial Engineering.

CHAPTER II

CONVENTIONAL AND ISLAMIC PERSPECTIVES ON FINANCIAL ENGINEERING

2.1. Introduction

Financial problems appear as pieces that form unique challenges in an ideal world. Financial engineering combines the abilities needed to structure integrated solutions through the creation of methods which unite creative thinking with technical knowledge. The discipline has grown throughout decades to provide financial instruments which help manage complex requirements during economic global transformations. The art of financial engineering goes beyond math and economics as it is the mat of math, economics and creative thinking. The discipline requires experts to produce financial solutions through instrument and strategy development. Multi-national corporations need protection against currency exchange rate changes but how should they defend themselves? An investor who wants protection against sudden market declines needs what type of strategy? Financial engineering creates derivatives as well as structured financial products alongside trading techniques that satisfy market demands.

Back in the 1950s and 1960s financial engineering started to develop when world saw economic boom and different technological obtainment. Academics like Harry Markowitz, in his very concept of modern portfolio theory and followed later by Black and Scholes who introduced the revolutionary options pricing model, shaped a new way to think about finance. Their work supplied the theoretical basis for managing risk and maximizing returns, commencing a revolution within the industry (Mangram, 2013: 59). The 1970s were a turning point. Financial innovation emerged after globalization and deregulation processes took place. Businesses gained risk management tools through derivatives markets consisting of futures options and swaps. Suddenly, seemingly financial engineering wasn't just a small domain; it turned out being the rewrite for modern financial markets (Uo et al., 2015: 2).

By the 1980s and 1990s, the field had matured. Tools like mortgage-backed securities and collateralized debt obligations transformed entire industries, such as housing finance. Although these innovations created opportunities for growth and investment, they also brought risks, as highlighted during the 2008 financial crisis. The collapse reminded the world of the double-edged nature of financial engineering—its potential to create value, but also its capacity to amplify systemic risks if misused (Rhee & Rhee, 2015: 30).

Financial Engineering has been defined in various ways by scholars. Liaw (1999: 199) describes it as "the ability to create and implement innovative solutions in security design." Marshall and Bansal (1993: 19) define financial engineering as "the process that seeks to adapt existing financial instruments and processes and develop new ones to enable financial market participants to cope more effectively with the changing world in which we live." Tufano (1996: 70) highlights its technical aspect, describing it as "the practical implementation of mathematics for solving equations or designing products and useful services." At its heart, Financial Engineering is about solving real-world problems. Every day, institutions, governments, and individuals face challenges that require tailored financial solutions.

A corporation wants to expand globally but fears currency risks. Financial engineering helps design currency swaps to protect against unfavorable exchange rates. A farmer needs to secure stable income despite volatile crop prices. Futures contracts provide a hedge against market swings. An investor seeks higher returns without exposing their portfolio to excessive risk. Structured products like equity-linked notes offer a balanced approach. These examples highlight the versatility of financial engineering. It isn't just about managing risk—it's also about unlocking opportunities. By designing tools that optimize liquidity, enhance returns, and promote market efficiency, financial engineers empower stakeholders across the economic spectrum (Cîrlan, 2023: 384).

2.1.1. Distinguishing Financial Innovation from Financial Engineering

Financial Innovation and Financial Engineering serve fundamental differences in their target goals as well as their operational methods despite sharing importance in economic expansion and corporate development. The goal of innovation lies in

developing new products together with services and procedures which deliver increased value but financial engineering builds novel financial tools and systems to enhance business financial outcomes. Experts use this fundamental divide to clarify their functions between business and economic frameworks. Innovation is characterized by the introduction of new ideas, products, or methods. It is often associated with technological advancements and creative problem-solving, aiming to improve efficiency, quality, or user experience (Keresztes & Endresz, 2020: 53).

In the corporate context, innovation can be driven by strategic alliances, venture capital, and leadership choices, such as the impact of founder versus professional CEOs on innovation outcomes (Pei & Liang, 2022: 1-2). For engineering students, fostering innovation involves integrating creativity and technical skills, preparing them to contribute to society with innovative solutions (Bruhl & Klosky, 2020: 8).

Financial Engineering involves the creation of new financial products and strategies, often leveraging technology to enhance financial services. It includes innovations like FinTech, which has revolutionized financial transactions and services (Zihan & Yihan, 2023: 26).

Financial Engineering plays a critical role in restructuring processes, focusing on signals, processes, and tools to optimize financial outcomes (Martel, 1995: 3-4).

Financial Engineering can influence market dynamics, as seen in the development of new financial instruments and the strategic use of mergers and acquisitions to enhance firm value (Wani & Jha, 2022: 2-3).

While innovation and financial engineering serve different purposes, they are interconnected in the broader economic landscape. Innovation can drive financial engineering by creating new opportunities for financial products, while financial engineering can support innovation by providing the necessary capital and financial strategies. However, the challenge lies in balancing these elements to ensure sustainable growth and value creation.

2.2. Milestones of Financial Engineering

Fast forward to today, and financial engineering has only grown more relevant. Technology has reshaped the field, with algorithmic trading and artificial intelligence driving innovation. Fintech companies now leverage financial engineering principles to create products like robo-advisors and blockchain-based financial solutions. These advancements make financial markets more accessible and efficient, ensuring even small-scale investors can participate (Zihan & Yihan, 2023: 26). However, with great power comes great responsibility. The misuse of complex financial instruments, as seen during the global financial crisis, underscores the need for ethical and transparent practices. Financial engineering, when wielded responsibly, has the potential to foster economic stability and drive sustainable growth.

Financial Engineering is more than formulas and algorithms; it's a discipline that reflects human ingenuity and resilience. From its humble beginnings in theoretical models to its role in shaping global markets, it has remained a cornerstone of modern finance. As we face new challenges—climate change, economic inequality, and technological disruption—financial engineering will continue to evolve, offering tools to build a more equitable and resilient financial system.

2.3. Challenges and Critiques of Conventional Financial Engineering

Conventional Financial Engineering has revolutionized financial markets, yet its development has faced significant challenges, particularly in technical domains. Basic models such as Brownian Motion, Value at Risk, etc., though useful, lack the potential for including real-life events into account such as market shock and volatility clustering and end up trading incorrectly valued risks and consequently some extra losses and gains. Further, the incorporation of copulas which is a sophisticated tool for analyzing dependencies among assets, have on other hand been found to be counterproductive when applied wrongly, hence the posting of wrong risk comparisons. Such technical limitations raise questions on the gap between research theories and real-life practices as the methodological tools and procedures need to be enhanced to embrace such systems.

2.3.1. Model Limitations and Risk Assessment

In the field of finance, financial models cannot be overestimated since they are utilized when it comes to asset valuation, credit analysis and a lot more. Nevertheless, usually due to their assumptions that are not valid in the market (fat tails, volatility clustering, jumping), they have very severe limitations. The former may result to mispriced risks and the latter may result in huge financial losses as well. It must be appreciated that the management of these challenges requires a good risk appetite, constant monitoring and effectively implemented risk management strategies. However, the task has not been very easy, as it is always a complex one to convert model error into its financial implications (Aggarwal et al., 2016: 239-242).

2.3.2. Complexity in Dependence Structures (e.g., Copulas)

This is valid from the perspective that the modelling of dependency structures presents another difficult task in financial engineering, especially in the aggregation of risk. This is quite common and copulas, which are used for this purpose, prove to be much more flexible and accurate compared to the standard solutions. Nevertheless, the choice of the right copula model is critical since it plays a significant role in determining risk levels. Some practical issues that arise from the use of copulas are Therefore, when using copulas, there are implementation, computational and expertise problems (Charpentier et al., 2007: 5). Contextual Challenges Regulatory and Ethical Constraints, it is in the financial derivatives area of financial engineering that regulation and particularly ethical issues are seen most obviously, such as in the case of credit default swaps. While these instruments can reduce risk, their abuse deepens systemic risks mainly for credit risks where risks are centralized at some institutions. This shows that it is always hard for regulators to strike a balance between encouraging innovation in the financial process and at the same time managing risks using these tools, which both contain and magnify risks (Schwarcz, 2020: 566).

2.3.3. Systemic Risks Highlighted by the 2008 Financial Crisis

The financial instruments also contributed in exposing the systemic risks during the financial crisis that affected the world in 2008. The derivatives, for instance, consisted of weapons of risk management such as collateralized debt obligations (CDOs), and credit default swaps, which spearheaded risks into inter-connected financial sectors. The financial crisis earlier revealed the issues with the approach to the appreciation, assessment and regulation of risks and led to the calls for the enhancement of the stringent measures to minimize systemic risks and improve stability in the financial sector (Buffet, 2016: 18-19).

2.3.4. Risk Structuring and Corporate Valuation

Risk structuring by the use of derivatives is faced with volatility and corporate valuation issues. Often implemented as an integral part of the contractual relationships, hedges may have a potential of adding a number of hidden risks, thus defeating their purpose. It also becomes challenging when managing risk in Islamic finance because the observable hedging instruments are not obtainable under Sharia law; for instance, interest rate swaps. This also exposes the Islamic financial institution to volatility and at the same time limits the ability to fully compete in the international market (Hasanah, 2022: 17).

2.4. The Emergence of Islamic Financial Engineering

Islamic Financial Engineering has emerged as a distinct sub-field within Islamic finance due to the imperative to develop suitable Islamic financial instruments. This discipline is quite rare in that it seeks to strike the balance between the conventional and the new, while it also is keen to observe the key prohibitive rules as embodied in Riba (interest) and Gharar (excessive uncertainty), but yet embracing the high Islamic values of profit and loss sharing. The growth and expansion of Islamic finance into a \$2 trillion industry shows the need for ethical and Shari'a compliant option on the global market (Ebrahim et al., 2017: 166). It is of importance to analyze the history of

its origin, ideas as well as development so as to establish how it influences the process of reconfiguring today's financial structures.

2.4.1. Origins and Philosophical Foundations

Shariah is the source of Islamic Financial Engineering as the two play the role of ethical and legal principles of Islamic economics. It appeared to satisfy the need for lawful economic solutions that do not involve Riba and Gharar thus following the Islamic principles (Seoage, 2020: 68). The panelists have discussed that earlier Islamic banking visionary aimed at introducing the interest-free banking system which laid the foundation of the institutions to provide the pure banking services. Consequently, the concept of Islamic Financial Engineering is rooted from the ancient modes of Islamic trade business like Mudharaba and Musharaka and migrant at the same time from the present context (Suyono, 2017: 318).

2.4.2. Distinguishing Features

Islamic Financial Engineering is guided by objectives deeply rooted in Islamic ethics, emphasizing equity and fairness. Central to this approach is the creation of financial products like Murabaha, Mudharaba, and Musharaka, which prioritize shared risk and equitable profit distribution (Suyono, 2017: 18). Unlike conventional financial systems prone to speculative bubbles, Islamic finance emphasizes real economic activity and asset-backed financing, contributing to its perceived stability during global financial crises (Othman et al., 2011: 10). Furthermore, international bodies such as the Islamic Development Bank have been instrumental in fostering the growth of Islamic Financial Engineering by setting frameworks and standards to support its global implementation.

2.4.3. Early Developments

The field began to formalize in the 1970s, marked by the establishment of Islamic banks and the introduction of innovative Sharia-compliant products. These institutions emerged not only in Muslim-majority countries but also in regions with diverse populations, reflecting the universal appeal of ethical finance (Budimir, 2017: 65-66).

The development of these financial products caters to the needs of both Muslim and non-Muslim clients, ensuring inclusivity and fostering broader acceptance (Seoage, 2020: 73). However, regional differences in Sharia interpretation, particularly concerning practices like bay al-inah and bay al-dayn, highlight the dynamic and evolving nature of Islamic Financial Engineering (Al-Mubarak & Osmani, 2010: 7).

2.4.4. Challenges and Opportunities

While Islamic Financial Engineering has achieved substantial growth, it faces challenges that require resolution to sustain its trajectory. These include the lack of standardization in Sharia interpretations across regions, which can create confusion and limit cross-border collaboration. However, these are some of the opportunities for innovation that has been perceived in the current global landscape. More competent and consistent Sharia practices and higher levels of interaction among the scholars can enhance acceptance on the international level. Concerns of ethically sensitive issues have placed the industry as a key player in determining the success of the global finance by outlining its importance for sustainable development fuels by the convection of transparency and fairness. Islamic Financial Engineering represents an ethics-oriented model that seeks to align financial innovation with moral and social considerations. Through the implementation of Islamic principles, it covers the vices of conventional banking system, so that it complies with the properly Islamic values. The capacity to address some of the challenges that it encountered; create solutions within the discipline; and be adopted in both Islamic and ‘other’ financial systems is quite transformative.

2.5. Conventional Versus Islamic Financial Engineering

Thus, Islamic and Conventional Financial Engineering and its principles and goals are quite different from one another for a number of reasons. Islamic finance is guided by Sharia law and is based on ethic, justice and risk sharing while it’s conventional counterpart is mainly based on-profit and efficiency with no certain ethical boundaries. These differences are in various areas of financial activities and products and services that a company can offer.

2.5.1. Defining Features of Islamic Financial Engineering

Islamic finance is based on Sharia that do not allow interest and stress on ethical business. For example, let us consider Mudharaba, Musharaka and Murabaha types of financial products, which are distinguished by profit and losses sharing instead of using interest rates (Mukhitdinov & Stambakiyev, 2023: 75-76).

The map of Islamic finance and business ethics is the Legal Intent of sharing, which is based on the welfare of the community. This includes avoiding excessive risk (Gharar) and ensuring transparency and fairness in transactions (Jatmiko et al., 2023: 117-118).

Islamic finance aims to enhance financial inclusion by offering products that cater to those excluded from conventional banking systems. It also contributes to financial stability by avoiding high leverage and speculative practices (Iqbal & Mirakhor, 2012: 43-44).

2.5.2. Defining Features of Conventional Financial Engineering

Conventional finance prioritizes profit maximization and efficiency. It leverages interest-based products and innovative financial instruments to achieve these goals, often without specific ethical guidelines.

The focus on innovation leads to the development of complex financial products and services designed to optimize returns and manage risks effectively, albeit sometimes at the cost of ethical considerations (Iqbal & Mirakhor, 2012: 43-44).

While Islamic finance emphasizes ethical principles and social justice, it faces challenges in differentiating itself from conventional finance, as some Islamic financial products resemble conventional ones in economic outcomes. This has led to criticisms regarding the authenticity of Islamic finance practices (Iqbal & Mirakhor, 2012: 43-44). Conversely, conventional finance, while efficient and innovative, may overlook ethical considerations, leading to issues like financial exclusion and systemic risk (Ali et al., 2023: 117-118).

2.5.3. Principles and Risk Management Approaches

Islamic and Conventional Financial Engineering represent distinct paradigms shaped by their underlying principles and methodologies for managing financial instruments and risk. While conventional finance relies heavily on interest-bearing and speculative instruments, Islamic finance adheres to Shariah principles, prohibiting interest (Riba) and speculative behavior (Gharar), and instead emphasizes ethical, asset-backed approaches to wealth creation and risk management.

Islamic financial instruments are fundamentally designed to ensure compliance with Shari 'ah principles by linking all transactions to tangible assets, thus promoting transparency and fairness. One of the most prominent Islamic financial products is Sukuk, often likened to conventional bonds but fundamentally different in structure. Sukuk are asset-backed securities that tie returns and cash flows directly to tangible assets, ensuring an ethical alignment with Islamic tenets. This market has grown significantly, with Sukuk accounting for approximately USD 140 billion, representing 10% of global Islamic finance assets (Puszer, 2015: 311). Complementarily, Murabaha and Ijarah revolve around cost plus financing and leasing, respectively, that are free of interest yet, bear good asset backing and no speculation wastage (Ahmed, 2015: 191). We need also to include Takaful, an insurance model that is based on the Islamic community's cooperation in Shari 'ah compliant insurance and mutual risk and loss-bearing, in which every member will share the profit or loss in proportion to the capital they have contributed; this is an indication of the willingness to ensure that revenues and profit are fairly shared among the participants (Ahmed, 2015: 194).

On the other hand, the traditional financial engineering deals with such securities and financial frameworks as derivatives, bonds, and synthetic securities. These tools contain interest and speculation and are made with flexible and effective approaches taken into consideration. For instance, derivatives enable the transfer of the specific financial risks between the relevant market players, while bonds offer an interest-based income stream to the investors. It must be understood that synthetic instruments, despite being rather creative instruments, are based on a high degree of speculation and leverage; and it is for this reason it is aligned to the very conception of the conventional system where the primary aim is to maximize the gain and not to distribute the risk (Acharya et al., 2020: 1-2).

2.5.4. Risk Management Approaches

This is especially true in the aspect of risk management whereby Islamic financial system has fundamental differences with the conventional financial system. Islamic finance is one of the systems of finance grounded on risk-sharing whereby the different party is to be rewarded in proportion to the associated risks. Self, aspects of instruments including sukuk minimize default risks since they underpin investment using tangible assets that improve finance integrity and compliance to ethical standards (Puszer, 2015: 331). Also, the quest for fairness and accountability also ensures that most of the transactions that are undertaken are justified by the economic activities within the economy and thus reducing the risks of speculative bubbles.

On the contrary, traditional finance focuses on risk shifting where financial instruments such as derivatives are used to manage risks. Despite the fact that this approach is flexible and adaptive, it requires certain amount of speculation and opaqueness that can increase systemic risks significantly. Securities, for example, enable the financial institutions to transfer risks across markets; nevertheless, when applied in abundance, they increase periods of financial crises (Tuckman, 2016: 62-63).

2.5.5. Challenges and Opportunities

Though Islamic finance has got many benefits such as its ethical and asset-based structure, one of the weaknesses that are observed is the issue of liquidity coupled with the level of depth of the market compared to the general conventional financial system. There is also an issue of scalability and the difference in the opinions of Shariah with relation to regions and countries. In contrast, conventional finance has abundant acceptance and contains a variety of instruments, but at the same time, it may generate concerns regarding speculation and provide ethical probes. Such strengths and limitations explain the imperative for future development and integration between the two paradigms to deal with world financial issues.

Islamic finance, as a concept, is a wholesome replacement for the conventional Western methods of finance that deals with risk sharing and not risk transfer, which is very prominent in Islamic law. The element of tangible assets and mutual cooperation enhances the ability of the concept to bring about solvency and financial stability.

Therefore, further improvements of the market in line with the elimination of certain limitations, as well as the implementation of the required global standards, will become critical for its further expansion.

2.5.6. Ethical Constraints, Regulation, and Innovation

Islamic and Conventional Financial Engineering has diverse structures that are dependent by the ethical principles, the regulation and the capability of innovation. While the Islamic finance system is based on the principles of Sharia law and includes ethical and moral aspects, the conventional finance system is expected to operate as per the standard financial laws and market trends. These differences extend to the very nature of the regulating enterprises and their ability to adapt in terms of ethical sustainability versus operational capacity.

2.5.7. Ethical Constraints

Islamic finance being based on Shari 'ah law has a strict set of regulations that guide the provision of such finances. It requires adherence to certain set of principles which include the prohibition of Riba or interest and the avoidance of investments in any business that is regarded as being unlawful, sinful or forbidden in Islam such as production of alcoholic beverages or gambling. Such an approach contributes to sound profitability and sustainable practice of banking and it also corresponds to people's moral principles and valuation of social justice where wealth is distributed equally (Ilias, 2010: 11). Islam abhors arrogance and speculative risks hence employing ethical constraint in the Islamic finance aims at eliminating speculation and ensure balance in distribution of wealth.

Subsequently, conventional finance does not prescribe as to where such ethical guidelines are located. It is, therefore, governed by business practices and rules and regulations that enhance the objective of shareholder value and financial returns. Even though this system provides higher level of operational flexibility and freedom there is almost no ethical regulation and this may lead sometimes to the utilization of socially

irresponsible approaches like reckless behaviors and speculation (Furqani et al., 2016: 122).

2.5.8. Regulation

Shari 'ah-compliant financial system means that the financial product is both compliant with the Shari 'ah rules and obeys laws of the country or the international law. This duality is usually challenging, and the formation of Shari 'ah Supervisory Boards (SSBs) is required to ensure that every consumable that is received, used or produced conforms to the Shariah laws and etiquette of risk taking and wealth creation (Arsyianti, 2019: 63-64). Although such a multiple-layer structure helps keeping the business organized from the ethical perspective, it is not exempt of problems concerning the regulators' efficiency, as the interpretations of SSBs may widely differ depending on a region.

On the other hand, more conventional financial institutions are governed under secular or non-religious laws which are also relatively smoother and standard. They help to regulate, preserve financial stability, and prevent risks that threaten it whereby enabling non-RPTD to work without any restrictions. However, this flexibility is sometimes lost to ethical principle, as the financial institutions will go for legal compliance, rather than the social justice (Schwarcch, 2017: 8-9).

2.5.9. Innovation

Flexibility to innovate is something where Islamic and conventional finance are quite different from each other. The Islamic finance, on the other hand, restricts the actual development of any particular product offered to comply with Shariah laws which does not allow certain things such as derivatives or synthetic products existed in conventional finance (Seoage, 2020: 67). While this restriction helps to prevent innovation from compromising ethical standards, it also has a disadvantage of slowing the process of innovation and making it difficult for the Islamic Financial Institutions to seize opportunities in the market.

On the other hand, conventional finance is characterized by a high rate of innovation enhanced by the advancement in technologies as well as competitions. Traditional financial intermediaries are less regulated than TFIs and therefore can introduce and implement innovative products, for instance algorithmic trading and other forms of derivative products at an astronomical rate (Schindler, 2017: 8-9). However, free-spirited creativity has its negative side effects; it contributes to fluctuations and speculative bubbles, which were evident throughout the global financial crisis.

This shows that there is more flexibility in conventional financial engineering, but it is restricted by ethics when it comes to Islamic Financial Engineering. Islamic banking has been explored as a model emphasizing ethical and environmentally responsible financial practices. However, because of a higher tempo and rather simple and clear regulations, conventional finance is fully capable of adapting to market conditions and might not have satisfactory ethical frameworks. As shall be seen, both systems have their merits and demerits and, more importantly, the existence of one side by side the other underscores the various ways and means through which stability, sustainability and growth in the financial arena can be attained globally.

There are several theoretical challenges that affect Islamic Financial Engineering. The main one being the provision of Islamic substitutes to conventional instruments of finance and investments for solving both ethical as well as practical problems in a weak foundation. These issues are grounded in the main premises of Islamic finance that prohibits taking any interest, any kind of excessive risk, called *Gharar*, and it has to be compliant with the Shariah laws. Such requirements are commonly realized as problematic in the creation of suitable financial products that meet the compliance and commercial challenges of the global market. Below are the key challenges and considerations in this domain.

2.5.10. Sharia-Compliant Alternatives to Conventional Tools

Islamic finance prohibits interest and excessive uncertainty, standard in conventional financial products. This necessitates the development of alternative structures like profit-loss sharing models (*Musharaka* and *Mudharaba*), which face challenges such as high risk and low returns (Schéele, 2003: 31-32).

The ethicality of Islamic banks is often questioned, as their business models sometimes focus more on compliance than on true ethical impact. This necessitates a reevaluation of centuries-old Islamic rulings (Jatmiko et al., 2023: 4).

Islamic finance aims to integrate ethical business practices into all financial dealings, promoting a more moral society. However, practically implementing these ideals in a fast-paced global economy remains challenging.

The rise of fintech presents both opportunities and challenges for Islamic finance. While technologies like blockchain can enhance security and reduce costs, there is a need for greater understanding and differentiation between Sharia-compliant and conventional fintech solutions (Rabbani et al., 2020: 67-68).

While Islamic Financial Engineering strives to align with ethical and religious principles, it must also contend with the realities of modern financial markets. Integrating new technologies and a deeper understanding of ethical frameworks could help bridge the gap between traditional Islamic finance and contemporary financial needs. However, balancing ethical integrity and achieving practical financial objectives remains a significant challenge.

Islamic Financial Engineering faces several challenges, particularly in regulatory and institutional frameworks, cross-border implementation, harmonization, market limitations, and scalability. These challenges are compounded by the need to align financial practices with Shariah principles, which can vary significantly across jurisdictions. The following sections delve into these challenges, drawing insights from the provided papers.

Islamic finance often struggles with standardized regulations, leading to inconsistencies in financial reporting and accounting policies, especially in non-Muslim countries like the UK, USA, and Canada (Salh, 2020: 32).

There is a persistent call for regulatory harmonization and the creation of a central monetary authority for the global Islamic financial sector to ensure the consistent application of Shariah principles across borders.

In countries like Bangladesh, Islamic Financial Institutions operate under conventional financial laws, lacking a dedicated regulatory body to address their unique needs (Alam et al., 2019: 123-124).

Different interpretations of Shariah law can complicate cross-border financial transactions, necessitating a more integrated regulatory framework, on the regulation of the intersection between religion and the provision of financial services.

In Pakistan, the application of profit-loss sharing models like Musharaka and Mudharaba is hindered by high risk, regulatory constraints, and low returns, limiting market scalability (Khan et al., 2020: 188-189).

A lack of awareness and understanding of Islamic financial products can restrict market growth and scalability, as seen in various regions (Khan et al., 2020: 189).

However, as seen above, these are areas that show that Islamic finance must adapt and has the resilience to provide an alternative to conventional finance systems; and it also requires a more unified regulatory policies and better institutional engagement. Solving these problems could help to improve the potential for growth and standardization of Islamic financial instruments on an international level to partially improve the functionality of the global financial system.

Thus, the Islamic Financial Engineering is in a position to work for innovation that at the same time does not violate the guidelines of the sharia law. This is achieved considering the fulfillment of the need for the creation of Innovative financing solutions while at the same time adhering to the Islamic law that prohibits interest (Riba) and other un righteous financial dealings. Technological advancement especially in the use of Financial Technology or sometimes referred to as FinTech presents benefits and risks to Islamic finance as it endeavors to operate under such restrictions. The subsequent sections elaborate on these challenges as follows.

The current evolution of FinTech means that whole new areas can be developing in the sphere of Islamic banking and new financial products can be introduced. However, the adoption of such technologies in Islamic banking has to be done based on shariah which could at times be quite challenging because it has to meet the tenets of the Islamic laws.

For the purpose of competitiveness, Islamic banks are advised to develop ICT-based products. This involves managing innovations vis-a-vis meeting customers' needs and satisfying the Sharia religious requirements (Apriyanti, 2018: 92).

The idea of Sharia auditing is as important as compliance with the rules of Sharia in the context of Islamic finance. The absence of the specific frameworks as well as qualified auditors presents some of the key concerns. According to Tuzzahroh, Laela (2022: 816-817), the aspects of Sharia audits are central in enforcing and upholding reliability in the Sharia compliant financial institutions.

Currently, most of the Islamic Fintech has emerged in the last two decades, but this has failed to trickle down to enhancing the regulation and supervision systems in the industry. Sharia supervisory boards have a key function of monitoring such trends and compliance with the Islamic rule is important here.

Business rules and regulations on conducting currency transaction are numerous and a hard-hitting task for Islamic banks in a bid to make the operations Islamic by strictly meeting the standards of sharia law and reject speculation in exchanging the currencies.

As seen earlier, developing new products and services depends on available capital and this is a key constraint in many organizations especially in the case of Islamic banks as many require government intervention to enhance the development of products (Zulfikar, 2020: 38-39).

Despite the significance of innovation in financial markets to support growth and drive competitiveness in the industry, the concept of Islamic finance has to be introduced cautiously to avoid any Shariah contraventions. It is important to note that there is a profit-based incentive system and it poses its challenges to the Muslim countries' economies which much rely on financial creativity that has some key rules within Sharia laws.

2.6. A Need for an Integrated Framework

Current systems of conventional and Islamic Financial Engineering have evolved and demonstrated a lot of innovation and flexibility. These challenges and limitations are

inherent to the systems and, therefore, indicate the need to have a single system to assess financial products. It has to stand in as a solution to such voids without negating other pertinent goals like Shariah compliance and economic viability. In this section, reasons for proposing the development of an integrated framework and the study's goals are explained.

2.6.1. The Rationale for an Integrated Framework

The requirement for an integrated framework is due to the continuous lack in both technical and Shariah compliant financial engineering. Previous strategies have been troubled by the authoritative and greedy outlook, especially because they do not take into account the moral and systemic aspects of organization's performance. Derivatives and financial products that are generally useful in managing risks have from time to time led to market instabilities and crises that resulted from misuse and over utilization. These flaws clearly show that there is no systems approach that would include both financial results and ethical responsibility.

The most important factor what involves Islamic Financial Engineering is the concern of Muslim countries to use acceptable Islamic law while they compete in the international market. The ban on charging of interest, sale of goods with excessive uncertainty (Gharar) and the sale of shares assuming risks through speculation (Maysir) limits the utilization of many conventional instruments. Though such restrictions seem to protect the shariah values as well as provide stability to the systems involved, they at the same time restrict innovation coupled with scalability of shariah compliant financial products. Preceding that, lack of conformity from one territory to another poses some challenges thus making it quite difficult to have best known Islamic finance securities worldwide.

An integrated framework makes use of the above-mentioned works to simulate the two systems to address these gaps. It can offer a framework on how to rate the soundness of financial products with regards to the rules of shariah and at the same time being fiscally realistic. This way, it helps innovation in Islamic finance and introduces ethical factors into conventional financial innovation. The task in question aims at ensuring long-term profitability, system reliability and rationality considering the continuously

changing financial environment. When the various criteria for evaluation are considered as one system, there will be connections between different systems and domains through which various methodologies for evaluation are consistent across the board (Creager et al., 2020: 3).

2.6.2. Objectives of a Unified Evaluation Framework

Regarding the mechanism for creating a unified evaluation framework, it shall be based on two main principles: Takaful compliance and operational efficiency. These objectives are a blend of the socioeconomic belt of Islamic finance and the real-world market requirements.

2.6.2.1. Ensuring Sharia Compliance

The first element focuses on the fact that the financial products should conform to the basic tenets of Islamic finance. Islamic Finance thus avoids certain types of contracts which are against Islamic Shariah such as; Riba, Gharar, and Maysir, as well as give other proper ethical consideration like social justice issues, conserving the environment, and so on. These includes establishing of large and measurable benchmarks that can be used for assessing the Sharia Non-Compliance in various jurisdictions and products. It would also contain procedures for filtering such components, as well as guarantee the compliance of financial products with the highest standards of ethics.

2.6.2.2. Achieving Economic Efficiency

The second profitability objective is to achieve efficiency in monetary products. This is through analysis of the performance indicators including the risk return ratios, cost efficiencies and the company's liquidity and capital preservation. A coherent approach was suggested in this paper to evaluate such aspects objectively, which overall outcome would assist stakeholders in deciding on the financial sustainability of a product. Also, the SNLF would incorporate the effect of real-world adjustment factors

in that products would reflect market conditions variability and other regulating factors that affect the market economy.

2.6.3. Integrating the Objectives

The true strength of the unified framework is the degree to which the objectives integrate within it. Sharia compliance and economic efficiency are usually seen as diametrically opposed priorities, but a properly designed framework can show the compatibility between them. For example, items focusing on fairness and transparent principles of Sharia are likely to convey credibility and gain broader breadth of investors, and therefore to increase their economic value. Fiscal stability, a trait of supposed economic efficiency, also achieves the ethical objective of lessening damage and promoting social welfare.

An integrated financial engineering system takes us forward in our development path. The new framework combines Muslim and secular concepts while uniting Sharia demands with business sense to generate a replicable system for evaluating financial items. A system like this, has the capability to enhance innovation, assure market belief, and promote good financial behavior in an ever more contributory planet.

Institutional Support: The structural support to the growth of Islamic finance is required in countries like Kazakhstan where it is viewed as the additional economic source during interval to ban (Kuanova, 2023: 161-162).

CHAPTER III

METHODOLOGY OF FRAMEWORK DEVELOPMENT

3.1. Framework Development in Scientific Research

Scientific inquiry entails frameworks as major elements to offer systematized modes of structuring the concepts of abstraction, in guiding research design, and in opening the path of applying theory in practice. Multidisciplinary regions especially those demanding approach of philosophical, legal, and empirical regions frameworks play significant roles as critical scaffolds that bring colony, transparency and stringency in investigational research.

A research framework is no simple model or design, but it is a very general framework which provides parameter of inquiry, how the primary concepts relate. Researchers are inclined to differentiate between the theoretical frameworks, the descriptions of general principles and assumptions used; conceptual frameworks, the grouping of the variables and their relationship; and procedural frameworks which are able to transform ideas into methods and tools. It is this stratified form of knowledge that ensures that a framework never stays in nothingness but one remains in the process between an abstract theorization and applied evaluation of it.

As note, frameworks provide the researcher with a visual and cognitive map that assists him/her to make sense of logic, sequence of things, and the way intricate structures could be interpreted. Through this, they enhance accuracy of analysis, besides, it becomes easier to replicate research findings. Bridging mechanisms in between philosophical position and operational execution, in particular, of operation are being carried out through frameworks of particular applicability (Sage, 2020: 2).

This has been especially relevant to the Islamic financial studies where researchers must strike a delicate balance between normative ethical models and economic tools. Contrary to the conventional finance where the use of empirical models is considered the minimum, Islamic finance demands the use of financial instruments to satisfy not just the efficiency criterion, but also Shariah rulings that are founded on the jurisprudential traditions. The absence of clear and standardized models in the field

has contributed to the fracturing of the techniques of evaluation and unequal compliance standards. In this aspect, the use of a systematic framework is not methodologically beneficial but significant. The idiosyncrasy of the Islamic finance that is both Shariah compliant and Shariah functional demands a system that has the capability of transforming the qualitative legal judgements (e.g., proscription of Riba, uncertainty under Gharar) into measurable operational components. This is necessary in particular when the case is in one of its gray fields like that of Shubuhāt where binary compliant/non-compliant is not sufficient. Gradation of such may be graded to structure designed appropriately.

Furthermore, since according to the design science, as (Hevner et al., 2004: 82) suggest, the frameworks founded on robust theoretical assumptions and designed to be applied within a practical context, must not be designed as not only conceptually but also practical. Precisely, this is what the present study attempts to achieve: to design a two-layered model, which would assist in rating Islamic financial products both in compliance and efficiency terms, in replicable manners and in transparent scoring instructions.

This model proposed in this paper is thus two-level. To begin with, it makes use of the Islamic legal theory to formulate criteria that would be relied on to judge the compliance with the Shariah. Second, it employs financial analysis tools in measuring the performance of the economy. This two-fold system of assessment will assure that products are not only legal but also feasible that is where faith-based finance finds the imperative of economic times.

In conclusion, it is possible to note that the relevance of frameworks in the research can be conceptual. They are the methodology whereby the complex ethical and economical decisions can be handled in systematic, reproducible and balanced manner. In this respect, the study will contribute not only to the dissemination of the academic knowledge but also to the introduction of practical mechanisms of product development, Shariah board assessment, and integration of the industry, in general.

3.2. Inductive and Deductive Approaches

Inductive and deductive reasoning should be well adopted when developing a systematic framework of evaluating Islamic financial products. Both methods have their own advantages to the research design which presents a balanced format that is both theoretical and empirical in nature. The combination of these methods is especially necessary due to the duality of the study: the need to follow unchanging Shariah standards and fit the dynamic financial activity.

3.2.1. Deductive Reasoning in Framework Construction

The logic behind the structure of the framework consists of deductive thinking. According to (Creswell et al., 2017: 59), the deductive approach starts with a general theory or principle and derives in a logical manner the specific hypotheses, rules, or application. This research relies on this top-down argument in the development of the Shariah compliance and economic efficiency aspects.

Under the Shariah pillar, deductive tool can be used to derive evaluative tools using the foundational jurisprudential sources. As an example, the prohibition on Riba (interest), Gharar (undue uncertainty), and Maysir (gambling) are accepted principles in the different schools of the Islamic law. These maxims are deductively applied to the financial contracts with the provision that any explicit breach would result into non-compliance. In the same way, fundamental principles like the certainty of the contractual relations, the transfer of ownership, and the absence of unjust enrichment are taken out of the fiqh literature in a systematic way and formulate into the items of checks in the compliance evaluation. The rules of compliance, as such, are not construed to be subject to case-by-case reinterpretation but are generalized unified standards based on the Islamic jurisprudence.

Deductive reasoning also determines the choice and design of performance tools in the economic efficiency pillar. The modern financial theory is based on concepts like time value of money, liquidity preference, preservation of capital and risk-return trade off, which serve as fundamental principles of financial theory. These are converted into certain tools, including net present value (NPV), internal rate of return (IRR), Sharpe

ratio, and liquidity covering ratios. The relevance of these tools has theoretical support that is why they deserve to be included in the framework deductively.

Additionally, deduction would help in shaping the general framework architecture. The choice to address the compliance and efficiency dimensions separately and the building of a gatekeeper test to filter obvious violations prior to scoring are both logical derivations made as a result of the well-known theory. By doing so, deductive reasoning guarantees internal coherence, legality and functionality.

3.2.2. Inductive Reasoning in Framework Refinement

Deduction gives the skeleton of the framework but inductive reasoning gives the framework the much-needed nuance and flexibility. Inductive logic is a logical technique that is based on observing certain phenomena and generalizing them to ensure patterns, rules, or constructs (Sekaran & Bougie, 2016: 27). The inductive reasoning is applicable in this study in refinement of theoretical constructs due to field observations, input by experts and practical constraints that are evident in real-life application.

As an example, the so-called Shubuhah -transactions between two realms - cannot be judged with binary deductions. Although jurisprudence in classical school acknowledges the presence of doubtful issues, there is not much formalization on the manner in which they should be assessed in contemporary financial instruments. This study formulated a scoring system to assess the level of suspicion based on evaluation of numerous product examples and comments by Shariah academics concerning the main aspects of suspicion including transparency of ownership, deliverability, and exposure to risk. This tool did not have classical texts as a source but was formed inductively as a result of working with real cases. On the same note, writing of evaluation checklists was also a process that relied on inductive processes. Although the deductive approach was useful in recognition of the main compliance areas, the language, sequence of items, and interpretation of the checklist items were inductively established. Sample contracts such as Ijarah Sukuk pilot applications showed what questions to clarify, what criteria were unclear and what aspects should be rearranged. This refinement process is congruent with the request by (Gregor & Hevner, 2013:

337) to engage in design science research that is both theoretically sound and practically applicable. Besides, the selection and calibration of the scoring thresholds were supported by inductive reasoning. The passing Shariah compliance threshold, e.g., was not predetermined by classical sources but became a result of a number of simulations and consultations with the experts. A 70 percent cut-off was found to be reasonable as it was seen to be consistent with any legal judgments and institutional practices. Inductive logic is seen in this practice of formulating rules out of empirical observation. The concomitant deductive and inductive approach makes the research approach hence grounded and flexible. Deduction makes sure that the framework represents the eternal principles and analysis instruments, and induction makes sure that the framework is applicable in diverse situations and that it is applicable in diverse financial systems.

Overall, the approach of the present study is based on a purposely combined deductive and inductive logic. Deduction has the rational framework of compliance and performance standards; the induction has the freedom of tailoring and updating such standards to the realities of the financial market. With such a combination, the framework can serve both academic and practical purposes to be rigorous and usable, principled and adaptive. Such methodological pluralism as emphasized by (Morgan, 2014: 1047) is characteristic of research and design-oriented studies which are pragmatic. Using both modes of reasoning, this study provides a powerful evaluation framework that can be used by scholars, practitioners, and regulators who need to evaluate the Islamic financial products in a holistic and methodologically justifiable way.

3.3. Qualitative and Quantitative Frameworks

The methodological duality of the research is also exhibited in the fact that it combines both qualitative and quantitative methods especially in the design and application of the proposed framework. It is not merely to characterize the ethical and financial characteristics of the Islamic financial products but to assess it in a coherent manner that brings depth of interpretation and objectivity in analysis (Bazeley, 2018: 93).

3.3.1. Qualitative Foundations of Shariah Compliance Evaluation

The Shariah compliance aspect of the framework is based on the qualitative component. The legal and ethical interpretation of the rulings in Islamic financing is intrinsically based on the need to pay attention to the context and rely on the textual facts. Other elements, like Riba, Gharar, and Maysir, cannot be defined by purely nominal indicators alone but have to be interpreted by the scholar with allusion to classical jurisprudence (Ayub, 2020: 87).

The compliance aspect of the framework uses structured qualitative tools, i.e., Checklists and clause-based filters, in order to have the academic and legal rigor. These tools are designed on the foundation of the Islamic legal literature, central fatwas, and regulatory requirements including AAOIFI Shariah standards. They are used to direct the evaluators on determining whether a product contains explicit contractual breaches or in areas of suspicion (Shubuhah) (Hassan, Aliyu, Paltrinieri, & Khan, 2022: 9).

The gap between the operational evaluation and raw jurisprudence is filled by the use of structured checklists. Although still interpretive, they are organized in a way that increases consistency, traceability, and repeatability. As an example, the question like Could there be a clause which would imply a fixed-rate of returns irrespective of the performance of assets could be answered by looking at the agreement itself, despite the interpretation nuance. Further, in case of ambiguity, the qualitative analyses are converted to quantitative representations using Likert-scale models of scoring. The evaluators rate the level of suspicion, and the descriptive anchors (e.g., No concern, Minor concern, Moderate concern, High concern) are intended to aid in the reliability among the users. This quantification of qualitative insight is not meaning-reducing as it is proposed by (Banha, Flores, & Coelho, 2022: 3), but in fact offers transparency to interpretive judgments.

3.3.2. Quantitative Methods in Economic Efficiency Evaluation

Conversely, the economic efficiency analysis is constructed on the basis of the quantitative instruments of corporate finance and investment analysis. This side of the framework takes numeric inputs in order to evaluate the performance of the product along the measures of the return on investment (ROI), liquidity ratios, risk-adjusted

returns (e.g., Sharpe ratio) and maintenance of capital. Quantitative methods are advantageous in a number of ways, they can be reproduced, can be compared directly, and produce data-driven outputs which support decision making. They have to be included by the fact that the instruments being reviewed is financial, and performance is necessarily quantitative since it exists in market systems. As an illustration, liquidity analysis of a Sukuk structure can imply the assessment of the liquidity ratio of liquid assets to short-term liabilities, whereas the cost-benefit analysis is the calculation of the net present value of the cash flow scheduled versus the initial expenditure and maintenance expenses (Alam, Rizvi, & Naqvi, 2023: 7) Such values are objective and can be included in scoring templates.

3.3.3. Integration: Mixed-Methods Design

The entire structure is therefore a mixed-methods design which capitalises on both the depth of qualitative and quantitative rigour. This two-way approach is not only additive but synergistic (Poth, 2023: 15). This is because mixed methods are best suited to respond to the complex social phenomena as argued. Especially where the research needs contextual interpretation and empirical support. Additionally, the combination facilitates stakeholder participation. The compliance scores achieved in the legal analysis and systematic interpretation tools can be prioritized by the Shariah boards, whereas the economic scores obtained in the numerical analysis can be prioritised by the investment analysts and CFOs. However, both sides are combined into one reportable format, which makes it possible to collaborate interdisciplinarily. The framework does not mean averaging or mixing the scores in the two sides but displays them together. This does not compromise the integrity of the two perspectives and promotes open decision making. Such pragmatic structuring, at least, enables its users to use weightings or priorities depending on institutional goals, stakeholder characteristics or market conditions (Morgan et al., 2014: 20).

In conclusion, the interpretative requirements of Shariah law are encompassed within the framework methodological structure, which involves qualitative methods to meet the interpretive requirement, whereas economic viability is met using quantitative methods. The dual design is part of the hybrid character of Islamic financial products

and provides a normatively-based and analytically strong model. It makes sure that the assessment is not oversimplified into numerical terms and is not lost in a simplistic analysis of text and is a balanced instrument to both practitioners and researchers.

3.3.4. Justification for the Chosen Methodology

The complex and inter-disciplinary nature of the evaluation of the Islamic financial products is the reason why a methodological design chosen in this research is complex. To be more precise, the focus of the present study is to construct a dual-framework system, which would evaluate both Shariah compliance and economic efficiency, and the methodology that the proposed study should have been one that should not only be theoretically based but also be able to connect the normative and the empirical realms. This is the reason why a mixed-methods design, which involves using both deductive and inductive reasoning and the use of both qualitative and quantitative tools is embraced. This section has provided a rationale of the selection of the methodology using five main factors: dual nature of the research objective, practicality of the framework, nature of Islamic finance, applicability of mixed methods, and compatibility with current gaps in the literature.

3.3.5. Dual Structure of the Research Objective

The primary reason as to the methodology adopted can be attributed to the duality of the research objective. On the one hand, the research should deal with normative compliance, which means that the financial tools should comply with the Islamic laws. Conversely, it has to measure the economic performance which entails empirical measurement of such measures as profitability, liquidity, and risk. The two domains are essentially different in terms of epistemologies and tools they use. A methodology that contextualizes itself on the basis of fiqh-based legal analysis, would neglect financial facts, whereas such an approach that is purely based on financial modelling, would disregard Shariah principles. Thus, a hybrid approach is taken in the research; it could evaluate all areas with the instruments best applied to them the tools of Shariah compliance (legal and interpretive) and economic efficiency (quantitative financial). This framework allows the epistemological integrity: it does not strive to turn religious

principles into the financial ones, and cannot transfer financial performance to the moral verdicts. Rather it considers individual domains in their own right and then provides a synthesised picture that leaves both pillars as independent.

3.4. Practical Contribution the Framework

It is more of a practical project rather than a mere theoretical exercise; this study is meant to produce a workable assessment tool, which can be applied by the actual stakeholders, which include Shariah boards, compliance officers, financial analysts, and institutional investors. To be applicable and acceptable, such a framework has to satisfy two fundamental conditions:

- Theoretical soundness, to guarantee that it has valid conclusions in the Islamic jurisprudence and financial theory.
- Operational visibility, to render the framework practical and comprehensible among the disciplines.

The framework is based on to reach these goals:

- Discovered checklists based on Islamic legal rulings
- The ambiguity scoring models in Likert scale

Quantitative performances such as NPV and Sharpe ratio, Gatekeeper filters such that red-line Shariah violations (e.g., Riba clauses) lead to disqualification on the spot.

The way the research is done by applying both the systematic application of legal filters and the use of empirical scoring techniques is that the final product can be both legally acceptable and testable with a financial approach.

3.5. The Value of Islamic Finance

Islamic finance cannot be viewed as part and parcel of financial economics; it is a system that is based on values and which is anchored on Gods laws (Shariah). This differentiates it as one of the few with dual responsibility to the market performance as well as to religious ethics. Most of the Islamic Financial Institutions are in

competitive markets and have to ensure that they maximise returns and appease investors, and also have responsibilities to the Shariah supervisory boards.

Such a dual responsibility demands a methodology capable of addressing legal pluralism, textual interpretation and financial risk analysis in one shot. In this regard, the methodology needs to be capable of:

- Adapt cross-school and cross-regulatory differences.
- Give leniency to adjudicate Shubuhah (suspicious areas) instead of making unconditional decisions.
- Dynamic evaluation of products as they change with time.

Accordingly, the mixed-methods design makes this balance possible as it provides the opportunity not only to conduct rigorous legal questioning but also to perform practical testing and fill the gap between theory and practice.

3.5.1. Justification for Mixed Methods

The framework makes use of both qualitative and quantitative approaches in the compliance pillar (e.g., clause-based checklists, scoring of suspicious elements), and efficiency pillar (e.g., calculating returns, liquidity ratios). But these are not implemented alone. Instead, they are combined in a mixed-method design which is structured.

This combination is done according to the principle of methodological triangulation: the combination of the different approaches increases the validity of the obtained results and the ability to cross-verify. It also supports:

- Transparency: Since the compliance and the efficiency scores are reported individually.
- Flexibility: A user can give precedence to one pillar above the rest depending on the given situation.
- Comparability: Financial products are comparable in both the time and cases.

This method corresponds with pragmatic paradigm defined by Morgan (2007: 10) when the choice of the method is the result of the research problem, rather than the approach. It is also a sign of the truth of product assessment in Islamic finance where interested parties tend to demand both ethical certification and financial viability information so that they can make investment decisions.

3.6. Closing the Gaps

Lastly, the chosen methodology fills a gap that is identified in academic and industry-based literature. Although numerous studies have been conducted on the compliance with Shariah and some have been conducted on financial performance, not many have tried to combine both aspects in the evaluation system. Besides, the models available are not usually standardized, replicable and adaptable particularly when it comes to complex and hybrid instruments like Ijarah Sukuk or Islamic remits. This study provides a balanced approach to normative integrity and operational efficiency by means of the adoption of a methodological framework enabling a structured legal screening procedure, scoring an ambiguous clause, and analytic approach using financial metrics. Altogether, the selected methodology represents a moderate solution to the interdisciplinary dilemma of rating Islamic financial products. It provides theological rigor as based on deductive, qualitative instruments; operational adaptability as based on inductive reasoning and scoring; and financial validity as based on quantitative instruments. The combined mixed-methods framework does not only mirror the best practices in designing-based research, but also assists in the creation of the academically strong, jurisprudentially valid, and practically viable framework.

The formulation of a holistic assessment system of Islamic financial products needs a systematic and direct shift in theoretical basis to conceptualization and eventually to operational integration. This development is not a sequential one but methodologically grounded so that the resulting framework is sound theoretically, in a logically consistent structure, and implemented using repeatable and verifiable instruments. The section provides details on how the theories that were mentioned above were converted

into the operational elements of the framework thus explaining the role and relevance of each stage in the framework-building process.

3.7. Expected Framework Structure and Components

This part shows the expected format of the integrated framework that will be created in the following chapters. It acts like a transition between the methodological establishments made in this chapter and the step-by-step framework construction that is to ensue. The framework is structured in such a way that it functions under two pillars and three levels of analysis the theoretical, conceptual, and the procedural. At this point, we are not trying to specify its individual dimensions or aspects but simply outline how these elements will be interrelated logically within the two pillars. These elements will be identified and measured in detail in subsequent chapters since the theoretical underpinnings of each pillar have been described in detail.

This section is thus aimed at giving a definite structural vision linking the abstract rationale that is developed in Chapter 3 with the practical analytical models that are presented in Chapter 4 and beyond. It explains the way the framework shifts the theoretical knowledge to the level of operational assessment without losing coherence and analytical discipline.

3.7.1 Dual-Pillar Foundation

The framework proposed is founded on two mutually supportive but independent pillars namely Shariah Compliance Pillar and Economic Efficiency Pillar. They are, both of them, the two sides of Islamic Financial Engineering, the ethical legitimacy and the economic soundness as a co-determining factor of product acceptability.

The framework is normatively based on the Shariah Compliance Pillar. It makes sure that all the financial products comply with legal and ethical limits posed by the Islamic jurisprudence. It is concerned with the analysis of the contractual forms, integrity of transactions, and the evading of the forbidden components like Riba, Gharar or Maysir. The purpose of assessment in this pillar is to determine the absence of illegality and/or whether it is fair and transparent as well as morally purposeful.

This is complemented by the Economic Efficiency Pillar that addresses the performance element of financial products. It checks the effectiveness of the distribution of resources and risk management and returns in order to verify them with market standards and economic rationality. This is done to ensure compliance with the Shariah principles do not impact negatively on financial sustainability or good sense and efficiency.

These two pillars are complementary even though they are approach different. The Shariah pillar will guarantee legitimacy; and viability pillar will guarantee efficiency. This synergy permits them to enjoy a holistic type of evaluation compliance provides the ethics with the validity whereas the efficiency provides the functional validity. The two-pronged nature of this structure enables the framework to act in the normative and the empirical realms at the same time and make the evaluation of a financial product an equally value-based and performance-driven one.

3.7.2. The Three Framework Levels

The suggested dual-pillar model works in three mutually reinforcing layers of analysis, including the theoretical, conceptual, and procedural. These levels will create the structural support of the whole research, as they guarantee a logical flow of the abstract thinking into the measurable assessment. Every level has a different role to play but is related to the other ones creating a logical chain of analysis.

The theoretical underpinning is the intellectual component of the model. It determines the principles, philosophies, and theories on which the evaluation process will be based. This tier provides the rationale of some concepts or parameters being significant and the epistemological legitimacy of their inclusion. The conceptual framework is used to put these theoretical principles into organised analytical categories. It structures the investigation of dimensions and aspects and forms the inner logic of evaluation. The general concepts based on theory are formed into quantifiable areas of study in this level which forms the foundation of operations in practice.

The procedural logic is then translated into quantifiable application in the procedural framework. It outlines the way each of the criteria will be evaluated, what tools will

be utilized, and how the findings will be construed. It is a level in which the framework is put into practice converting abstract ideas to quantitative and verifiable results.

All three levels taken together guarantee the scientific and practical applicability of the framework. The theoretical layer provides the meaning, the conceptual layer structure, and the procedural layer action, a complete and coherent system in the evaluation of financial products of both pillars of analysis.

3.7.3. Hierarchical Components of Evaluation

Under each of the two pillars, the structure operates by a series of analytical elements that reduce the abstract theory into quantifiable components. These elements, dimension, aspect, criterion and tool constitute the working structure of evaluation. Both are different degrees of particularity, making the process of analysis to be logical, as general principles are developed into tangible quantification. A dimension is the primary field of analysis of study under a pillar. It is a general theme or domain that is used to describe a certain section of compliance or efficiency, like contractual legitimacy or resource performance. Dimensions determine the extent and limit of evaluation as it determines the main themes by which a product is going to be evaluated.

A sub-element is a part of a dimension, which makes the focus of the analysis more specific to the issues. It helps see what aspect of the dimension should be focused on, and the evaluators will study a concept in more detail, such as the organization of the risk distribution or the level of transparency of ownership. One of the criteria is the quantifiable measure of whether the aspect is acceptable or not. It converts the conceptual observations to verifiable results, and this is the one that connects theory and measurement. All these criteria should be specific to be interpreted and compared across products.

Lastly, a tool is the measuring or quantitative tool to evaluate every criterion. The tools can be in the form of checklists, matrices, ratios, or formulas depending on whether one is doing qualitative analysis or a numerical analysis. Clarity and precision are achieved through this hierarchy. Dimensions define the field of analysis, aspects the subject of analysis, criteria the expression of measurable expectations, and tools the

methods of analysis. They all constitute a flow of reasoning that links the theoretical basis of the framework with its practical implementation.

The ability of the proposed framework to form a dynamic connection between the two pillars or three levels of analysis is also the strength of the framework. All pillars, such as Shariah Compliance and Economic Efficiency, develop following the same logic sequence of theoretical, conceptual, and procedural development, but each of them applies it to its own disciplinary basis. This interaction gives the methodological harmony, which preserves the analytical independence. On the intellectual level, the two pillars lay their intellectual foundations. The pillar of Shariah is based on ethical and legal arguments and the pillar of efficiency on the economic and financial theory. In spite of the dissimilarity of the sources, they all aim at defining the principles according to which sound financial evaluation is to be conducted. Their theoretical bases then run parallel establishing the epistemological limits of the rest of the framework.

The conceptual level converts these theoretical principles into systematic systems of analysis. Under every pillar, there are dimensions and aspects that are specified based on the logic of its respective field. The Shariah pillar can use core prohibitions or core values as the dimensions of its pillar, whereas the efficiency pillar may base its analysis on performance parameters. In spite of such differences, both pillars use a similar logic internally, the decomposition of complex domains into dimensions, aspects, and measurable elements, to be consistent throughout the model.

At the procedure level, the two pillars meet. This is the point when the theoretical reasoning and conceptual organization is transformed to the practical, measurable part. In this case, assessors employ similar tools/techniques, including matrices, scoring models and quantitative benchmarks, to come up with a result that can be analyzed separately and subsequently compared. Its ability to follow the same line of procedural logic in both pillars allows integrate the results in a way that does not affect the independence of any of the parties.

The framework can serve as a parted and parallel, but concomitant system, with such a vibrant interaction. Each of the pillars is independent of the other in terms of content and goals, although they both follow the same methodological beat theory-application.

The communication will lead to a single analytical architecture that would be normatively appropriate and quantifiable in a pragmatic manner so that the assessment of financial products would be ethically sound and economically reasonable.

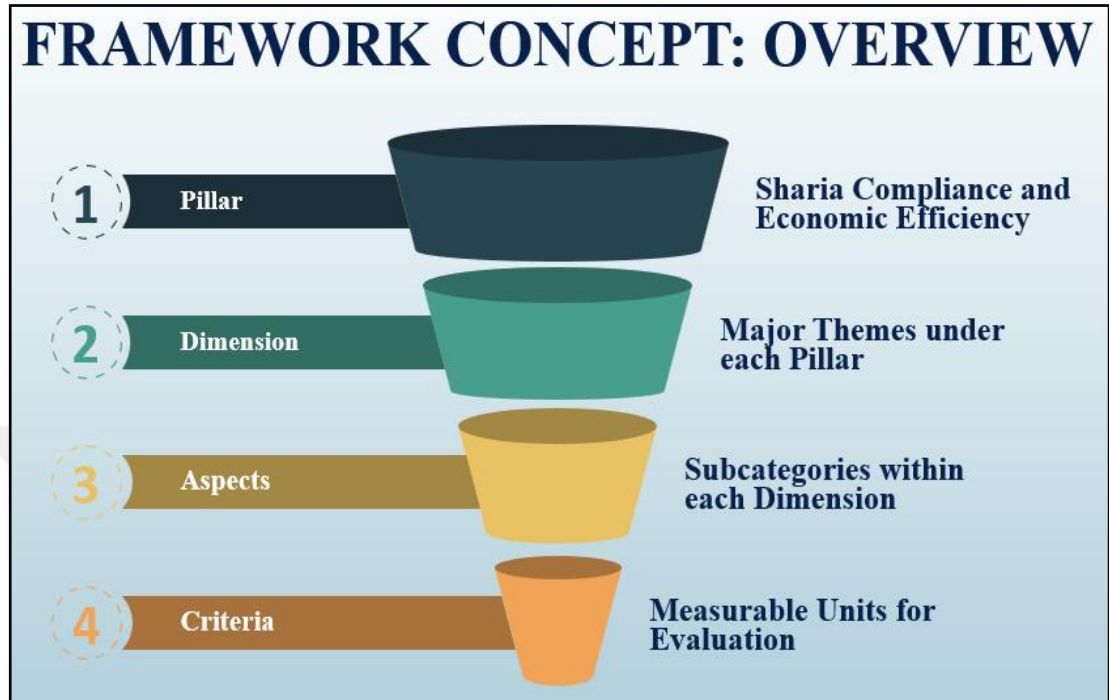


Figure 3.1: Framework Concept: Overview

Source: Prepared by the Author, 2025

3.8. Summary

The model that has emerged during this study is crafted into a system and well-structured framework combining the ethical evaluation of performance-based evaluation. It is split into two major pillars that are Shariah Compliance and Economic Efficiency that illustrate two important features of financial legitimacy and financial sustainability. All pillars are examined in a number of dimensions each with varied assessment spheres. All the dimensions are also divided into specific aspects that introduce finer details of analysis and allow the specific study to be conducted. Such aspects are observed and measured using predefined criteria who are performance or compliance indicators. Individual evaluation of each of the criteria, in its turn, is

determined using appropriate instruments- be it qualitative checklists, or quantitative formulae- ensuring that the analysis is not only systematic but testable as well.

All the above-mentioned components possess a solid theoretical foundation; hence all the analytical processes have conceptual and scientific sense. The theoretical paradigm provides a direction and meaning as well as the conceptual and procedural layers translate the theoretical paradigm into real evaluation and formalized measurement. The entirety of all these interrelated items, pillars, dimensions, aspects, criteria and tools is a single system of analysis. They establish an alienating line between theory and practice, which permits an objective and reasonable reviewing process leading to a harmonization of the problems of ethical sufficiency and economic acceptability.



CHAPTER IV

A REVIEW OF THEORETICAL FOUNDATIONS OF SHARIA COMPLIANCE

4.1. Introduction

Sharia compliance is the very core of Islamic finance. It streamlines their inherent financial operations and depends on Islamic ethical and spiritual tenets. Of rules, of course not, but of making fair, just and responsible transactions in money. Compliance to Sharia is unlike traditional systems of seeking to achieve peak of profits by considering the dependency between economic growth and social wellbeing as a means to a more just financial world. In simple terms, Sharia compliances do not involve such practices that are deemed wrong or unjust such as, Riba (interest), Gharar (excess risk), and Maysir (gambling). It also encourages truthfulness and transparency in equity and see to it that on the agreements all the parties are well aware of each other. These are not rules, but values that will strive to develop trust and collaboration in the financial relations. Risk sharing is one of unique characteristics of Sharia compliance. Islamic finance as opposed to the conventional finance, tends to distribute risk rather than reallocate it to fully another party. It inspires accountability and is a basis for stronger partnerships. One example would be in profit sharing contracts where if you gain in that you also have a gain for the other party and if you lose in that you also have a loss for the other party, this is a sense of a synergy where the competition is actually turned towards collaboration.

Secondly, its focus goes beyond the individuals to the community as a whole. With a purpose of lessening inequality, supporting the expansion of economic development, and being more beneficial to the society as a whole, financial practices are conducted. The Muslim majority country and the people who are searching for the sustainable and responsible finance solutions across the world can relate to this ethical approach. It presents finance in a way that is good for the planet, and to people, putting the long-term first. Essentially, Sharia means more than guidelines; it is a system that integrates ethical principles into the area of finance. It is a threat to the status quo by demonstrating that profitability and responsibility are not mutually exclusive. It has

become a blueprint of creating a sustainable, fair, one that is just and transparent, one that, through its action or through its inaction, the society could have been better.

The path toward the attainability of Sharia in any financial transactions is a complicated and multifaceted process with its focus in the variety of the Islamic jurisprudence (Fiqh) and its multiple versions across various schools of thoughts. Even though the main principles of Sharia are a mutual concept that is unanimous to all schools of Fiqh, however majority of applications of Sharia to contemporary financial dealings might not be in accord with each School (Fiqh). These factors have different variations and might be tedious to determine what is acceptable (Halal) and what is not acceptable (Haram) in the financial product and its application. As to the evident differences of opinion of scholars from different schools of Islam, it is a huge challenge. Take the example of a particular type of financial contract — it is acceptable for one school and non-compliant for the next. Issues mentioned become the reflection of each school's different methodologies in trying to produce Oracles rules from them (Islamic Rulings). Therefore, Sharia compliance does not have any single universally accepted standard, and thus, there are complexities in developing financial products that have to cater to various views and markets about their Sharia compliance. In this research, we did not side with any Fiqh school. We instead do this from a broader perspective. We cover the areas of consensus of trustworthy bodies that standardize sharia including Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), etc. Generally accepted and known rules which these organizations possess it constitute a viable and moderate basis. Such a bridge is constructed as mutually accepted standards of this diversity of opinions, attempting to get across without hitting controversial areas that reduce the scope of applicability of the research.

It is also worth mentioning that this study is not aimed at arguing over deep issues of the numbers of Fiqh or to support certain rulings based on evidences. Such financial engineering products are not compared with Sharia compliance criteria itself in the paper, but rather a framework and methodology of such assessment is established. In this spirit of pragmatic appeals, this school of thought altruistically aims at universality and practicalism whereby it can be used universally without being dragged in interpretation controversies or conflict particularly with specific Fiqh schools. The

basics of Sharia compliance are more or less about the way through which the Islamic jurisprudence, the regions of general accord. The foundations of this study will be the steadfast norms of the major Sharia fatwas and the ability to avoid taking on divisive issues will ensure that the developed scheme is not burdensome in terms of the complexities of the opinions of some of the Fiqh authorities on certain variables.

4.2. Core Principles of Islamic Financial Transactions

Islamic finance puts the field to the root since it is anchored on ethical and legal principles of Sharia. Emphasis on these values promotes the fact that such fiscal dealings go hand in hand with the personal and social interests of society in general to support justice and equity. Islamic finance compares to the modern monetary system based in the profit maximization on the lowest possible ethical grounds, and the social equity and avoiding harm. As far as Islamic finance is upheld by as restrictive principles of transaction boundaries authorized as its supporting principles, the latter has significant role to play in the development of an appropriate framework to encourage healthy economic stability and growth. These are the main principles attempted to be integrated in the broader aim of the Islamic financial systems with their ethics of Shariah. The basics, which provide rationale to the Islamic financial flows and its impact to the modern money systems, are:

- Ensuring that every transaction occurs within the Halal domain.
- Avoiding explicitly prohibited elements, including Riba, Gharar, Maysir, fraud, and monopolistic behaviour.
- Some scholars further emphasize that transactions should also align with the higher objectives (Maqasid) of Sharia.

These principles will be examined in greater detail in the following sections.

4.2.1. Halal Domain in Islamic Finance

Halal domain has become the cornerstone of the entire Islamic economic activity. It means that all human endeavors and sources of revenues should be fulfilled within the

legal framework set by Sharia, with the wealth rate gained by legal means and spent on morally and socially positive and ethical purposes. Quran instructs explicitly the believers to eat of what is legal (halal), and good (tayyib), on the earth (The Qur'an, 2004 2: 168), and so a moral framework that the lawful incomes are combined with purity, justice, and integrity was established. Similarly, Allah also warns against unjust consumption by using the wealth of another, which is not to consume the wealth of another deceitfully, without exploiting that person. (The Qur'an, 2004 2: 188). The Prophet Muhammad (peace be upon him) stressed this point by stating, saying, every flesh that grows off ill earnings deserves the Fire (Musnad Ahmad, Hadith no. 17329) which shows how the spiritual repercussions of pursuing illegitimate proceeds are very profound. According to Islamic religion, the Halal realm is not simply a legal sphere but a morality system that defines the conscience and conduct. It is the balance between economic freedom and divine responsibility with honesty, fairness and transparency being the attributes of human activity. The people stay within this realm hence contributing positively to the social harmony, spiritual well-being, and sustainable development, some of the most significant values in the Islamic ethical philosophy.

4.2.2. Avoiding Prohibited Transactions

Banned transactions are to be avoided in the Islamic finance that emphasize ethics and social justice. Quran has numerous Quranic verses and Hadiths, which stipulates that unjust acquisition of wealth is not permissible to secure the means just and have a credit to the economic transactions. This is a goal that the operations of finances are supposed to help promote equity, transparency and benefits of the society. This principle is highly relevant to financial engineering as in many modern financial practices there exist complexities that would inevitably transgress the boundaries of ethically acceptable. Though differing in many aspects of Islamic jurisprudence, the majority have reached agreement on the defining category of prohibited financial practices. These prohibitions are to eliminate all exploitative or unjust economic activities. Amongst the most prohibited transactions within the framework of an Islamic economy are those areas that are near to the consensus of the Islamic scholars.

4.3. Prohibitions in Islamic Financial Transactions

The core ethical boundaries in Islamic finance can be defined as these categories. While their interpretations of them are different, however, their core basics are universally recognized and should at least be used as a reference for ensuring Sharia compliance by various Zakah and Maqasid groups. Prohibited practice will help the design and evaluate financial engineering products. The remaining sections of this paper will delve into each of these items prohibited in Islamic Financial Engineering to understand the implication behind these rules.

4.3.1. Riba (Interest)

For Islamic finance, of course, Riba is a fundamental prohibition, on the basis of both the Quran and Sunnah. Linguistically, Riba means ‘increase’ or ‘increased’, but in Islam jurisprudence, it really pertains to any unjustified gain that results from loans or other financial transactions. In his seminal work *The Islamic Financial Transaction* Wahbah Zuhayli provide with a complete definition of Riba. He offers two perspectives: The Right General Definition, which is that all predetermined and assured addition or augmentation over the principal cash in a mortgage or exchange contract other than a similar exchange of incentive or work is called Riba. A Detailed Definition: Riba encompasses two main categories—Riba al-Nasiah (interest on loans or deferred payments) and Riba al-Fadl (excessive exchange in barter transactions). Quran and Hadith are very clear on prohibition of Riba. Several verses clearly denounce the practice of Riba as it is harmful for the people and the society at large (Al-Zuhayli, 2021: 50).

The Islamic prohibition of Riba is rooted in its harmful consequences, which undermine economic justice and lead to exploitation. The aim of this prohibition is to prevent the accumulation of riches through interest, for the benefit of lenders, not of the borrowers and to earn riches through laborious and respectable ways. The idea of Riba is prohibited in Islam and is considered as a core problem in Islamic finance as Riba is essential to modern financial systems, which are also the basis upon which Islamic finance is embedded. The use of interest rate as a tool for economic management is widely practiced by central banks in the world. Additionally, interest

rates are significantly involved in financial products like loans, bonds, and mortgages; they are therefore embedded into the global economic structure to a great extent. This is a large obstacle for Islamic finance, which prohibits Riba, to operate Sharia compliantly in an interest dominated system.

The dependence on interest in financial matter has ethical as well as a technical nature. Lenders are interested in putting all risk on borrowers as well as accumulating wealth passively and adding an imbalance contrary to Sharia principles of fairness and justice by interest-based transactions. Consequently, Riba is not only a prohibition in religion but also a major factor in attaining a just and socially driven financial system.

4.3.1.1. Interest and Economic Imbalance

Interest rates, however, are considered indispensable tools of regulation of economic activity in conventional finance. In particular, they are involved in the inflation, the steering of the money making its way through the financial market. The interest is so important as part of modern financial systems that instruments such as bonds, loans and derivatives are based around it. However, from an Islamic point of view, deriving all the interests leads to forcing dependence on interest, which is structurally unjust. The interest-based system made loans to both economic and performance condition avoidable, hence the lenders garner greater returns and the borrowers are faced with the burden of debt and unequal wealth.

Dr. Sami Al-Suwailem points out that Riba violates the ethical idea of balance between risk and probable reward as the basis of Islamic financial transactions. Interest stimulates and further encourages unproductive speculation and sets up systemic vulnerabilities due to concentrating wealth among the few lenders. According to (Asari et al., 2024:10), the interest in avoiding Riba is not only a religious duty, but rather a good economic practice considering that it enforces fairness and decreases system risks.

4.3.1.2. Moral and Social Consequences of Riba

There is a great root cause in the prohibition of the Riba, that's why it would not promote ill effects to the individual and the society. However, interest based transactional does not enhance financial worth of individual unless it involves risk or effort on his/her part and is against the Sharia principles of justice and fairness. If, as is true in the US, heating ventures disproportionately affect the poorest segments of the population, their obstacles in getting a loan weigh more heavier on economic and social inequality. An interest driven system also leads to speculations, excessive leveraging, and destabilizes economies and generates systemic crises. The fact that Islamic finance has alternatives that are more ethical and social is what addresses the above issues directly. On the other hand, profit & loss share arrangements such as Mudharaba (partnering) and Musharaka (joint venture) are considered fairer to generate wealth. Such models connect returns (in production) with financial returns, sharing responsibility and following the Sharia's view of mutual benefit and social welfare. The difficulties in dealing with the dominance of interest-based systems in Islamic finance make it difficult for financial engineering. To develop Sharia compliant products, one has to think about innovatively to avoid Riba while satisfying the demands of the modern financial markets. The Sukuk (Islamic bonds) and the asset back financing structure show how the Islamic finance is able to fulfill the requirements of the current times and yet maintain its ethical values. Such products not only correspond with the prohibition of Riba, but also help develop economic stability through omitting the aspect of speculation and exploitation.

4.3.2. Gharar

Gharar is a core concept in Islamic finance which means that a financial transaction be as much uncertain, ambiguous or deceitful as possible. The prohibition of it is deeply ingrained in Islamic teachings and intended to prevent unfairness, lack of transparency, and unfairness in all economic dealings. As stated by M. A. Uddin in his remarkable essay *The Modern Islamic Financial Transactions*, is describing Gharar as a state of uncertainty in a contract that may lead to hurt or impoverishment considering the opposite terms or hidden risks (Uddin 2015: 4). He stresses that ambiguity in the

subject of a contract, price, or delivery conditions leaves one or more parties unequally treated thus constituting Gharar.

The classical scholars, offer a complementary perspective. Gharar is defined as 'transactions in which the outcomes are unknown or the delivery of the goods is not possible. They note that Gharar deprives a contract of its Sharia perquisites of trust and equity because one side may exploit the ignorance or lack of knowledge by the other party. This perception also encourages the concept of Islamic finance that is one of trust, transparency and mutual understanding among the financial stakeholders. In this discourse, also (Alfian et al., 2024: 710) adds her contribution to emphasis on the ethical character of Gharar. He says, "Gharar violates trust at the core of each act of contracting by causing ambiguity or deception." To him, specifically, to eliminate Gharar is not only a technical requisition, but it is his ethical responsibility of maintaining the level of fairness and confidence between all involved parties. This is in accordance with the underlying Sharia principle of favoring justice and the protection of individuals from harm.

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI, 2017: 822–841) offers practical guidance on how to identify and if possible, form solutions for the presence of Gharar in today's financial transactions. Even according to AAOIFI, Gharar is merely about an uncertainty that materially affects the outcome of a contract, then a contract is void under Sharia. Three vital aspects of Gharar are outlined by the organization:

- Existence of the Subject Matter: At the time of the agreement, the asset or service that you are selling must exist. Its impropriety rests in the fact that this would involve selling non-existent or undeliverable items (e.g., fish in the sea, crops that have yet to be harvested).
- Certainty of Ownership: In the first instance, the transacted asset has to be owned or there has to be some permission for selling it by its owner. The process of selling items without such authority and ownership is really insecure as well.
- Clarity in Terms: Explicit statement and agreement of all contract terms such as price, quality, quantity, and delivery conditions among other things should

be made. However, no ambiguity in these terms is considered as Gharar and the transaction is rendered null and void.

Several standard features of Gharar are agreed upon by scholars and standard leveling organizations. Ambiguity in the Subject Matter: Transaction on an undefined or unclear thing, e.g., selling an 'item in the sea', or 'a bird in the air'. Unjust Imbalances: Contracts where the result is in the hands of uncertain events or chance. Undefined Contract Terms: Terms of agreements which are undefined in terms of price, quality or delivery leading to possible disputes.

These characteristics signify how simplicity, fairness and transparency must be inherent in any financial deal so as not to cause harm or exploitation.

Traditional use of the word risk means the possibility of loss or uncertainty for the outcome in any activity, economic, social or operational. It is a fundamental aspect of decision-making, where individuals or organizations evaluate potential future scenarios to determine the likelihood of success or failure (Settembre-Blundo et al., 2021: 110-112). Economists often define risk as the probability that actual outcomes will deviate from expected outcomes, whether positively or negatively. This principle is the basis of contemporary financial activities like investment, insurance and risk management with quantification and reduction of risk are a part of the process of stabilizing and making a profit (Al-Suwailem, 2000: 64).

Risk has a more ethical and jurisprudential aspect in an Islamic perspective. According to Islamic doctrine, risk, al-Ghurm or Khatar is a natural element of economic conduct and an indispensable element of fair profit. Profit in Islam is a compensation of risk that we take either by trade, entrepreneurship or investment. Such an outlook is founded on the ideals of justice and fairness which provide those financial returns are linked to productive contribution and collective responsibility. The latter, however, does not make the risk acceptance in the Islamic finance unconditional; it must be consistent with the moral system of Sharia avoiding elements of excessive uncertainty (Gharar) and speculative behavior (Maysir) (Grira & Labidi, 2021: 4).

4.3.2.1. The Role of Risk in Trade and Investment

Risk is an inherent component of any traditional economic system, particularly in trade and investment. Uncertainties in market conditions, supply chains, consumer demand and other external factors like weather or geopolitical events lead to it naturally. Risk taking is usually associated with entrepreneurship, where people or entities gamble in markets that are untested in the hope of making money. In investment, risk is also related to the varying market values, economic trends, or performance of certain assets based on which company entity or entity with whom the company is or was invested in can create or impact risk related experiences or losses. Risk can cause the loss of an investment, but it motivates people and businesses to seek ways to reduce and control uncertainty (Rehmat et al., 2023: 2).

In a traditional economic system, there is nothing inherently inhibiting risk taking; rather risk-taking par excellence is a fundamental ingredient in wealth creation and economic robustness. In this perspective, risk cannot be equated with recklessness because it is about calculating uncertainty in economic activities. For instance, trade routes and investments used to bring a lot of risk into the equation, for example, the risk of market conditions to be unpredictable, and the risk that transportation per se would not be safe. However, such risks were actually managed through strategies such as diversification, partnerships, and insurance mechanisms, which allowed risk sharing or risk reduction of potential negative outcomes (Rehmat et al., 2023: 2).

It emerged that no matter how much risk is understood, it is equally well understood as a menace and as an opportunity in the same system. Unmanaged risk, or Risk for that matter, is an unstable force but measured and informed of Risk will spur entrepreneurship, innovation and long-term economic growth. Thus, risk has been accepted in the framework of traditional economic systems as being part and parcel of the progress, if taken with caution and responsibility.

4.3.2.2. Distinction Between Risk and Gharar in Islamic Finance

Understanding the distinction between risk and Gharar is a fundamental characteristic of Shariah compliance to Islamic finance as it lays the boundaries forming permissible and impermissible uncertainty in an economic activity. Both have uncertainty but the

treatment of each under Sharia is totally different. Since it is an inherent and accepted feature of trade, investment and entrepreneurship, risk is also part of legitimate trade, but Gharar is avoidable or excessive uncertainty that creates ethical and operational challenges and is strictly prohibited in Islamic finance.

Ghurm is the name given to risk which is inevitably present in productive economic activity like marketing and production of goods and service. Mohd Noor et al. (2018: 5–6) highlights the fact that risk is a part of profit making in Islam, that is, profit is regarded as a reward for assumed risk. Risk is distributed fairly across parties in such contracts as Mudharaba (profit sharing), Musharaka (joint ventures) etc., as parties have equitable responsibilities and accountability. They represent the core of what sharia requires of shared responsibility, with profit and losses tied to real economic fortunes.

However, Gharar also means excessive and unnecessary uncertainty that would give rise to disputes, or the wrongful result. For this reason, selling something that does not exist or cannot be delivered, for example, "a fish in the sea", constitutes Gharar because the subject matter is ambiguous and undeliverable. Gharar is a prohibition of an ambiguity of contract terms and to protect the party from hurt arising from unclear agreement (Mohd Noor et al., 2018: 5-6).

Differentiation between risk or Gharar, however, is dependent on a vital intent which is to engage in the risk. Risk involves the uncertainty inherent in legitimate economic activities where the parties hope to benefit from another. For instance, entrepreneurs invest resources in ventures assuming that those outcomes are based on effort and market conditions as well as economic factors. This certainly fits in with Sharia's fairness and shared accountability. However, unlike Gharar, Gharar often happens due to negligence or deliberate ambiguity, leading to a way for one party to exploit another. An instance is speculative instruments such as the standard options or derivatives where the Gharar is introduced as these instruments' stresses short term gains over real economic value, contravening Sharia's moral order (Al-Suwailem 2000: 65).

In Islam finance, risk is allowed so long as the risk comes within the boundaries of Sharia principles and helps in value creation. Through the contracts, Islamic finance promotes equitable risk sharing where the returns from the financial aspects are linked

to the real economic activities. For example, Salam contracts provide the buyer, albeit with reduced risk from accepted terms like price, quality and delivery date, the ability to pay in advance for goods that will be delivered at a later date. On the other hand, Gharar is prohibited because it introduces additional risks, which can be avoided, that are not only preventable, but also cannot be assumed to create unfairness or harm the integrity of the transaction. Gharar originates from the unavoidable ambiguity where ownership is unclear or the contract terms are not specified and the possibility of exploitation or dispute. Thus, the Islamic finance prohibits the Gharar that means all involved act transparently and ethically in financial dealings (Al-Suwailem 2000: 64-65).

Islamic finance acknowledges the fact that risk is intrinsic part of business activity and opportunity. From the Islamic standpoint, they consider the risk to be acceptable if it braces with Sharia principles, helped in making wealth, and no harm done. An emphasis is made on three requirements of acceptable risk in Islamic finance: inevitability; insignificance; and unintentionality (Al-Suwailem, 2000: 64). The criteria make sure that the risk-taking supports value creation and economic justice, rather than speculation. The first condition, inevitability, recognizes that risk is a consequence of the very kind of activity that is acceptable in a legitimate society, such as trade or investment. The risk in Islamic finance has to be attached to tangible results, not abstracted into speculative instruments. Let's consider for example Mudharaba and Musharaka profit and loss sharing contracts as they have built risk sharing as a core component that makes the contract fair and equitable for the parties involved. This is distinctive from typical derivatives where risk is also distanced out from its underlying asset resulting in the proliferation of artificial risk (Mohd Noor et al., 2018: 5).

Insignificance is the second condition and that the probability of success must be greater than the probability of failure. Mohd Noor et al. (2018: 5), emphasizes that risks of real economic activities are usually controllable because the same are related to productive efforts and tangible results. Well defined terms ensure transparency and thus minimize the level of ambiguity in contracts such as Murabaha or Salam and thus mitigate the risk. Moreover, risk in Islamic finance must be unintentional, i.e., the purpose of the transaction must not be to take the risk as its core element. Unlike speculative actions aiming at profit through risks, Islamic finance is based on real

economic achievements. Mudharaba includes the risk as an inseparable element of trade or service for generating profit, and neither a business enterprise nor risk in and of itself (Mohd Noor et al., 2018: 5). Thus, Islamic finance limits the kinds of risk it is prepared to take and modulates them free of Gharar. The advantages of adopting this approach in practice are the way that financial activities are integrated with the ethical ground so that not only does utmost it supports economic stability and justice but also can be fulfilled with the Sharia objectives. Practical Examples: Risk Musharaka agreements require stakeholders to share capital investments as well as proportional profits and losses dependent on genuine economic productivity. Such agreements stimulate collaborative work relationships between stakeholders through shared profit and loss responsibility (Al-Suwailem, 2000: 64). Gharar: The sale of undefined goods through "whatever grows on this land" represents Gharar since the items' nature remains uncertain. Unclear terms in transactions lead both parties to lose faith and fairness while dealing with each other (Al-Suwailem, 2000: 65).

Practical Implications in Islamic Finance: Risk distinction and Gharar determine how Islamic financial products need to be developed within Sharia-compliant guidelines. Beating Gharar practices forms a vital aspect of Islamic finance to support transparent financial behavior with ethical risk practices as it fights deceptive and unclear transactions. The application of standardized terms along with asset-backed structures reduces Gharar risks to comply with Islamic laws according to 5. Both Istisna and Ijara instruments serve as examples of ethical risk management without yielding violations of religious principles (Mohd Noor et al., 2018: 5).

The difference between risk and Gharar defines both ethical standards and operational rules in Islamic finance institutions. Islamic economic activities accept risk as a necessary aspect that becomes permissible when productive benefits are distributed fairly. Gharar brings unnecessary uncertainty into contracts which violates the principles of fairness and justice defined by Sharia. Islamic finance creates a trustworthy structure of equity and sustainable development through proper risk management and Gharar elimination.

4.3.2.3. Can Gharar be Converted into Acceptable Risk?

In Islamic finance Gharar causes problems because it consists of excessively confusing or uncertain financial transactions. Gharar exists as a serious risk because it creates possible injustices and conflicts but this form of high-risk events does not automatically match the definition of Gharar. Islamic finance accepts both risk-related matters yet all risks cannot be considered suitable because necessary risks adhering to Sharia principles determine approvals. Gharar becomes acceptable risk through an organized procedure which resolves ambiguities and establishes uncertainty measurements and determines essential risk elements.

A structured approach to evaluate and mitigate Gharar becomes possible when risk is properly classified by different levels. The characteristics that define high-risk transactions include multiple uncertainties together with definitional ambiguities. Gharar exists in this risk category because it enables unethical results including unjust disadvantage and exploitation of parties. Islamic finance prohibits all transactions which present spam or undefined contractual terms and uncertain elements since these transactions occupy the high-risk category.

The implementation of medium risk transactions requires partial mitigation of uncertainties while remaining ambiguity exists. The medium level of risk needs additional details for precise application according to Sharia principles. Transactions with low risk contain few and controlled uncertainties because every critical element of the deal receives clear understanding and definition. The subset of low risk, acceptable risk includes necessary and unavoidable uncertainties that develop from legitimate economic activities. A risk qualifies as acceptable when it matches three fundamental conditions that involve connection to productive activities and both management possibilities and compliance with Sharia.

4.3.2.4. Steps to Convert Gharar into Acceptable Risk

Risk transformation from Gharar involves determining and managing unclear aspects alongside holding to ethical criteria as well as operational requirements.

The process begins with identifying all ambiguous aspects in the transaction. The transaction might contain several areas that lack definition such as subject matter diction and delivery terms or ownership rights. Stakeholders gain the ability to locate specific Gharar sources by identifying areas with unclear definitions. Evaluation of unknown points starts with identifying their influence on operations and significance after detection. The process of ambiguity assessment requires the determination of the financial consequences or operational or ethical effects that result from uncertain factors. An evaluation process allows organizations to determine which elements need focus to minimize ambiguous situations.

The resolution of Gharar requires complete specification of everything included in the contract. The clarity of a transaction improves through precise definition of price together with quality standards, quantity specifications and delivery scheduling. The use of asset-backed infrastructure can establish real-world connections between transactions which simultaneously decreases speculations in the agreement. Organizations need to remove all avoidable uncertainties before concentrating on transaction risks which remain despite attempts to eliminate them. Risks should be linked specifically to economic production activities where they affect market demand strengths or operational aspects of trade and investment.

Sharia laws require one to evaluate remaining risks to determine if these risks are acceptable. The evaluation process determines if the risk meets criteria of being minor while necessary for compliance with Islamic principles. Islamic finance considers a risk acceptable if it passes the necessary requirements of minor proportion, necessity and compliance with Sharia principles.

4.3.2.5. Is Risk Quantifiable?

In *Is Risk Quantifiable?* Dr. Sami Al-Suwailem explores the limitations of formal mathematical models in accurately quantifying risk. The economic systems share similar complexity properties with natural and social phenomena according to advances from Gödel's incompleteness theorem and Turing's research. (Al-Suwailem et al., 2017: 279) Critics assess the belief that risk reduction can become a single numerical measurement because this basic approach causes markets to experience

greater than expected uncertainty which leads to instability. Financial organizations that build security perception on mathematical models and formal reasoning systems end up developing unsafe market perceptions. Mathematical standards allow market behavior estimation yet they do not recreate the distinct nonlinear economic activities which dominate market operations. The implementation of ethical protocols for risk management should replace arithmetic methods according to researcher Al-Suwailem. A successful risk mitigation process requires the first step to identify and describe all uncertainties present in a business transaction. The elimination of unclear aspects including ownership, delivery requirements and contractual specifications reduces the opportunity for Gharar to occur. By clearly defining uncertainties through practical proprietary tools such as structured contracts and asset-backed mechanisms one can manage remaining risks that align with Sharia principles.

4.3.2.6. Integrating Perspectives on Risk: From Quantification to Mitigation

Dr. Sami Al-Suwailem reveals through his work *Is Risk Quantifiable?* that total risk elimination or mathematical risk quantification proves difficult to achieve and could lead readers astray in his study. He describes the inadequacy of formal systems in capturing economic realities since the models used make them develop the illusion of total control that leads to vulnerable systems. He suggests applying open practices with sensible mechanisms that are driven by ethics as the right way of dealing with economic crises. This is the wider view of Dr. Al-Suwailem that is made efficient with the application of acceptable risk changes that offer organized uncertainty elimination paths. Her translation of Gharar into bearable risk entails reasonable methodologies that keep risk to the extent of reducing ambiguity without violating Sharia regulations despite the fact that Dr. Al-Suwailem is opposed to quantitative models. His algorithm of transforming Gharar to acceptable risk involves steps of identifying uncertainty elements and quantifying uncertainty as well as determining what set of particular risks are to be retained (Al-Suwailem et al., 2017: 285).

They both hold on to the position that risk management is still relevant because its complete eradication is impossible. The first step as far as both assumptions about economic processes are concerned is the identification of places of ambiguity. The

practical transactional instruments that combine asset-based rules and structured agreement are useful in substantiating fair transaction whilst adhering to Gharar conversion procedures. The impractical and ethical interventions define the definition of Gharar by the terms of delivery, which is undefined or ownership by the terms that are defined by the practical meaning. The analysis of persisting risk factors by the required and tolerable standards provides economic feasibility and ethical aspect in Sharia-deemed deals. The systematic derivation of acceptable risk out of the uncertain conditions is in tandem with the hindrances of risk quantification to initiate clarity under compliance to the rules of the Islamic teachings. These perspectives affirm the fact that integration of pragmatic efforts and ethical codes of conduct and risk perception in the real world makes Sharia compliant financial activities remain powerful and in compliance should uncertainty be faced. The combination of research answers the theoretical questions about the risk management, by giving specific engineering principles of the Islamic financial systems (Al-Suwailem et al., 2017: 289)

4.4. Gambling and Speculation (Maysir)

Maysir is an Arabic term that is translated into English in two senses that comprise gambling and speculative behavior. The Islamic finance conducts financial business activities in which fortune happens without intent, labor, or productive business dealings or genuine business. Islamic law does not allow Maysir as it raises unethical benefits to a minor segment of the population who consider fortune at the expense of the health and welfare of the rest.

Maysir is based on an Arabic root that is understood as something easy, or getting something without hard work or shares. In pre-Islamic Arabia Maysir was closely identified with games of chance especially the ones involving arrows. In such gambling activities there are those who shared the wins and those who made the loses. The said gambling habits were not merely a form of routine entertainment, but also contributed to redistribution of wealth, often resulting in exploitation of the poor by the rich (Uddin, M. A. 2015: 5). Under the Sharia, Maysir does not refer to literal gambling only, but it also involves any financial transaction where the fate rests purely on chance, speculations, or uncertain events of the future. It is covered under activities

where one side benefits at the other party without any form of productive work or genuine economic provision.

In their study, it is highlight that, Maysir is defined as Any transaction conducted by two parties to possess the ownership of a particular asset or service, where one party benefits while the other is harmed due to the reliance on chance or an uncertain event. The definition shows that Maysir creates a system of zero-sum exchanges that transfer profit to one party while causing loss to another. This imbalance contradicts Islamic principles of fairness and justice (Syarifati et al., 2022: 1204).

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) identifies Maysir through this definition: "The acquisition of wealth by chance, whether or not it deprives another party of their rightful share" (AAOIFI, 2017: 835).

Maysir establishes when a random wealth gain takes place even if it results in debt for another party (AAOIFI, 2017: 835). The definition makes it clear that wealth creation in Islam needs to consist of economic reality through fair exchanges and mutual risk-taking instead of purely random or speculative methods. Maysir describes every gambling activity together with speculative deals and gains from uncertain events which depend on chance instead of work and productivity. The Islamic prohibition of Maysir ensures that economic conduct becomes ethical through transparent practices that provide mutual benefits to involved parties. Islamic finance works to create a fair sustainable economic environment through elimination of speculative chance-based deals so it can fulfill Sharia's comprehensive mission.

4.4.1. Sharia Basis for the Prohibition of Maysir

According to Islamic finance the practice of Maysir (gambling and speculation) is strictly prohibited by Sharia on account of Quranic directives along with prophetic traditions and scholarly agreement. Islam has made Maysir illegal because it creates economic instability while granting unfair profits to certain parties which damages ethical economic operations. This section investigates the religious texts from Sharia law that support Maysir prohibition and how these biblical verses strengthen Islamic financial principles.

Islamic finance adopts this core principle which states that transactions causing more damage than good need to be refrained from. Many people experience brief joy from gambling activities that result in lasting social and economic destruction for many people. According to Islamic ethical principles money obtained deceitfully or speculatively in trade violates the moral standards. By nature, gambling creates uncertainty therefore it receives legal disapproval under the broader Islamic legal concept of Gharar. Through Islamic finance parties accomplish transparency along with fairness and mutual benefits because it removes Gharar and Maysir from financial transactions.

All Islamic jurists from various schools explicitly forbid Maysir. Islamic scholars unanimously prohibit Maysir because it contradicts principles of justice fairness and protection from harm which make up key objectives of Islamic finance. According to Ibn Taymiyyah Maysir acts as a financial oppression which violates Islamic ethics since acquiring wealth without legitimate causes results in social decline. For Al-Ghazali gambling creates a financial disorder which causes people to rely on luck instead of work and discourages them from performing productive labor. Ibn Qayyim identified Maysir as an instance of financial deceit that transfers success from one person to another with economic repercussions.

Islamic financial contracts get their restrictions related to Maysir from the guidelines established by The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). The definition of Maysir describes how obtaining wealth from chance can lead to confiscating rights from other individuals. (AAOIFI, 2015: 795). According to this definition gambling operates as a zero-sum activity because it enables one party to profit while the other loses money directly against their right in violation of Islamic financial principles. Islamic banking has insisted on this principle to ensure that their investment structures are free of speculative aspects according to the Sharia regulations that prohibit Maysir.

4.4.2. The Rationale for Prohibiting Maysir

Islamic finance disallows Maysir gambling since it is unethical practices and as well as economic inefficiency and as well as disadvantaging the society. According to the

Islamic beliefs, the learning of wealth occurs in a moral manner when it involves a proper way of trade and is supplemented by investment capital and work as opposed to a disorderly speculative venture. The Maysir prohibition by Islam safeguards economic actions by ethical tenets of equity that uphold financial explicitly and stability to guarantee the allocation of wealth by benefiting society rather than resulting in exploitation and concentration of wealth. This part presents both moral and financial and social rationale of Maysir prohibition in the context of Islamic financial regulations.

4.4.2.1. Ethical Implications of Maysir

Islamic finance categorically denies wealth making on any speculative endeavor that comprises of sheer chance and gambling. According to the Islamic law Maysir is forbidden, as it is entirely based on chance, but it does not conform to the Islamic basic idea to produce wealth by effort and productivity. Maysir builds unethical finance practices that break the economy discipline as it encourages flakey financial habits and arbitrary systems rather than justifiable business practices.

The Maysir practice produces damaging psychological responses which also formulate unsound behavioral patterns. According to research findings, gambling addiction keeps growing among Muslim communities who are not free of the strict religion regulation of the activity (Lubis et al., 2023: 120). The gambling-based activities become easily accessible, and people are likely to make unwise financial decisions and subvert their financial stability. The use of Maysir prohibition by Islamic Finance is a protection mechanism as it will make sure that all money transactions would be concerned with responsible conduct and not speculative impulse.

4.4.2.2. Societal Consequences of Maysir

Maysir promotes the culture of greed and temporary profit-making, which pushes people away the creation of wealth that is sustainable (Lubis et al., 2023: 120). The zero-sum nature of the gambling generates losses among players whose fortunes end up outweighing the earnings of another individual because gambling does not possess

a trade and an investment attribute. The transfer of capital through Maysir would lead to more economic disparities and financial instability and decrease the economic activity as a whole because the capital was flowing out of productive economic business. Those who gamble to achieve quick wealth simultaneously fuel more social divisions between different groups. People running Maysir gambling activities develop financial problems leading toward poverty conditions because their debts from gambling keep mounting (Lubis et al., 2023: 121). Research shows that most economic downturns stem from characters such as excessive speculation and gambling-based financial instruments which demonstrate the significant threats Maysir presents for financial stability. Islamic finance designates wealth accumulation strategies to productive activities so financial disruption can be avoided since luck and exploitation should not lead to increasing wealth.

4.4.3. Contemporary Applications of Maysir in Finance

Modern financial markets show rising significance of Maysir which stands for excessive financial transaction uncertainties alongside gambling-like and speculative activities. Current financial instruments and trading strategies bear notable similarities to casino gambling because of their significant technological developments. Market stability suffers alongside systemic financial crises because of speculative trading strategies and derivatives as well as margin trading and high-risk financial instruments operations. Speculative trading along with gambling-based financial instruments and financial crisis involvement constitute the modern expressions of Maysir in contemporary financial systems.

The underlying character of the speculative trade prevails in the contemporary financial markets where the speculation produces liquidity required in the market and in a manner that establishes fair prices. Over speculative trading causes many catastrophic market effects that cause financial crisis and systemic risk factors and market bubbles. In the case of the high-risk situations, speculators act without fundamental analysis since they use market sentiment and momentum, as well as short-term price fluctuations, as their primary price impetus. The direct connections between psychological biases of traders especially overconfidence and the herd mentality led

to an explosion of the market and the appearance of more risk (Haykir, O., and Yagli, I. 2022: 335-336).

Speculative trading, as a study confirms, is no different than gambling because traders often make risky bet every time, they do not understand how this or that bet will turn out (Lee et al., 2023: 3-5). These speculative dealings are quite similar to Maysir because they are dependent on chance as the result and not on productive economic operations. The situation worsens when there is speculation in place in the markets since retail investors who lack the necessary financial skills are particularly susceptible to the elements of ensuing market instability.

The derivatives that financial markets have created trading as the most important business aspect as it enables traders and institutions to reduce risks in hedging or gambling on the market. Those derivatives utilized as justifiable alternatives and futures and swaps work well in terms of their monetary functions, yet, their speculative application creates significant systemic risks (Vinitha, & Kalarani, 2021: 104). Traders often misuse these instruments as leverage by trading with the hope of making short-term gains. Nevertheless, the leverage contained in the derivative contracts can be so high enough to cause crippling losses, especially during unstable market environments. The loss of touch with real economic value and the apparent systemic disconnection between market prices and the real economy can be counted as one of the biggest concerns involved into speculative derivatives trading. Excessive individual speculation on derivatives by traders gives rise to false demand and supply and results in high pricing of assets. Complex derivative instruments were a major cause of the financial crisis that occurred in the past, such as the 2008 financial crisis, where the use of collateralized debt obligations (CDOs) and credit default swaps (CDS) contributed to the heightened systemic risks (Blake, D. 2022: 3). All these instruments pursued imprudent lending behavior, which led to a massive bankruptcy.

Through margin trading, investors are able to take loans with the aim of inflating their investments so as to enhance the gains on the trading. Nevertheless, the strategy only increases losses which makes it a rather high-risk strategy (Bian et al., 2021: 11). Numerous traders that practice margin trading will get extremely leveraged, that is to say they have of only small capital at their disposal. This strategy can bring huge profits and at the same time the results can be disastrous in the event the market factors turn

against the company. The erroneous urge of margin trading is similar to gambling since the traders are allured with the hope of a large payoff without realizing the equal chances of losses. It has been found that traders who actively trade on a margin display traits of problem gamblers, namely risk-seeking and loss-chasing (Bian et al., 2021: 01-03). The failure of leveraged trading accounts is also very high, which justifies the reasons why leveraged speculative strategies are in line with Maysir, as the success of the methodology depends on uncertain and risky results and is based on high-risk speculation. Investment based on lottery and banking based on prizes in the financial sector has emerged as the most favored alternative savings tool particularly where the conventional saving accounts would only provide little in terms of returns. These financial products provide its participants with an opportunity to get significant amounts of money as a reward, provided that their money is kept in a savings account (Pfiffelmann, 2013: 45). Even though such investments drive people towards the principle of saving, they also bring the aspect of gambling as the mindset does not revolve around a stable economic growth but rather a possibility of a high reward. One of the key problems of the lottery-based investments is that they are massively appealing to the low-income earners who get lured with the promise of a lot-win investment. These tools may cause financial distress, as on a par with traditional gambling, people may abandon safer and more predictable ways to save and pursue uncertainties (Parker et al., 2023: 2-4). The fusion of the gambling process into the financial products call into question the ethical aspects and it also proves how the modern investment strategies provide an incorporation of Maysir spectrum of elements in financial markets.

One of the most acute examples of speculative-based finance that is evident in the modern markets is cryptocurrency trading. Most Cryptocurrencies like Bitcoin and Ethereum have incredibly high volatility of their price, which is very enticing to speculative traders. The cryptocurrencies are not always sought after simply because they have no intrinsic value, hence dominated by the market sentiment, speculation, and media hype (Corbet et al., 2021: 182-183). Researchers claim that cryptocurrency users follow gambling addictive patterns, and almost half of the traders are characterized by compulsive trading (Corbet et al., 2021: 182-183). Regulatory oversight is also lacking, which also leads to further exposure of the risks that come

with crypto speculation making it a risky financial activity that involves a lot of losses. In the viewpoint of Islamic finance, the cryptocurrency is speculation which is a central aspect of Maysir because it is usually a matter of fortuitousness instead of an actual economic contribution.

The emergence of the online betting market has also helped to erase the borderline between gambling and financial speculation. Financialized gambling is now provided on many betting sites, including binary options and prediction markets, where one is betting on the price of assets, the result of an election or a sports event. Such resources convince people that they could make fast money, which in most cases results in the development of addictive behavior and financial devastation (Riley et al., 2023: 7-8). Online betting has financial effect on more than individuals as it is also a part of the general economic instability. Financial transactions that result in massive gambling would cause a misallocation of resources, which in turn would support the inefficiency of a market and the bubble. In the view of Maysir, that, which involves the presence of betting components in financial markets, has major ethical and economic implications.

4.4.3.1. The Role of Maysir in Financial Crises

The case of the 2008 financial crisis is a good example of how excess risk-taking and speculative trading can cause the system to break down. Speculative lending practices caused the crisis especially in the subprime mortgage sector, which saw financial institutions lending out risky loans without adequate risk evaluation (Sultoni, 2021: 08). Widespread derivatives and leverage boosted the crisis resulting in huge losses in the world financial markets.

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behaviors that necessitate both heightened regulatory oversight and moral management systems for the investment sector.

4.4.4. Distinguishing Between Maysir and Risk

Islamic finance depends on a clear definition of Maysir gambling versus risk because both subjects exist with different implications affecting financial deals and economic stability. Risk manifests as an essential component of economic action which affects entrepreneurship along with investment and trading because it derives from reasonable decisions together with intentional actions. The controlled and quantifiable uncertainty relies on assets and strategic planning and productive activities for determining outcomes. Islamic finance upholds risk-taking through defined requirements because business expansion alongside wealth development and economic growth depends on it. From a Sharia perspective the concept of financial gains depends on productive activities because this ensures wealth generation benefits social welfare (The Risks of Financial Derivatives and Alternatives from the Viewpoint of Islamic Economics, 2023).

Islam bans Maysir as a financial practice since it creates exploitative scenarios in finance. Islamic finance rejects Maysir because this invalid practice depends solely on chance instead of decision-based risk. Through zero-sum transactions Maysir transfers wealth from one party to another therefore creating financial instability that deepens economic disparities (Mihajat, 2016: 11). Islamic finance does not accept Maysir because this practice goes against essential economic principles of ethical transactions which rely on justice and fairness and risk-sharing between parties. Gambling leads to financial irresponsibility because it constitutes irresponsible behavior as opposed to investment behavior. Maysir creates social harm comprising of addiction creation and will result in economic destruction and unfair wealth distribution hence causing financial insecurity among individuals and the communities.

These concepts are strongly differentiated in both of their financial results. The growth of the economy can be achieved under the management of risks because it fosters entrepreneurship along with innovation as well as optimization of markets. Mudharaba is a form of partnership with profit sharing habits along with a joint venture termed as

Musharaka and is one of the structures that are applied in the Islamic finance to encourage ethical risk-taking and proper sharing of wealth. The instruments are aligned with the Sharia principles on social and economic justice because the risks are fairly shared between the parties. Maysir mechanism generates speculative market behavior resulting in unsound financial bubbles that often lead to market crises of the market. Speculative financial instruments which had the effect on the world financial crisis of 2008 were similar to gambling behavior in their respective features. None of these practices comply with Islamic financial ethical standards because these standards prioritize investments based on owned assets along with mutual risk-sharing instead of speculative activities.

4.4.5. Distinguishing Between Maysir and Gharar

The two prohibited Islamic financial elements Maysir and Gharar present different difficulties for translating exchange transactions into valid financial contracts. According to previous discussion gambling activities known as Maysir result in acquiring wealth through uncertain chance without labor. Unfair financial arrangements result from Maysir since they allow earnings and losses to occur randomly rather than through valid economic activities. Maysir raises financial disparities that violate Islamic financial norms because it rewards only a few at the expense of many (Mihajat, 2016: 11). Gharar defines the condition of excessive uncertainty found in contractual arrangements thus leading to disputes with the possibility of deceitful advantages and unfair treatment. Islam disallows Gharar beyond reasonable bounds since high levels of deal uncertainty make contracts unfair and less transparent. Terms in contracts affected by Gharar become difficult to understand due to blurry obligations and features incapable of proper assessment by the parties who signed the documents. The existence of uncertainty enables exploitation because it leaves one party with insufficient knowledge and control of the final outcome (Bousslama & Lahrichi, 2017: 722).

The legal effects of Maysir and Gharar distinguish themselves through their actions toward the validity of contractual agreements. Maysir is a direct cause of financial injustice since it favors speculations on unproductive financial dealings. The existence

of Gharar disrupts the legitimacy of contracts with information imbalance and uncertainty of data. The Islamic law voids transactions that incorporate abnormal Gharar in them since the elements contradict the fundamental requirements of a contract regarding mutual comprehension and fairness. The ban on speculations is one of the Islamic teachings because, the Quran and Hadith support the transparent, honest and fair economic transactions. Present financial instruments reflect the use of Gharar when conducting business transactions. Strict limitations are also given by Islamic finance on contracts where there is a lack of clarity particularly on derivatives instruments with untrustworthy payout. The aspects of Gharar in life insurance contracts are related to their pay-out framework that relies on uncertain events and unspecified risks. The Muslim finance addresses the issue of insurance by creating Takiful (Islamic insurance) which is a combination of cooperative solidarity with the users without insurers to uphold minimal Gharar and provide security to the participants.

Maysir and Gharar factors come together frequently in speculative transactions in Markets which are volatile. The occurrences of the current financial crisis are primarily due to the speculative investments that make those involved engage in trading assets, without a clear understanding of the risks involved since they lack adequate understanding of the assets. The ambiguity of the terms in the speculative transactions is commensurable with the definition of Gharar as compared to the pure bets in financial markets characterized by Maysir. Islamic finance limits these financial risks by imposing open asset-backed transactions along with ethical forms of conducting business. Some scholars suggest the solution that would allow the ethical risk-taking activity without the restrictions that are mentioned against Maysir and Gharar. Economic development coupled with transformational financial innovations require the right concept of uncertainty in which required risk-taking would be fruitful rather than harmful. This balance is achieved through Islamic financial instruments such as Sukuk (Islamic bonds) along with Istisna (manufacturing agreements) and Salam (advance payment agreements) since they live with the required risks but do not live with undesirable speculative characteristics and uncertainty.

Adequate distinction of Maysir and risk and Gharar is one of the key requirements to promote a clean structure of the Islamic financial system. Risk control of economic

growth should be supported by responsible ethical codes laid down by the Islamic finance. The Islamic code does not forbid Gharar, risk, but Maysir since Maysir is based on predatory speculation that can result into economic instability and inequity. Banning of Gharar is based on the level of risk as extreme cases are abusive in terms of transparency that is essential in contract transactions. The ethical financial instruments of the Islamic finance work in the clear distinction of risk-taking activities that are permitted and those that are not that are exploitative and this results in economic balance as well as equitable and positive social good of the people. These ethical financial instruments help to observe the fair financial transactions and mutual prosperity.

4.5. Fraud in Islamic Finance

Tadlis in the Islamic law relates to Fraud in the practice that occurs when one sidesteps vital transaction details to unduly benefit another. The term Tadlis is the Arabic word of deception or obscuring. According to the legal definition of Tadlis, it is any misleading act where the result is harmful financial aspects and undesired gains to the sender. Tadlis was classified under other systems of Islamic scholars into different categories. Like Misrepresentation of Quality, it happens when a seller is aware of a defect in a product or when he/she overstates the quality of a product so as to mislead the buyer. The other type is Deception in Contractual Terms, this encompasses deceptive terms, concealment or uncertainties about terms that lead to misleading one of the parties involved in contracting terms. And also, Tadlis Al-Mawjib (Fraudulent Inducement), This type of fraud involves a party being misled into getting into a financial deal on false grounds. Shameful acts violate Islamic trading ethics while making economic disorder worse. Fraudulent behavior in economic transactions hurts both economic deal authenticity and market trust which creates serious systematic financial dangers (Al-Zuhayli, 2021: 122).

4.5.1. Sharia Foundations for the Prohibition of Fraud

Adl which means justice and Qist which means equity and Bayan which means transparency form the base of Islamic finance and specifically reject deceitful actions.

According to the Quran it is forbidden to deceive others through financial misconduct. It is forbidden to steal wealth from each other or to offer money to authority figures to acquire money from their jurisdiction's assets through fraudulent means although you realize this practice contravenes Islamic teachings (The Qur'an, 2004 2: 188). The spiritual text declares specific moral condemnation against methods that people use to obtain money by dishonest means or corrupting legal systems or building relationships through improper payment. Within Surah Al-Mutaffifin the text declares condemnation against people who practice deceptive business transactions. "Woe to those who give less than due, who, when they take a measure from people, take in full, but if they give by measure or by weight to them, they cause loss." (The Qur'an, 2004, 83:1-3).

The Prophet declared: "Whoever deceives (in trade) does not belong to us." (Sunan Ibn Majah, 2224). By this Hadith, we can see that fraud in commercial transactions are prohibited explicitly if not prohibited as the main requirement of financial transparency in Islamic finance. The fact that fraud is a violation of mutual consent (Taradhi), a necessary condition for the existence of the contract in Islamic law (Suryanto & Ridwan Siah 2016: 144-145), is fraud.

4.5.2. Economic and Social Ramifications of Fraud

Financial practices that violate the Sharia are both fraudulent and also have huge economic, social consequences. The disruption of market confidence, destruction of financial stability, and cause of long-term distrust to the financial institutions by fraud. Fraud destroys trust in the financial markets by shaping an environment where the investors, stakeholders and other institutions become doubtful of the integrity of financial transactions (Suryanto & Ridwansyah, 2016: 144-5). Not having transparency causes inefficiencies because participants ask for higher premiums to compensate for fraud risk, leading to higher transaction costs.

Lastly, large scale financial collapses can occur from such fraudulent activities of Ponzi schemes, insider trading and financial misrepresentation as for example in major financial crises (Lin et al. 2018: 579-580). The reason is that Islamic finance is concerned with the mechanisms of sharing risks, which are Mudharaba and

Musharaka, which require greater disclosure and ethical practices. These structures are vulnerable to frauds that have the capability of creating economic losses on both the sides of individual investors and financial system.

4.5.3. Ethical and Social Decay

Social implication of fraud is also of social nature. When the society starts letting individuals get away with such acts that do not consider ethics, the moral right starts eroding. And normally high amounts of cheating breed moral decadence, as it is a normal practice that encourages dishonest practices and finally hurts economic justice. Fraud contributes to the inequality of wealth since it provides people of bad conscience to acquire wealth by disadvantaging the honest players in the market, against the Islamic notion of social justice.

4.5.4. Contemporary Forms of Fraud in Finance

Although the problem of fraud has been with us since time immemorial, the advanced technological approach to fraud that is presented by the present-day financial markets has created a dilemma in the regulation process as they may include:

- Misrepresentation and fraudulent financial reporting, most corporations use fraudulent accounting practices to inflate the revenues and conceal liabilities thereby deceiving investors. Such practices are not allowed because of the Islamic principles of Islamic finance that emphasize on transparency and disclosure (Blanque, 2003: 61).
- Financial market trading that is non-public information trading is a severe ethical violation in the financial markets.
- Fraudulent investment products are schemes that claim unrealistic returns in order to deceive investors, like Ponzi Schemes. The schemes take advantage of financial ignorance, going against the concept of justice (Adl) and equity (Qist) in Islamic finance (Bartoletti et al., 2020: 259).

Islamic finance makes an attempt to fight such risks with audit of shariah standard, screening with strong ethical and rigorous governance framework. Independent

Shariah boards are also part of the fraud prevention mechanisms, which does help keep the financial institution on its feet.

There exists no fraud in Islamic finance because it goes against the basic religious principle of fraud which is detrimental in terms of trust, social equity and economic stability. The Islamic prohibition of fraud has such rooted in Quranic principles and Prophetic tradition to make sure all transactions are fair and transparent. Fraud's destructive nature is highlighted by its economic and social consequences and as such requires robust levels of regulatory oversight and ethical safeguarding. Insider trading and Ponzi schemes are just a few of modern manifestations of fraud and they need to be constantly monitored and controlled by Islamic Sharia in order to protect investors from unethical financial practices.

4.6. Monopoly

In Islamic finance, Ihtikar which is resembled Monopoly is dictating the supply of the market to raise the prices and suppresses competition. Ihtikar is linguistically based on the Arabic root (as exclusivity or hoarding). Islamic jurisprudence (Fiqh) defines it as deliberate abstaining of goods or the means of acquiring (money) in such a way that it creates a supply that lacks supply of commercial items or money so that the other people suffer hardship with economic situation (Hamid et al., 2020: 122). Second, although the concept has so far been applied to physical goods, it can be brought to financial markets, where there is monopolistic behavior in the provision of financial services where exploitative pricing, lack of access to essential financial services and systemic inefficiencies can be promoted. Islamic economic thought has historically advocated for free and fair market that allows circulation of wealth and financial opportunities in an equitable manner. This delightful literature presents a marketplace in Madinah, laid down under the prophet Muhammad (peace be upon him) that was an open and self regulating market, with intervention only when the economic justice was challenged by unethical practices (Hamid et al., 2020: 123-124).

4.6.1. Differences Between Lawful Market Dominance and Prohibited Monopoly

Islamic economics recognizes the distinction between lawful market dominance and prohibited Islamic economics acknowledges the difference between lawful monopoly and those monopolistic acts which are illegal. Such market position is granted to a business through its efficient, innovative, or quality of service that conforms to Islamic principles of fair trade and competition (Denicolo et al., 2021: 7). On the other side, denied monopoly (Ihtikar) prevents market supply artificially to manipulate price and exploit mayor, which condemned in Islamic law (Denicolo et al. 2021: 2). Scholars insist that blocking the monopolistic acts does not mean blocking all of monopolistic acts; they will only be blocked if they lead the hoarding of the essential goods with inelastic demand and that will result in economic hampering. Islamic prohibition of such monopolies is of ethical consideration to keep wealth distribution just and resources for every citizen in that society (Denicolo, et al., 2021: 2).

4.6.2. The Role of Competition and Free Markets in Islamic Economic Thought

Competition is good in the Islamic economic principles as a means for creating economic justice and efficiency. According to Olushola (2024: 81-82), the Prophet Muhammad (peace be upon him) established a market place in Madinah that is open and self-regulating and without monopolistic interventions. In this sense, this reveals the Islamic wider emphasis at enforcing that fairness in competition renders the market just, prohibit exploitation, and paces the just as wealth distribution. Business is forbidden in Islamic law in which the market entry is limited like hoarding (Ihtikar), price manipulation and collusion. The same way as with the contemporary economic environment, Islamic ethics imply that the competition laws should embody these principles to ensure that they do not marginalize small firms with the same effect as disarming vulnerable consumers so that they are pushed to the periphery of monopolization. Consequently, Islam neither does its forbid businesses to succeed by means within the law, nor does it allow it to succeed by those practices which deprive of economic justice, such as the prescription of artificial barriers to entry or into complicity in fixing prices. The ethical nature of this framework is that the market

forces provide an equilibrium, providing the equal opportunity to all the parts of the economy.

4.6.3. Sharia Foundations for the Prohibition of Monopoly

The Islamic finance which bans monopoly is strictly based on Sharia which is based on the Quran as well as the Hadith. The Islamic literature places an emphasis on economic justice, fair trade, and not harming the society. The forbiddingness of monopoly is in accordance with the generalizability of equity and social responsibility in the Islamic economic ideology.

Quran denounces economic exploitation, unjust enrichment and hoarding because such practices bring artificial scarcity that is harmful to consumers.

Surah Al-Baqarah (2: 188) warns against the unlawful consumption of wealth by stating: “Do not consume one another’s wealth unjustly or offer it to the authorities as bribes in order to consume a portion of others’ wealth sinfully, while you know it is unlawful” (The Qur’an, 2004 2: 188).

This passage condemns deceitful business dealings, which includes monopolistic behavior that restricts access to goods and inflates prices unfairly.

There are several Hadiths that explicitly prohibit monopoly and hoarding due to their harmful impact on economic fairness and consumer welfare. The Prophet Muhammad (peace be upon him) strongly opposed practices that undermine justice in market transactions.

The Prophet (peace be upon him) said: “Whoever hoards food (and keeps it from the people), Allah will afflict him with poverty or leprosy” (Sunan Ibn Majah, no. 2144; authenticated by Al-Albani). This Hadith clearly highlights the severe moral and social consequences associated with hoarding and emphasizes the gravity of its punishment.

Similarly, as recorded in Sahih Muslim, the Prophet (peace be upon him) stated: “No one hoards but the sinner” (Muslim ibn al-Hajjaj, 2006, Hadith No. 1605). This narration establishes a direct moral condemnation of hoarding by equating it with sinful conduct. In another narration, the Prophet (peace be upon him) said: “Whoever

monopolizes is a wrongdoer” (Ahmad ibn Hanbal, 2001, Hadith No. 1019), reinforcing the ethical prohibition of monopolistic behavior in Islamic economic thought.

4.6.4. Contemporary Forms of Monopoly in Finance

In recent days, monopoly over the financial sector is found in different contemporary forms such as the market manipulation, price fixing, and exclusive contracts, which prevent competition. Market manipulation and price-fixing is one of the most important issues, as the financial institutions or market leaders manipulate artificially the prices of assets, the rate of interest, or foreign currency to make their profit. This is commonly practiced in traditional markets and is in contrast to Islamic financial ethics, which practice transparency, fairness and equal wealth distribution (Foster, McChesney and Jonna, 2011: 03). This kind of manipulation is evident in the LIBOR scandal as some of the leading banks were caught running a conspiracy to manipulate the interbank lending rates leading to distortions in the international financial markets. Exclusive contracts and monopolization of Islamic financial products is another variant of financial monopoly. In other institutions some have restrictive agreements such that other firms are not allowed to provide similar Sharia compliant products which limits consumer choice and creates a de facto monopoly. The practice is not in accordance with the Islamic economics that promotes the accessibility of markets and healthy competition (Foster, McChesney and Jonna, 2011: 03). Given that some financial services, e.g., the issuance of Islamic sukuk, are not offered by a significant number of banks, they are inefficient and impede financial inclusiveness.

The measures of the Sharia governance seek to maintain a reasonable level of competition in the market by maintaining market ethics, openness of the price, and the denial of Ihtikar (hoarding and price manipulation). Sharia Supervisory Boards (SSBs) are to conduct the Islamic finance institutions with an obligation to stick to the Islamic ethical and legal principles. These boards are taken to make sure that financial products are competitive and open to all participants of the market and would prevent monopolistic control (Brillyandra et al., 2024: 11-12).

Additionally, Islamic financial regulation analogy on anti-monopolies policies focuses on the Maqasid al-Shariah (purposes of the Islamic law) to ensure that no wealth is vested on a few individuals. Regulators such as the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB) provide guidelines ensuring that no institution dominates the market at the expense of others. These frameworks emphasize prohibitions on exploitative contracts and encourage Mudharaba (profit-sharing) and Musharaka (joint ventures) to distribute economic power more equitably (Bawafie et al., 2024: 50).

4.7. Suspicious Elements (Shubuhah)

Islamic law classifies financial and commercial transactions into three main categories: that which is clearly Halal (permissible) to the extent no one has a problem with; that which is clearly Haram (prohibited) to the extent no one has any doubt about its prohibition; and that which falls in the category of Shubuhah (doubtful or suspicious matters) the meaning of the terms of which must be subject to a pondering. The first two categories are simple, if transaction clearly mentioned in Qur'an or Hadith as Halal (lawful) then and there no need to look further, if transaction mentioned as Haram (prohibited) such as Riba (usury), gambling (Maysir) or excessive uncertainty (Gharar), then it is prohibited without any exceptions.

Nevertheless, in Shubuhah the transaction is not specifically said to be either allowed or prohibited and therefore leaves room for further legal analysis (Ijtihad), scholarly consensus (Ijma') and comparison with analogous legal precedents (Qiyas). The notion of Shubuhah is a core Islamic juridical notion that is involved in any ethical or financial decisioning. The principle for which this serves as primary textual evidence is found in the narration of Nu'man ibn Bashir, as recorded in both the collections of Al-Bukhari and Muslim.

The Prophet (peace be upon him) stated: "The Halal is clear, and the Haram is clear, and between them are doubtful matters (Shubuhah) that many people do not know. Whoever avoids them has safeguarded his religion and honor" (Al-Bukhari, 2002, Hadith No. 52; Muslim ibn al-Hajjaj, 2006, Hadith No. 1599). This Hadith establishes three classifications: (1) Clearly Halal – Transactions that pose no compliance

concerns. (2) Clearly Haram – Transactions that are explicitly forbidden. (3) Doubtful (Shubuhah) – Transactions that require further scrutiny or avoidance out of precaution (Ihtiyat).

4.8. Achieving the Objectives of Sharia

Maqasid al-Shariah act as the foundation of Islamic finance because it ensures that any financial transaction is permissible in accordance with the primordial objectives of Islam, such as being just and ethical. In contrast to conventional finance, Islamic finance is a rational balance between individual prosperity and the welfare of society (Nasr, 2015: 17–20). Thus, the core of this framework rests on the principle that wealth (Maal) is not a purely personal asset, but a God's (Amanah) trust that must be handled responsibly (Zailani et al., 2022: 26).

Islamic finance adheres to five core objectives that are meant to ensure that it discharges its responsibility to uphold this responsibility; namely: Hifz al Mal (preserving wealth), Tawzi al Tharwah (fair circulation of wealth), Adl wa Ihsan fi al Miamalat (financial justice and virtue in economic relations), Maslahah (public welfare) and Darar Avoidance (preventing of economic harm). They shape the way by which financial institutions, investors and policymakers' sanction so that the economic activities can add in stability, inclusivity and sustainability. The next sections will explore how these five objectives provide an ethical and practical configuration of Islamic finance.

4.8.1. Preserving Wealth (Hifz al-Mal)

Preserving wealth in the Islamic finance field means not just to accumulate assets but also to guarantee the financial stability, to safeguard the resources from immoral practices and to use such wealth in order to raise the socio-economic level and achieve prosperity of society and individuals. Islam also frowns upon financial foolishness, waste, and hoarding since this led to unbalance in economics and prevent use of wealth in a useful and significant way (Zailani et al., 2022: 26).

Islamic finance also forbids exploitative transactions such as Riba (usury), Gharar (excessive uncertainty) and Maysir (gambling) the violations of which lead to financial instability and imbolder of the society (Uddin, 2015: 07). Such risk sharing models of Mudharaba (Profit sharing partnership) and Musharaka (joint venture) are applied to prevent monetary transactions from being unfair with respect to the division of profit and risk as such. And both this framework helps protect individual investors while building financial resilience going forward across the whole economy. One of the most important factors of Hifz al Mal is also for the wealth to be used for good purpose. This principle, therefore, is consistent with ethical investment practice such as impact investment and sustainable financing that directs the financial resources to different sectors aimed at realizing long term societal development in health care, education and infrastructure (Ibn Ashur, 2006: 120). In the same way, Waqf (Islamic endowments) safeguards the assets that are invested and reinvested for subsequent generations.

4.8.2. Ensuring Fair Wealth Circulation (Tawzi' al-Tharwah)

Islamic finance is designed to prevent concentrated wealth in the hands of a few privileged which implies the necessity of a more expansive economic market. Islamic finance provides these redistributive measures as part of Zakat (compulsory almsgiving), Sadaqah (voluntary charity), or Waqf (public endowments) that result in fair allocation of wealth in the society (Kamali, 2017: 155-158).

Islamic finance ensures that people become more financially inclusive by means of offering risk-sharing contracts through which individuals, particularly the small enterprises and entrepreneurs, can get access to capital without necessarily having to worry about interest-based borrowing (Kamali, 2017: 155-158). The Islamic finance formulates investments to distribute risks and rewarding unlike the conventional lending methods that often retain borrowers in debt cycles. This also provides individuals unable to access the conventional financial system with an opportunity to accumulate wealth, besides fostering economic involvement. Another illustration of how wealth circulation in Islamic finance is meant to benefit society as a whole is the increasing trend of ethical and sustainable finance, including Green Sukuk (Islamic bonds for environmental projects). Islamic finance guarantees that economic growth

supports long-term sustainability rather than short-term financial gains by funding initiatives in public infrastructure, affordable housing, and renewable energy.

4.8.3. Promoting Financial Justice (Adl wa Ihsan fi Al-Mu'amalat)

Islamic economic theory is based on justice and fairness in financial dealings. Every financial transaction has to be founded on trust (Amanah), openness (Sidq), and justice (Ihsan) (Fisol et al., 2006: 951). Riba's ban is a clear reflection of this idea since, for those who borrow, interest-based lending creates an unjust financial load while for those who lend it offers disproportionate benefit. Islamic finance, on the other hand, guarantees that all contractual conditions are obvious and mutually advantageous by eliminating fraudulent practices and too high speculation. Good governance and control mechanisms which request ethical financial conduct serves to support this concept in practice. The Islamic Financial Institutions are obliged to disclose the risks in their investments, protect the consumer, and ensure the lending policies are responsible (Fisol et al., 2006: 951). These while instilling confidence in the financial system also eliminate exploitation and financial malpractice.

4.8.4. Fostering Public Welfare (Maslahah)

Among the characteristic aspects of Islamic finance is the fact that it tends to promote the welfare of the population. Financial transactions do not only serve as a way of creating wealth to an individual but to better society as well. Health, education, and infrastructure investments can be considered in line with the Islamic ethical requirement to make wealth not only an individual good but also a collective good (Akram & Furqani, 2013: 250). The Islamic finance takes the initiative of positively impacting the social sector by investing capital in a socially responsible manner. Examples can be Sukuk (Islamic bonds), have been employed to fund infrastructure projects like schools, hospitals and clean water projects so that growth in the financial component is in line with developmental objectives.

4.8.5. Preventing Economic Harm (Darar Avoidance)

Islamic finance lays a lot of stress in avoiding harm, at the individual and system-level. La Darar wa La Dirar (no harm, no harm in return) provides that the financial operation will not result in the economic turmoil, maltreatment and market collapse (Akram & Furqani, 2013: 281). This is by not taking excessive risks and avoidance of unethical financial tools and having good regulatory checking to check the stability of the market. The 2008 international financial crisis demonstrated the risks of over-speculation, over-leverage and unethical banking. As a risk-sharing structure with the focus on ethical investment, Islamic finance allows offering a robust alternative that can protect the economies against such a disintegration (Akram and Furqani, 2013: 281). Islamic finance reduces the systemic risks and also fosters the long-term economical sustainability by making sure that the financial operations are based on ethical factors and actual economic productivity.

Islamic finance is not only an alternate financial model but a moral system that will guarantee that wealth is used in a responsible way, distributed equally, and used towards the good of the society. Including the maintenance of Maqasid al-Shariah helps financial transactions to transcend the pursuit of profit in promotion of a greater goal, which is to promote justice, avoid harm, and promote long-term economic and social sustainability. With the changing financial environment in the world, these ideals will continue to be a key factor in the development of ethical and sustainable economic practices.

CHAPTER V

A REVIEW OF THEORITICAL FOUNDATIONS OF ECONOMIC EFFICIENCY

5.1. Introduction

Economic efficiency is one of the most perennial issues in economic and financial philosophy. It is defined as the optimum use of resources to attain maximum output or welfare within certain limitations. When it comes to the financial systems, efficiency is the extent to which financial products and markets invest capital in its most efficient and risk-balanced utilization. In this respect, efficiency does not constitute an accounting concept of profitability but a structural feature of the ability of financial mechanisms to turn resources, risk, and information into economic results that are sustainable (Fama, 1970: 383).

Classical economists thought of efficiency in macroeconomic terms that is, whether an economy or a market could achieve an equilibrium where the welfare of one party could not be increased at the cost of another. This concept in the form of Pareto optimality gave the philosophical underpinning to subsequent analytical methods including welfare, allocative and productive efficiency. However, in the course of time, financial innovation has led to the analytical emphasis to the products level efficiency where one is concerned with the expected returns of individual instruments/portfolios in relation to the risk, cost, as well as the liquidity constraints (Markowitz, 1952: 80).

Economic efficiency gains a new operational meaning with respect to the financial engineering aspect. It turns into the principle which identifies whether a financial product fulfills its economic purpose mobilization of capital, production of returns and maintenance of value without introducing distortions or unfounded transfers of risks. Portfolio selection theories, capital asset pricing theories and dynamic optimization theories have increasingly defined efficiency as the ability to convert uncertainty into compensated risk and productive opportunity (Sharpe, 1964: 434). However, the behavior of modern instruments cannot be attributed only to such theories, and in

particular to those organized in a way that they are limited by ethical or legal considerations that are not limited by profitability.

In turn, this chapter attempts to determine theoretical underpinnings of economic efficiency, when it comes to financial-product assessment. It follows the developmental process of this concept that begins in its classical expression in welfare economics and moves into what is currently being understood in investment theory. The discussion takes as starting point the five traditional forms of efficiency welfare, allocative, productive, dynamic, and informational and continues by describing how these more general theoretical and economic views can be converted into four operational pillars, which are risk-return, cost-benefit, liquidity, and capital preservation. On the basis of such pillars, we construct offer a consistent framework within the scope of which the performance of financial instruments may be analyzed not only according to the return, but also in terms of sustainability, resilience, and rational allocation of resources.

Through the solid foundation of these pillars of operations by the theories of economy, this chapter therefore offers a practical model of efficiency evaluation. The following chapters will give the conceptual and procedural background of our applicable frameworks that we will quantify and measure the economic efficiency in the wider dual-pillar model of our study.

5.2. Theories of Economic Efficiency

The concept of economic efficiency has evolved through several theoretical formulations that together describe how resources should be allocated, utilized, and renewed to achieve the greatest possible welfare. Classical and neoclassical economists developed multiple dimensions of efficiency to capture different aspects of economic performance, including welfare, allocative, productive, dynamic, and informational efficiency. Each represents a distinct analytical lens through which the overall health and performance of an economy, market, or institution can be assessed. In the following sections, we will move quickly through some of the major theories that have discussed the concept of efficiency, outlining their main ideas without delving deeply into technical details.

5.2.1. Categories of Economic Efficiency

Welfare-based efficiency was among the first ways to look at economic efficiency and was based on neoclassical economics' normative branch. According to (Hansson, 2004: 361-364), the main idea is Pareto efficiency which shows that it is impossible to improve a person's lot without harming another. Vilfredo Pareto suggested this theory in the early 1900s to help measure if resource allocation is optimal. A Pareto-efficient state means that, for any resource allocation, changing where things are distributed cannot make anyone better off unless it makes someone else worse off.

Even though Pareto efficiency is appealing, it is usually understood that it is necessary but not enough for everyone to be happy. The model is not concerned with fairness; a system where all resources are with one person and nothing goes to others is Pareto efficient if no exchange can benefit one without hurting another (Luenberger, 1994: 70-73). More to the point, the concept demands that individuals possess complete information, no side effects and clear preferences which is not usually the case in complex financial markets. Nevertheless, Pareto-based efficiency can still be highly applicable in the policy and regulation of economic processes, primarily in the attempts to move the economy to a socially optimal position. Under financial product design, using welfare economics, financial products are evaluated for their contribution to the overall gain of the economy, not only to the gain of individuals buying them (Luenberger, 1994: 70-73).

The basic theory for Allocative Efficiency rests on general equilibrium theory and models, mainly Arrow and Debreu which build on the idea of markets with perfect competition, complete information and responsible actors. Prices in these circumstances give clear instructions to both firms and consumers about the best levels to produce and consume. The market theory explains how capital and labor are automatically sent to where there is the highest demand and value produced (Ghroubi & Ben Khalifa, 2025: 06-10). Even so, the way markets usually work does not match these perfect assumptions. According to (Chen & Irarrazabal, 2016: 524) and similar authors, informational asymmetries, high transaction costs and externalities can cause resources to be used unsustainably. There are many types of these inefficiencies, for example, credit rationing, speculative bubbles or not investing enough in areas like public health and they can affect economic growth and stability for years. Markets

might produce too many goods that have big short-term profits (such as speculation) and not enough services that provide essential long-term help such as healthcare or infrastructure. Making sure resources are used efficiently is very important in the financial sector. Capital goes to the areas that will be most productive in the economy such as investment, development of infrastructure or advancing technology due to financial markets. Well-developed capital markets allow investors to find opportunities that meet their risks and expected earnings and they help corporations and institutions get loans based on their true risk level. Should allocative efficiency be lost because of loopholes in regulations, common behavior or misaligned incentives, capital. It is harder to see how allocative efficiency works directly, because it often means comparing the choice made with other possible choices the capital could have been invested in. Capital-output ratios and productivity growth can be useful for getting a general idea, but properly evaluating allocative performance usually needs a review of market outcomes matched to societies and the economy's key needs.

Also, achieving allocative efficiency is not the same as a business being profitable. Even if a product or market is very profitable, it may not be efficient in allocation if the main gains come from activities such as arbitrage, speculation or finding ways to avoid rules rather than from real value creation. The importance of this difference is greatest in financial engineering because complex financial instruments may hide risk, make investment in goods and services less likely and increase the chance of another big crisis. In finance, allocative efficiency is used to assess if financial products help the economy in meaningful ways. It leads the analysis from internal performance review to asking who can use the product and if it supports the goals of the overall economy. To judge how well capital is used, inspect the purpose of the capital, the sector it affects, the stability of the flow of cash and the ongoing impact on the distribution of capital. No complete judgement of financial products can be made unless we look at both their operations and how they impact the entire economy.

Productive Efficiency is attained when an economic unit (such as a firm, industry, or economy) uses the minimum possible inputs to produce a given level of output—or equivalently, produces the maximum possible output given a fixed set of inputs. At this point, no further output increase is possible without increasing inputs, and no input reduction is possible without reducing output. This concept is typically represented by

a production-possibility frontier (PPF): Only points lying on the frontier are productively efficient, while points inside the frontier indicate underutilization or misallocation of resources. The formal articulation of this notion in production-economics owes much to M. J. Farrell's seminal work: *The Measurement of Productive Efficiency* (1957), which introduced the idea of measuring how far a production unit lies from the "efficient frontier" of best-practice technology and thus quantified inefficiency. The study defined radial input and output measures of efficiency and laid the groundwork for subsequent methods such as data envelopment analysis and stochastic frontier analysis (Farrell, 1957: 11).

A productive economy works efficiently if it produces the highest output with its available inputs or uses the least number of inputs to produce a targeted level of output (Kokkinou, 2010: 109-112). If the PPF is not followed, it means resources such as labor, capital or materials are not being used or managed efficiently. Productive efficiency in traditional industrial economics can be judged through examining cost-minimization functions and isoquants to see if input-choices fall on the least-cost curve. For markets and institutions, it reflects the level of efficiency involved in setting up financial products, pricing them and delivering them to users. It concerns the strategies employed by financial institutions to run their business, maintain technology and handle staff. A financial instrument or service works efficiently if it does what it is designed for at a minimum cost, in a clear way and without duplicating resources.

It is more difficult to establish that something is productive, unlike allocative efficiency which is manifested through the results of a market and prices — specifically in areas outside the manufacturing industry such as finance. You have to be conversant with the intricate operating framework, regulations, expenses and bizarre data that is usually not open or accessible in the presence of competitors. Although cost-to-income ratios, operating efficiency scores, and return on assets (ROA) are used to explain the outcomes on the firm level, they fail to reveal the entire picture of the performance on the system level. Further, financial products encompass such items as firm legal basis, flexibility and diversifying risks that cannot be readily determined using conventional input and quality-of-results analysis. Despite these obstacles, the concept of productive efficiency remains extremely significant. It emphasizes the fact that financial engineering must provide certain working of a

product and at the same time how safe, cheap and simple it is to comprehend. This is why the efficiency of financial systems should always be measured in terms of production to ensure that what they create really provides economic value and will not be destroyed by internal inefficiency.

Although allocative and productive efficiency concerns efficiency in one period, dynamic efficiency is a study that essentially concerns the efficiency of an economy that gradually evolves and adapts to alterations in the long run. The emphasis on innovation, investment in research and development (R&D) and the ability of the system to ensure continuous growth in productivity is one of the core points of its strategy. This type of efficiency is critical particularly in the financial sector because technology, evolving market trends and emerging rules continue to evolve. The concept of the dynamic efficiency was introduced by Joseph Schumpeter in his works where he emphasized the role the so-called creative destruction has in the economic development. Schumpeter opposed the idea of static efficiency models based on equilibrium, claiming that progress results when new technologies and business ideas replace existing systems (Schumpeter, 1942). Thus, dynamic efficiency measures if an economy or company can keep changing and innovating when new opportunities or problems appear. Dynamic efficiency in a firm relates to the pace of innovation, how well it can adjust its resources and its ability to upscale new approaches. Endogenous growth theory acknowledges that over time, innovation and knowledge shared between companies play a major role in economic growth (Silva & Stefanou, 2007: 398-399). Because of these developments, companies started looking for sustainable results and dynamic efficiency became a main focus in areas that must always adapt such as financial engineering. In financial markets, dynamic efficiency looks at how well institutions and instruments change to keep up with changes in the economy and society. It consists of evaluating how fast financial products change, how technology affects markets, how market rules adapt and how to handle capital for a long period. Being both nimble and stable, an efficient financial system means helping new ideas be used while also avoiding risks.

In financial design, dynamic efficiency leads to developing resources that are easy to add on or change, depending on ongoing needs in the market, avoiding major changes. It further demonstrates that the sustenance of new and modified abilities among experts

relies on contemporary databases, risk apps and banking frameworks. Staying the same after a while can give the illusion of success, though institutions that do not change can be easily outdated or at risk from competitors or outside changes. The financial crisis in 2008 fails to show how dynamic efficiency works. While they did well in lowering costs and improving their balance sheets, many institutions were not able to adjust to new circumstances. Because they used complex and unchanging financial instruments, financial firms did not respond wisely when financial markets changed. Key financial reforms implemented after the crisis stressed how stress testing, different scenarios and capital buffers can support a bank's ability to handle new risks (Ho, Palacios & Stoll, 2013: 04-07).

Dynamic efficiency is attractive, but it is hard to measure and execute. With dynamic efficiency, things can change over time which is not reflected in simple market prices and costs. It takes a long time for us to notice the outcomes which means policy makers and firms may not usually realize if their actions support or limit the company's future readiness. Also, sometimes, reaching higher goals in the future can cause issues with current performance measures or compliance standards, creating a challenge between open-mindedness and obeying regulations. In their works, economists like (Geerolf, 2013: 03-04) have looked at models where the idea of innovation is influenced by various institutions, reward structures and how tough competition is. According to these models, not having much competition or having too much can both harm performance: monopolies may not find reasons to research and develop new ideas and when there is big fragmentation, making risky investments in R&D may be difficult. This is why the dynamic efficiency demands not only the actions of individual firms but also the common ones, including the protection of intellectual property, provision of money to research and sound financial policies to prevent the risky experiments.

In a simple way, dynamic efficiency, with respect to looking ahead, will balance the two measures of allocative and productive efficiency which are static. It makes the financial engineers, contractors and individuals who invest to consider the future of a financial solution and the extent to which it satisfies the current requirements. Due to this fact, it is extremely crucial that the theory of reviewing the financial products takes place, particularly in the industries that remain constantly evolving, which are becoming increasingly digital and more complex.

Informational Efficiency describes how effectively market prices capture and reflect the information available to participants. In an informationally efficient market, prices move quickly to absorb new data, whether it comes from financial statements, public announcements, or economic expectations. This makes prices reliable signals for investors and decision-makers. The idea lies at the heart of financial economics because it links information flow to fair valuation and rational allocation of capital (Fama, 1970: 383–385). The informational efficiency is formally based on the Efficient Market Hypothesis (EMH) of Eugene F. Fama in 1970. Fama suggested that the security prices are efficient because they are the complete reflection of all known information and described three levels of efficiency.

Weak Form: The already existing prices have all the information with the past trading information thus history cannot be used to create abnormal returns.

Semi-Strong Form: Any publicly available information, such as earnings reports, announcements, and news, is reflected in prices, and fundamental analysis is restricted in its utility.

The market in this model is an information processor. When it operates effectively, it will direct capital to the most productive ventures and the resources will be distributed based on risk and returns (Fama, 1970). Although EMH emerged as the foundation of modern-day finance, subsequent findings showed that markets are not necessarily well-organized systems writ large. According to Robert J. Shiller (1981: 421-436), it has been found that stock prices tend to vary more than they can be explained by underlying fundamental variations, a phenomenon which gave rise to the behavioral finance movement. Likewise, Fakhry (2016: 434-437) claimed that, in the case of perfect information embodied in the prices, there would be no reason to acquire new information by investors, which poses a paradox and restricts the full efficiency. These criticisms redirected the debate to adapted or limited efficiency. As a matter of fact, markets switch between rational pricing and overreaction or inertia. Perfection is not important but the fact that the market provides sufficient information on which participants can make good judgments on value and risk.

Informational efficiency is particularly applicable to the assessment of financial instruments and the engineering practices. Derivatives, Sukuk structures and other

complex products are based on the accurate and transparent information in order to provide fair prices and appropriate risk assessment. In case product structures are opaque, in complexity, lack of disclosure, or concealed risk characteristics, the prices will no longer provide the right signals, and capital will be misallocated. For financial systems to remain efficient, products must therefore be transparent, standardized, and comprehensible. These qualities allow analysts and investors to form realistic expectations and reduce speculative distortion. In this sense, informational efficiency directly supports economic efficiency: it ensures that value assessments and capital allocation are grounded in verified information rather than uncertainty or asymmetry.

In viewing economic efficiency in many perspectives, it is evident that it is not easy to determine how a financial system or a product contributes towards the economy. All these forms of efficiency base various theories to examine the impacts of economics on individuals and corporations and when combined they are valuable in the determination of how financial operations influence the economy. The foundation of welfare-based efficiency is Pareto optimality and it provides a criterion to assess the quality of the overall effects of the policies of the government. It may not be concerned with how to address all the issues of equality or the manner in which the principles can be used but it does emphasize the desire to serve the society without injuring anybody. The concept of the allocative efficiency examines whether there is an allocation of resources as demanded in the best way possible to the society. It establishes the foundation of evaluating the markets and decision-making of companies. The issues that are brought up by productive efficiency regards the technical outputs to be least expensive but the financial systems to be constructed and operated. Dynamic efficiency considers how organizations can adapt, innovate and improve overtime. The asset pricing theory in terms of information efficiency ensures that market signals are truthful and give appropriate direction to decision making. These dimensions are analytically distinct but in practical life they tend to go hand in hand. As an example, informational efficiency informs us about the management of the outcomes and dynamic efficiency explains how production will take place in the course of time. The evaluation of financial products that are the result of financial engineering must be done as a combined set of all these factors. Financial innovations that prove to be

effective in one locale and not the other would lead to the emergence of fast gains, yet security risks or inefficiencies in the long run.

Financial engineering places special focus on both forms of efficiency. To begin with, they give the framework for understanding the actual economic worth of financial products, rather than judging them only by how profitable or well they function inside the company. Furthermore, they decide the factors that are important for evaluating, marking and examining financial designs. Next, the chapter will tie each form of efficiency to the economic theories and models at the core of designing modern financial products. Connecting the ideas in theory to their use in practice helps to build an appropriate method for performance assessment.

5.2.2. Limitations of Classical Efficiency in Financial Product Evaluation

Although these classical formulations provide a fundamental understanding of how the economies and markets work, they work at macro or systemic level. Their analytical boundaries tend to be based on idealistic assumptions, including perfect competition, optimal expectation, and frictionless markets, which are not very realistic in reality. Under applied to financial products, these frameworks offer a small amount of explanation on how an instrument performs internally in converting risk, cost and liquidity into measurable economic results.

Because of this reason, the analysis of economic efficiency at the product level would involve a conversion of these classical theories into operational constructs that would be able to estimate micro-level performance. Every kind of efficiency may therefore be traced to a given pillar of analysis: welfare and productive efficiency are associated with cost benefit analysis, the allocative efficiency is associated with liquidity and investment allocation, the informational efficiency is associated with the risk-return performance and the dynamic efficiency is associated with the long-term sustainability of capital. This change is elaborated in the following section, where the theoretical frameworks of classical theory are connected with the evaluation framework chosen in this study.

5.3. Applicability of Efficiency Categories in Financial Efficiency Analysis

The abandonment of classical theory of economic efficiency to applied financial valuation is a paradigm shift. Classical theories focused mainly on the well-being of the society and the allocation of resources on a macroeconomic level considering that there was competition in the market and that the actors were rational. Conversely, contemporary financial analysis works at the product level and is concerned with how a financial instrument or a portfolio converts inputs like capital, risk and information into a meaningful output like a financial return, liquidity and stability over the long run. This shift in macro to micro level welfare-performance is both a needed addition to the concept of efficiency in financial matters in the modern time (Hansson, 2004: 361-364; Luenberger, 1994: 70-73).

5.3.1. Applicability in Investor Decision Making

Any fair-minded investor, be it individual or institutional, goes about the investment with a fixed chain of considerations behind which lies the logic of decision-making. The first one is the profitability, which is manifested in the anticipated profit that justifies the investment of limited capital resources. Return is a multidimensional measure of the size, timing, and permanence of cash flows. These factors are compared to other investment options in terms of hurdle rates and opportunity costs to establish whether the expected payoff is worth the forfeiture of other alternative fund uses. This argument echoes the ideology of rational distribution in the face of scarcity, which was formulated in the classical utility theory (Keynes, 1936: 83-85).

The second circle of the reason of the investor is the preservation of capital. Protection of principal against losses is what will determine whether the company will be able to survive and carry on with its operations. Investors evaluate possible downside, asset correlation, and treachery to tail-risk events that can pose a threat to capital persistence. Such a loss-averse orientation goes along with the behavioural finance evidence suggesting that the weight of losses relative to an equal number of gains is more psychological and economic (Kahneman & Tversky, 1979: 15-16). Therefore, the rational investors add a buffer of safety and position-sizing constraints to limit the possible losses hence balancing the profit motive with the survival motive.

The third level in this pyramid is liquidity. Flexibility and resilience are based on the capacity to convert assets into cash at fair value when they are needed by them. Liquidity reflects market depth, bid-ask spread as well as time-to-cash ratio that is not only a technical state but also a strategic protection. Liquidity preference is a human instinct to be uncertain a tendency to keep an option and have power over timing as (Keynes, 1936: 83-85) highlighted. Therefore, illiquidity must be compensated by a return premium and greater liquidity can be used to justify lower expected returns.

Contemporary financial theory converts this investor rationality, which combines profitability, protection and liquidity, into analytical constructs that would make them measurable systematically. The trade-off between expected return and risk is formalized by the mean variance framework (Markowitz, 1952: 77-79) which represents efficient portfolios as portfolios that maximize expected return divided by unit variance. In this structure risk is no longer an indescribable concept of uncertainty but is a variable that can be measured and that can interrelate with return. This model forms the basis of formulating the equilibrium asset-pricing models, specifically the Capital Asset Pricing Model (CAPM) which relates the anticipated return of a given asset to its systematic (non-diversifiable) risk element (Sharpe, 1964: 425- 442).

This argument is supplemented by the Efficient Market Hypothesis (EMH), which states that market prices indicate all the information that is publicly available; therefore, abnormal returns can be attributable to superior information only, or the actual mispricing (Fama, 1970: 383). This sense of efficiency is an informational state that is a regulator of investor expectations. At the same time agency and transaction-cost theories focus on the frictions in the form of monitoring and bonding and negotiation that destroy gross returns hence impacting net economic efficiency (Jensen and Meckling, 1976: 31). All these views can be combined to form a rational model that is integrated, which means the mean-variance analysis, the CAPM, the EMH and the agency theory. They all express their manner of justifying profitability through compensated risk, of bettering capital protection through a system of governance structure that reduce value leakage, and responsiveness to new information through liquidity. Accordingly, investor decision-making can be seen as not a rejection of economic efficiency theory, but its most feasible expression in the field of finance.

Overall, the logics of the investor are organized on the basis of three long term objectives which jointly determine the basis of financial efficiency: (1) Profitability, which is a quest to attain positive returns and value creation. (2) Protection, guarantees security and safety of capital against losses. (3) Liquidity, the ability to keep money to allocate or consume.

5.3.2. Applicability to Product-Level Analysis

The application of the ideas of classical efficiency to the financial analysis of products is a requisite development of the normative theory to applied analysis. Classical views welfare, allocative, productive, dynamic and informational efficiency were initially developed to describe aggregate economic performance in the case of perfect markets (Hansson, 2004: 361-364; Luenberger, 1994: 70-73). But in the real world of financial systems, financial systems operate in imperfect, information-asymmetric, and risk-sensitive environments in which investors evaluate efficiency not at a macroeconomic level, but at the individual level of instruments and portfolios. Therefore, the issue of contemporary financial assessment is how one can determine what aspect of the efficiency can have a meaningful impact on the ability of a product to enable the transformation of capital, risk, and information into sustainable economic value (Chen & Irarrazabal, 2015: 526). Efficiency at the product level is not an abstract concept but the reflection of the interpretation of performance among the investors. The rational decision-makers, the investors in this case, assess products based on three broad areas, namely, profitability, capital protection and liquidity, which combine to define the appeal and maintainability of an investment. Profitability is the indication of the anticipation that invested capital will yield returns that are commensurate to the risks taken and the resources injected. Capital protection guarantees the survival of the principal and having the ability to maintain their real value over time and market pressures. Liquidity gives room to reassign or sell assets with the change of conditions without triggering too much losses. These priority preferences are agreeable to the classical view and behavioural view of economic rationality (Kahneman and Tversky, 1979: 15-16).

Continuing on this rational of investors, four dimensions of analysis become the bare minimum overall set needed to assess product-level efficiency: Risk -Return, Cost-Benefit, Liquidity, and Capital Preservation. Each of the dimensions can be linked to a quantifiable expression of the goals of the investor and represents one of the key areas of the economic performance.

The Risk Return Dimension is a measure of profitability in the case of uncertainty, and it represents how well a product can convert the exposure to risk into paid off performance. It is based on the portfolio and asset-pricing theory (Markowitz, 1952: 77-79) and the core of the contemporary evaluations of financial efficiency (Zabarankin, Pavlikov, and Uryasev, 2014: 505).

Cost Benefit Dimension indicates the efficiency of utilizing the resources and the relationship of welfare and productive efficiency to financial decision making. It evaluates the total advantages of an instrument and the cost of its transactions, operations, and opportunities (Boadway, 2006: 1–5).

The Liquidity Dimension represents the flexibility requirement of the investor by assessing the depth, breadth, and strength of market processes or internal cash-flow capability (Polimenis, 2005: 443-445).

Lastly, the Capital Preservation Dimension is used to depict the strength of capital and its capacity to survive the negative environment with references to the idea of dynamic efficiency and modern views on financial resilience (Silva and Stefanou, 2007: 398-400; Ho, Palacios, and Stoll, 2013: 36).

These four dimensions are justified by the fact that they are sufficient and universal. The combination of them represents the overall process of value creation and maintenance by a financial product: (1) a transformation of uncertainty into justified returns, (2) a net value creation and continuity after the deduction of expenses, (3) a retention of liquidity and flexibility, and (4) continuity of capital. Other possible measures, like leverage, innovation, or market share are not primary relationships (they are derivatives of these primary relationships). Any omission of either of the four would create an intellectual void: profitability would be out of context without cost and risk analysis; liquidity would bring short-term and not long-term efficiency.

Overall, the shift towards product-level assessment is steered by the three motives of profits, protection, and liquidity characteristic of the investor that are empirically manifested in the four operational dimensions of Risk–Return, Cost-benefit, Liquidity and Capital Preservation. They are not arbitrary dimensions but direct, most evidence-based attempts to translate the reasoning of investors into quantifiable indicators of economic efficiency (O’Sullivan et al., 2024: 55). They hence constitute the theoretical and analytical basis on which the later chapters will operationalize and quantify the economic efficiency of the financial products.

5.4. Channels of Efficiency of Operation

This is where a synthesis of the above discussions is made with the identification of the key, or core, operational channels or pathways of efficiency under which efficiency should be assessed. All channels have a different process through which a financial tool transforms inputs, like capital, risk and information, into quantifiable outputs of performance, stability and flexibility. A combination of these channels offers a multidimensional model of measuring the effectiveness of financial products not based on profitability alone but taking into consideration the sustainability, liquidity, and capital protection of the assessment. Although the classical theories establish efficiency at the macro level, the channels convert it to micro level measures that capture the behaviour of the investors and the performance of the products. Out of all the different types of efficiency discussed in the literature, all the others, (allocative, productive, dynamic and informational) four channels proved to be specifically applicable in applied financial analysis and they are Risk Return Efficiency, Cost Benefit Efficiency, Liquidity Efficiency and Capital Preservation Efficiency. All these are essential and complementary elements of economic performance that are in line with the three strategic goals of the investor namely profitability, protection and liquidity. These four channels are discussed in the subsections below, the first being Risk Return Efficiency that forms the basis of economic performance as it relates uncertainty to proportionality.

5.4.1. Risk–Return Channel

Risk-Return efficiency is the channel upon which economic efficiency is woven in financial products. It defines the ability of an investment to convert risk to uncertainty to a reasonable and compatible compensation. The critical point in this regard is not the absolute level of returns, but the reasonable proportion of the possible gains and the risks taken on these gains. This connection is the analytical core of financial decision-making because uncertain perception of the investor is connected to the quantifiable performances and stability results (Buchak, 2014: 125). Classical financial thought has defined risk as the fluctuation or variation of potential outcomes, and the reward of investment made with uncertainty is called the returns (Schoemaker, 1982: 531). The efficiency depends on the effectiveness with which an investment returns the risk that is being taken, both in the sufficiency of its expected payoff as well as the consistency of its distribution of outcomes. Risk-return efficiency in operational terms, the risk-return efficiency is, therefore, calculated by comparing the realized or projected returns with the statistical measurements of risk such as the variance, the volatility, the beta, or the drawdown ratio (Estrada, 2006: 119). Such quantitative measures are balanced by behavioural dimensions that affect the perception of investors as they are more apt to tolerate greater losses than equal gains, and this results in the asymmetry of tolerance to uncertainty (Shiller, 1980: 421-423). With time, various traditions of thought have been used to define and formalize the relationship between risk and return. Older theories like the Expected Utility Theory (EUT) put in place the mathematical basis of rational choice in the face of uncertainty, which refers to the process of maximizing expected satisfaction instead of nominal profit by investors (Diecidue & Wakker, 2001: 282). This logical principle was subsequently put into operational use by the Mean Variance framework of Markowitz (1952) that used efficiency of portfolios as a measure of the efficiency of portfolios along an efficient frontier of optimal combinations of risk and return. Later on, the Capital Asset Pricing Model (CAPM) generalized this relationship to the market equilibrium and stated that systematic risk alone should be given a premium (Sharpe, 1964: 426-428; Fama and French, 2004: 273). Simultaneously, a very critical aspect of realism was brought to Behavioural Economics, that of acknowledging the fact that investors are

not entirely rational-psychological influence and heuristic prejudices tend to distort the image of risk and reward (Kahneman and Tversky, 1979).

The section does not go out of its way to enumerate the vast literature on the concept of risk–return relationship but instead it is an attempt to determine which conceptual and methodological underpinnings make it possible to measure such measures at the product level. The chosen models form a continuum of rational through behavioural conceptualizations of efficiency, which offer the theoretical infrastructure of the scheme that is founded in subsequent chapters. In this continuum, Expected Utility Theory defines rational preference, the Mean–Variance model operationalizes quantification, CAPM introduces market standardization, and Behavioural models restore practical realism. Together, they delineate how risk–return efficiency can be empirically assessed as the first channel of economic efficiency, guiding how investors perceive, price, and allocate capital in pursuit of rational performance.

5.4.1.1. Theoretical Orientation

The Expected Utility Theory (EUT) continues to be the backbone of all the future models of risk and returns. It is a decision-making model that was introduced in conditions of uncertainty; it suggests that rational actors provide a utility to the outcomes and select the alternative with the highest expected utility instead of the expected monetary value (Buchak, 2014: 192). EUT changed this concept of financial choice and it incorporated subjective preferences in which people can express a different attitude towards risk. A concave utility function is a sign of a risk averse, whereas the linear or convex utility function signifies the behaviour of neutrality and risk-seeking, respectively.

In financial products design, EUT offers a rational justification of how to design instruments that address the needs of different types of investors. As an example, the high-risk aversion investor would buy fixed-income or capital-protected notes whereas the risk-taking investor would buy convertible or equity-linked notes which have higher, but more insecure, returns. This flexibility of the design to accommodate the choice of investors is a constitutive part of economic efficiency, since it provides that

the exposure to risk is not too great, and is not at cross purposes with the utility role of the investor.

Moreover, EUT provides the basis of the measurement of expected value in uncertain settings, whereby probability distributions of outcomes are connected to welfare-maximizing behaviour. This is not only a behavioural concept, but it also carries important analytical implications in pricing, hedging, and optimization of a portfolio. Although behavioural finance has criticized EUT on not considering the practical non-rationality in the world, it still remains the standard of reference in efficient decision-making. Without it, the relationship between the risk exposure, and the reasonable compensation would not be theoretically right to any scientific test of financial effectiveness.

The Capital Asset Pricing Model (CAPM) developed on the basis of EUT and the mean-variance optimization of Markowitz, offers a formal way of providing a numerical measure of the relationship between the risk and the return. CAPM assumes that the expected performance of an asset is connected to its systematic risk (in the form of a beta (β) linearly and the value of the beta (β) of an asset is the covariance between the asset and the market portfolio (Fama and French, 2004: 252). The equation that defines the model, $E(R_i) = R_f + \beta_i (E(R_m) - R_f)$ shows that the investors require a higher rate of return as each unit of the market risk increases beyond the risk-free rate.

According to this model, it is non-diversifiable or systematic risk that is entitled to receive a premium along with the mitigation of idiosyncratic risks that can be achieved through diversification. This separation follows the rationality of economic efficiency, where it would not be encouraged to compensate inefficiencies due to risk exposures which may be avoided or unpriced. CAPM thus offers a normative and analytical standard: any product with returns that are lower than its risk-adjusted performance is inefficient economically and products that are above the Security Market Line are indicative of value creation.

Financial Engineering with the use of CAPM can also determine cost of equity and minimum required returns that justifies the issuance of products. CAPM is sometimes employed as a structural intermediary between the risk analysis and the cost-benefit

analysis because discount rates in the valuation models such as Net Present Value (NPV) or Internal Rate of Return (IRR) are frequently calculated using CAPM. The model, despite its being criticized on its simplifying assumptions (perfect markets, homogenous expectations, and frictionless trading) has still had a perennial explanatory value. Although multi-factor extensions of CAPM, such as the Fama-French and Carhart models, are also based on the fundamental logic of the model that is, systematically and not randomly, the reward of risk.

Even though the EUT and CAPM model explain the response of risk and return in general, the pricing of structured products demonstrates that they can be applied to more complex financial structures. Organized derivatives (equity-linked notes and reverse convertibles) use derivatives the price of which integrates both a utility framework theory and a market-implied volatility framework. These instruments are valued by using models which measure exposure to market, credit, and liquidity risks using Black-Scholes, binomial trees or Monte Carlo simulations.

Structured product risk pricing is not limited by mathematical pricing. It represents the way issuers and investors share risk, by either capital protection or participation rate, or payoff conditionalities (Zabarankin, Pavlikov and Uryasev, 2014: 508–509). The more open and equal such distribution, the more economically efficient the product is. On the other hand, too much complexity or inappropriate pricing of the risk would undermine efficiency by masking actual exposure. Systemic interaction between structured instruments was not recognized sufficiently by markets as Cox, Fairchild and Pedersen (2004: 260-262) noted, which results in risk accumulation that can only be observed during conditions of stress. The financial engineering required to achieve efficiency thus requires pricing systems to capture the actual market risk as opposed to regulatory or information asymmetry.

5.4.2. Cost–Benefit Channel

The cost-benefit efficiency is one of several focal manifestations of economic rationality in the long-term and involves a connection between the utilisation of scarce resources and the long-term benefit sustainability. It contains an underlying question of the financial theory of whether the future flow of benefits a certain activity creates

makes it worth the expenditure to generate these benefits. In this reasoning, efficiency goes beyond profitability and goes in terms of the ability of a financial product or policy in creating long-term value over its life cycle. The connection between sacrifice and reward turns out to be an intertemporal choice issue, which involves making rational trade-offs between the current spending and future reward (Boadway, R and Bruce, 1984: 24). The basis of this argument is the concept of time value of money (TVM) or the idea that one unit of money in the present is worth more than the same unit of money in the future due to its earning capability. This is what the concept gives rise to discounting, which converts the future benefits and costs into present equivalents to enable a meaningful comparison of the same (Damodaran, 2012: 68). This transformation, in terms of efficiency, enables decision-makers to determine whether time-adjusted benefits exceed time-adjusted sacrifices, which ensures that scanty resources are used in the most efficient temporal combination.

5.4.2.1. Theoretical Orientation

The philosophical and behavioural origins of the discounting can be traced to the works by Keynes (1936: 385) that corresponded to the definition of liquidity preference that explained the instinctual tendency towards current consumption at the expense of unknown returns in the future. This disposition produces the discount rate which is a contrivance that balances the present satisfaction deferred, and the uncertainty of time. The discount rate therefore captures the cost of opportunities and a psychological utility in linking finance with human behaviour in the state of uncertainty. Discounting, when used in capital allocation, transforms heterogeneous cash flows into similar values thus bringing time as a quantifiable variable when determining efficiency (Fisher, 1930: 101).

In this theoretical light, the cost-benefits efficiency is a method of combining the temporal rationality to the principle of allocative efficiency scarce resources are allocated to applications that provide the greatest net value over time. A product that is financially efficient therefore is the product that converts the available resources into future benefits that have a higher present value than the future cost of opportunity (Damodaran, 2012: 69). This framing over time inserts cost-benefit rationality into the

larger field of welfare economics, in which efficiency is the maximization of social or private welfare using efficient timing of resource utilization.

Cost-benefit theory is further narrowed down to incremental analysis, with the introduction of marginal efficiency of capital (MEC) by Keynes (1936: 104-106). It assumes that returns to every extra unit investment must just cover its marginal cost; after that point, the returns to an extra unit of expenditure will be less than the marginal cost. This is the theoretical rationale why effective financial systems need to continuously recalibrate the cost systems and pay benefit expectations. It further illustrates the fact that, it is the difference between incremental benefit and incremental cost rather than the maximization of gross returns that is the actual test of efficiency; a principle that is central to modern capital allocation theory (Jorgenson, 1963: 248-250). The law of diminishing returns strengthens this perception: with an increase in the intensity of investment, the marginal benefit of an extra unit of investment is more likely to decline, unless there is an innovation or economy of scale. Sustainable efficiency is therefore not a static concept; it is a process which is constantly under review of whether incremental costs are worth the incremental payoff. Such dynamic application of cost-benefit analysis is consistent with the changing nature of financial engineering, in which products and structures need to be re-assessed on a regular basis to be long-term viable.

Theoretically, cost-benefit efficiency will be placed at a middle ground between risk-return efficiency and capital saving. It adds the time aspect in the financial analysis by posing the question of whether or not returns sufficiently compensate the time as well as risk. By so doing, it compliments liquidity efficiency- which concerns transactional immediacy- since it is concerned with the coordination of costs and benefit over time in a number of time horizons. A financial product is economically efficient hence it provides a balance between short term rationality and long-term viability such that the time value of money is not wasted in the present.

Finally, cost-benefit channel gives the theoretical linkage between intertemporal choice, opportunity cost and dynamic efficiency. It translates the philosophical concept of time preference to the analytical one associating investment decisions with the overall aim of sustainable financial performance. This dimension is what allows financial engineering to be embedded in terms of time-based reasoning and in the

framework of economic efficiency to guarantee that the creation of long-term value is sustained and that the limited resources are used rationally.

5.4.3. Channel of Liquidity Efficiency

Liquidity is one of the core pillars of economic efficiency since it links the temporary operation capacity with the financial stability of the market in the long run. Theoretically, liquidity refers to the convenience and the rate at which assets or obligations can be turned into cash without any significant value loss. This is a crucial property in two aspects; it ensures continuity of financial activities and it forms the basis of confidence and stability in the market (Tobin, 1958: 74). It has both internal and external aspects of the concept, in that internal liquidity guarantees that the entity is solvent, and market liquidity that the system is easily traded and resilient at large. Too much liquidity may paralyze resources and reduce returns, but is associated with insolvency protection, whereas too little liquidity increases the level of financial stress and default. Therefore, liquidity efficiency shows the economic principle of optimum flexibility: staying flexible enough to satisfy the short-term commitments without reducing their profitability or capital growth. This dual balance defines liquidity as an operation issue as well as a hypothetical factor that determines the efficiency of the entire economy.

5.4.3.1. Theoretical Orientation

On the inside, liquidity provides a continuation of finance by way of discipline in terms of timing of cash coming in and going out. Classical finance understands liquidity as part of working-capital management that puts profitability and solvency in between (Gitman, 2009: 642). The cash-flow timing principle is the theoretical core, according to which the alignment of payments and receipts to the operational stability is widely associated. Efficient financial management in this perspective means to be in a state of elastic solvency the capacity to absorb temporary shocks without having to engage in value-destroying activities such as distress sales or excessive borrowing. Furthering the idea of Keynes (1936: 83-85) about liquidity preference, the current theory views liquidity as a behavioral factor due to uncertainty. The importance of flexibility and

immediacy is in the fact that economic agents do not know what the future will bring; consequently, liquidity is viewed as a kind of insurance against the risk of not being able to make transactions when it is required. This conceptual explanation places liquidity in the conceptual context of intertemporal choice: the presence of liquidity means that there is a trade-off between possible yield and security and flexibility.

External to this, liquidity stretches to the organization and manner of the financial markets. Market liquidity is the ability to trade rapidly, in large volumes and with a minimum number of price impacts. This idea was formalized by Kyle (1985: 131-132) who established three structural attributes of depth, breadth and resilience that combined to define the capacity of a market to absorb orders and re-equilibrate after a temporary shock. Informational efficiency is also closely connected with liquidity. According to the Efficient Market Hypothesis (Fama, 1970: 383), the prices of assets will reflect all the information accessible to them, and liquid markets will spread the information faster, whereas the transparent information will boost trading operations. This reciprocity implies that liquidity does not just contribute to easy transactions, but it also serves as a medium of distributing resources and finding prices, which are key elements of allocative efficiency.

Behavioral economists however, have cast doubt on the assumption of a perfect informational efficiency. Schiller (1981: 211) and other researchers noted that investor sentiment, herding, and speculative momentum may lead to distortion in the prices resulting in a bubble or a freeze of the liquidity. These observations suggest that liquidity is not a structural phenomenon; it also requires rationality and confidence of the market players. In the latter sense, liquidity efficiency represents both a mechanical and psychological aspect of it, including the trading mechanisms as well as trading expectations and trust.

Liquidity plays a stabilization role in the financial structure. Adequate liquidity facilitates transmission of the monetary policy, it cushions the asset-price volatility, and reduces the systemic fragility (Holmström and Tirole, 1998: 15). On the other hand, this is because liquidity deficit can fuel crises such as the 2008 financial meltdown when interbank funding became non-existent, and assets prices plummeted (Brunnermeier and Pedersen, 2009: 220-222). Therefore, liquidity does not belong to the characteristics of individual institutions but rather to the systemic efficiency as a

collective determinant. The theoretical implication is that optimal liquidity is between two extremes, excess, which traps capital in idle reserves, and deficiency, which takes the value-destroying liquidation. Liquidity efficiency thus aims at achieving equilibrium in that financial systems are operationally adaptable and also economically viable. The very fact that it represents economic rationality in action: the sobriety of not going too big, and the self-control of not hoarding or speculating.

Finally, liquidity efficiency is the dynamic linkage that exists between the structural and the temporal aspects of the financial performance. It makes sure that it guarantees that the short-term solvency promotes, and not compromises, the long-term value creation. This balance is what makes liquidity not only a technical situation but a theoretical base of economic efficiency but a key determinant of stable financial stability.

5.4.4. Capital Preservation Channel

One such element of economic efficiency (defensive) is the capital preservation which without compromising the continuity of values of investments (nominal and real). When other efficiency building blocks seek to maximize the returns or strike equilibrium between the costs and the liquidity, capital preservation seeks to build the financial value stability over the growth and shrinkage phase. It demonstrates the fact that it is not only growth that is a determinant of efficiency, but also sustainability. The conservation of funds in the capital theory of the modern finance is obtained through many approaches that involve sturdiness, cautious matching of risks as well as structural operations that ensure the irreparable destruction of values. Without such stabilizing processes, the short-term efficiency is poor and unsustainable. Simply put, capital preservation is represented as financial resilience, which means the ability of a financial product, portfolio, or institution not to lose its value and functionality when subjected to stress. The concept incorporates risk, systemic stability and asset structure into one theoretical field. A well-functioning system is one that can take in shocks, adjust to the fluctuating market factors and survive without much capital integrity being destroyed. Consequently, capital preservation is the hypothetical anchor of

economic efficiency, it turns efficiency into an existing state, rather than a transitory state.

5.4.4.1. Theoretical Orientation

Financial resilience can be traced back in the systems theory where complex entities are considered dynamic systems that can absorb shocks and reabsorb equilibrium. In financial terms the term resilience is the capacity of organizations or tools that can still be operable at times of economic instability. As Ho, Palacios and Stoll (2013: 47) point out, the financial resilience never eliminates the risk but makes it possible to survive and live through the risk. A robust system sustains its necessary framework, capital sufficiency, liquidity holdings and reliability even as the external factors start going downhill.

The stress theory defines resilience quantitatively. Stress testing represents the response of a portfolio or system to hypothetical negative situations, including adverse changes in interest rates, falling of credit ratings, or freezing of liquidity. The amounts of tolerations of capital structure are measured by the simulation of such conditions by analysts. This, hypothetically, is making resilience a quantifiable bit of efficiency: a financial product that works well during the crises of extreme stress is a capital efficient one, as the value of continuity is profitable. The more robust the system, the less robust a system that is in a fragile state resulting in investor confidence and systemic stability. Moreover, the concept of resilience also embodies the principle of adaptive efficiency, set forth by institutional economics, where systems are developed through learning and feedback, and not hard optimization. This notion reinforces the notion that there is no efficiency but that it is dynamic, namely: asset sustainability in the long-term should revert to maneuverability, redundancy and projective thinking. An effective capital structure allows the ability to be exposed to risk as it pleases without endangering its very existence, and performance should not die between market regimes.

Capital erosion is the opposite of efficiency the erosion of real (or nominal) investment value in the form of volatility, inflation or credit degradation. In theory, it points out the imbalance between loss and recovery a loss of 50 % is compensated by a 100%

percent gain to balance. This non-linear correlation shows that it is mathematically more effective to avoid deep losses rather than take high returns but volatile. As Fama and French observe (2004: 252), risk is not priced correctly and that brings about boom and bust which end up destroying long-term capital. Efficient financial management, therefore, focuses on downside protection, i.e., reducing the extent of the loss instead of maximizing the returns (absolute). The logic defines preservation as not the risk lessness but the risk alignment in proportion: not keeping exposure levels excessively high, because volatility should not impair sustainability.

One such theoretical asset that capital preservation is the asset backed structure which offers the physical support of the financial instruments. Asset-backing sees to it that every financial commitment is pegged towards recognizable and productive resources, thus basing the valuation on real economic activity as opposed to speculative feeling. (Demirdöğen 2024: 83) reminds that this importance of such structures is to improve transparency and accountability by thoroughly linking returns to underlying performance. Such association reduces the information asymmetry and increases the confidence in the honesty of the valuations. This is the asset-backing as technically a structural buffer of capital erosion. It transforms non-guaranteed claims into security-pledged claims, which diversify the upwards and downwards market risk and removes it as security. Through this it narrows the distance between the financial and real world - a relationship that is very vital as far as sustainable performance is concerned. The same reasoning is observable in the financial products which are presented by real assets, e.g., a mortgage-backed, lease-backed or project-backed product. Their pricing does not only rely on the mood of the market but it is supported by the underlying economic output, which causes a better standing in terms of capital continuity.

Additionally, asset-backing exists, which helps to recover in the scenario of default. It grants investors legal and economic rights to residual values, boosting recovery rates expected, and reducing systemic contagiousness. This capital protection of structure turns the efficiency of performance into the efficiency of design - efficient products are the products whose architecture is such as to resist loss of capital. Therefore, asset-backing represents an active type of capital protection, anchoring the safety in order into the structure instead of the intervention after the crisis.

Capital preservation as a multidimensional construct in the focus of economic efficiency is the sum of the three theoretical strands present resilience, downside control, and asset support. Financial resilience implies that it can be endured in case the times become difficult, downside risk constrains the intensity of potential losses, and physical capacity is created to bounce back by means of asset-backing. When put together, these factors will transform capital preservation as a passive understanding of safety into efficiency dimension. No longer does a financial product have to not break down but show the capacity to maintain value over cycles, adapt to shocks and recover rapidly on disruptions. Its theoretical importance is supported by the dependence between the preservation of capital and the rest of the efficiency foundations. Strong risk-reward linkages are based on the ability of capital bases to support investor confidence; costs-benefit maximization is based on the assumption that future payoffs will not be destroyed by capital depreciation; and the liquidity position is based on the fact that capital bases can continue to support solvency and tradability. In that regard, capital maintenance is being the structural end of economic efficiency the element that makes all the rest viable in duration.

Finally, efficiency is sustainability that is determined by the maintenance of capital. And in the absence of it, the gains that are made in the short term cannot be sustained, and the stability on a systems level fall apart. Productivity then has to be reconceived as a sustainable balance between profitability and protection. The most efficient financial system is one that does not just improve the short-term payoff, but one that has the ability to create value on an on-going basis despite the uncertainty. Capital preservation, therefore, finishes the theoretical stipulation of economic efficiency of ensuring growth is anchored by resilience and expansion is measured by timeless integrity of value.

5.5. Implications for Framework Development

According to the theoretical discussion of the four efficiency bases, risk -return, cost-benefit, liquidity strength, and capital preservation, economic efficiency is not a one-dimensional property because it is a multidimensional balance, among mutually supporting financial principles. The foundations have a different evaluative opinion,

and they all constitute a complete theoretical model that can offer empirical and the analysis procedure. But theory does not make efficiency practical, its usefulness is to provide measurable structures to be able to consult and make decisions. The theoretical implication to the framework development is that these theoretical constructs need to be changed to operational variables, which can be objectively measured. The risk-return foundation offers the rationality of proportionality to take up uncertainty and compensation whereas the cost-benefit foundation ushers in intertemporal rationality by making use of intertemporal valuation. Capital preservation provides a measure of resiliency as a mechanism of sustaining value and liquidity strength includes continuity and market flexibility. These are all reasons to have an integrated efficiency analysis which is not limited within a short-term profitability and embodies systemic stability. The build-up of viable assessment framework would then suggest putting these hypothetical grounds in methodical aspects of analysis. Through such a process, measurable indicators, aligned to each of the foundations are determined and measurement criteria are determined and thresholds that can be used to ensure effective versus ineffective results are determined. Such translation is not merely theoretically sound and can be empirically verified. Besides that, it ensures that the end framework is placed in theory, internally consistent and able to adapt to different financial instruments and market environment.

Finally, the scientific validity of the upcoming framework is determined by the implied theoretical implications of this chapter. It is followed by the next stage which is introduced in Chapter 7 and which is an extension of these bases, in which the abstract financial reasoning is transformed into a coordinated system of analysis. By doing so, it connects the disconnects between theorizing about the concepts of economic efficiency and putting them into practice, making sure that the concept of economic efficiency is not being theorized at all, but rather being a systematic assessment.

5.6. Summary

The conceptual examination that has been undertaken in this chapter has systematized economic efficiency as a multifaceted and multidimensional notion, which is anchored to the classical and modern thought in finance. As it is discussed, efficiency cannot

just be equated to profitability but must also be the ratio of reward, cost, liquidity and sustainability. Both theoretical foundations, risk-return, cost-benefit, the strength of the liquidity, and the preservation of capital are separate pillars forming the structure of the efficient financial functioning. They are combined to establish the measures within which a financial product can be regarded as rational, resilient, and value-generating. The result of the investigation conducted on the risk-return relationship was that efficiency was not based on absolute returns but on comparative gain to uncertainty. The cost benefit base gave it a time context so that intertemporal optimization rather than short term optimization is promoted by time value of money and discounting doctrine. The liquidity base provided an extension of efficiency to the operations and market arena as a pre-requisite towards stability and trust. Lastly, the capital preservation foundation unveiled sustainability and stability as it demonstrated that sustainable efficiency demands safeguarding against the death of capital and stresses of the system. As the combination of these foundations, they result in a consistent theoretical model of economic efficiency that is compatible with the overall resultant theoretical perspectives of rational finance. They jointly see to it that efficiency is tackled as a state of equilibrium as opposed to one expenditure. This balance shows that the financial system can change risk to rightful reward, allocate resources appropriately with time, become liquid when required and also guard capital in the case of volatility. A system like this not only presents the best performance but also sustainability, flexibility, and openness which are the features that support consistent financial development. The following theoretical synthesis is the intellectual foundation of building an assessment system. The moment of theory to framework necessitates operationalizing these premises to measurable and testable contents ensuring that the abstract reasoning of efficiency can be operationalized in the empirical context. In this regard, the subsequent framework development in Chapter 7 is not the theoretical abandonment, but rather its continuation in the form of a structure. It converts the principles of the concept into tools of analysis, and maintains the integrity of the theoretical model suggestion in addition to being able to apply it in practice.

Conclusively, the chapter serves its purpose of providing the theoretical framework of the research. It describes financial-based economic efficiency, isolates its foundation

pillars, and sets up the background on how to render such concepts into a systematic assistive model. The second phase of the research will take this theoretical base into the conceptual and operational framework where such pillars shall be operationalized into quantifiable parameters and combined with the dimensions to have a holistic manufacturer of financial products evaluation.



CHAPTER VI

DEVELOPING A CONCEPTUAL AND PROCEDURAL FRAMEWORK FOR SHARIA COMPLIANCE

6.1. Introduction

Legitimacy should receive preference over performance in every system of financial assessment. Under the scope of Sharia compliance, the legitimacy of such an endeavor lies in the perspective of Islamic finance, where the primary variable to differentiate between acceptable innovation and unacceptable imitation is. Before the validity of a financial instrument (profitability, liquidity, or efficiency) is measured, it has to satisfy the moral and legal requirements of its validity. As a result, the Sharia Compliance Framework is the first and fundamentally important Pillar of this dual-evaluation model suggested in this research. It provides a structural and procedural base on which further economic analysis is constructed. This chapter serves as a connecting point between the concepts we learnt in Chapter IV and their application in the real world. In other areas, we have examined the legal and moral arguments that influence Islamic financial regulations. The intention is to transform abstract rules into the quantifiable sections, which is to explain what is going to be checked, the way of checking and the understanding of the results. This allows compliance teams and financial engineers to review any financial product in a repetitive transparent manner that is Sharia rational.

Sharia Compliance Framework is based on two related assessments. The initial and the initial line of defense is the Gatekeeper Criterion. It picks up blatant infractions, including high rates of returns, speculative enterprises, or empty promises. In case the product does not pass in the Gatekeeper test, the product halts and receives no further consideration. The second one is the Suspicion Criterion, which concerns cases in the grey area, where indirect or unclear components of a product could be non-compliant. In compliance with the second criteria, the ethical and legal aspects are also considered over the traditional binary framework.

First, it provides an easy theory which connects Sharia objectives to methods of measuring finance. Then it has a model with major blocks such as Pillar, Dimension, Aspect, Criterion and Tool components. There are six key attributes of Sharia compliance listed in the chapter, which are divided into quantifiable sections and measured using a particular set of tools. Practically, the chapter describes how the judgment calls are made, such as detection of suspicious items, scoring systems and their analysis. Lastly, it discusses how to formalize these processes, with the aid of standard tools, and this contributes towards consistency and reliability of these financial products and organizations.

The primary section of the two-Pillar system, as observed in the introduction is the Sharia Compliance Pillar. The general principles and methods of decision-making are that it must be valid, then efficient, then prohibited, then considered performance, and finally persuaded it will work before making a conclusion. As ideas are taught clearly and followed strictly, this chapter turns Sharia ethics into practical practice. It shifts compliance assessment from subjective to systematic and evidence based.

6.2. Sharia Compliance Evaluation

The compliance to Sharia is founded on a wide range of rules, ethics and objectives that is based on the Quran, the Sunna, and centuries of legal reasoning. These regulations are not only informing us about what is prohibited; but they define the moral and the practical boundaries of any financial operation. In Islam, legitimacy precedes making money and the integrity of a transaction is just as important as its profitability. Therefore, a product cannot be a legal product unless it is based on the principles of Sharia. Conceptually, Sharia compliance is comprised of three complex concepts that are interconnected. These are: (1) Operating within the Halal Domain, which secures that the activity and the contract and the purpose underlying are necessarily permissible. (2) Avoidance of Prohibited Transactions, that avers any aspect of Riba (interest) Gharar (undue uncertainty), Maysir (speculation or gambling), Tadlis (fraud) or Ihtikar (monopoly or exploitation); and (3) Meeting the Maqasid Al Sharia meaning that all the financial activities will lead to justice, balance, and social welfare in line with the higher purposes of the Islamic law.

A combination of these three foundations is referred to as the main dimensions of the Sharia Compliance Pillar in the frame of the current research. The former two i.e., the Halal Domain and the Avoidance Prohibited Transactions are operational dimensions that can be directly gauged at the product level. The third one, Meeting the Sharia Objectives is more of a moral and philosophical compass that directs the first two, but, in its turn, is not a quantifiable dimension in the measurement of individual products. There must be a separation between Maqasid al-Shariah, the fundamental aim of Islamic law, and practical conformity. Maqasid are the governing dimensions that regulate and legitimize all legal norms. The moral purposes of the law, justice, equality, and population welfare, are not measurable, therefore measuring Maqasid by product would be misleading. The framework posits that a product supports the Maqasid by making something lawful and avoiding prohibited components without having to weigh each component in proportion. The conversion of these concepts into instruments in the contemporary Islamic finance requires explicit regulations. Various organizations such as the Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB) have elaborate rules which conform to the teachings of scholars to the way the banks operate.

These regulations hold new financial products according to the ancient religious law. In the case study, AAOIFI rules are taken to be the primary checking basis. Nevertheless, the system may also be guided by other rules or institutional perspectives of the school. When one applies another religious perspective, then it must be established at the early stage as well as applied in every section of the project to maintain the approach straight up. Previously, the determination of whether something obeys Sharia used to rely significantly on the opinion of an individual scholar. Although such a decision is within the tradition of Islam, in the modern complex financial products, a more systematic and definite approach is required to evaluate them. Even a system of measurement ensures a constancy of things without excluding good thinking. It provides an explicit procedure according to which the varying scholar views could be utilized, reviewed, and exchanged in a standard manner.

Generally speaking, this chapter indicates that there are three key concepts. First, in order to adhere to Sharia, one needs to remain in the Halal world, avoid unlawful transactions, and adhere to the grand aspirations of the Islamic law. Second, the

Maqasid is a guiding concept, which is not a product-level measurement. Third, you must have systematic checks and rules to ensure that they do not change and be compared across various institutions and different interpretations. These propositions provide the conceptual framework by providing the intellectual foundation of the next section which constructs the conceptual framework. The following section of the chapter transforms these legal principles into a systematic framework comprising some quantifiable dimensions, aspects, criteria, and tools, developing a complete assessment methodology to compare the Sharia validity of financial products.

6.3. Construction of Conceptual Framework

The conceptual framework is the principal framework of this research, as we mentioned above, in Chapter III. It operates on the same order, which we have already discussed, Pillar, Dimension, Aspect, Criterion, and Tool, to ensure that theory and practice remain in touch with each other. Within this sequence of levels, we can find a distinct job, at each one, that assists in the transformation of ideas into things that can be measured, thus, we are able to examine Sharia compliance in a clear, accurate, and consistent manner.

The Sharia compliance framework converts intricate legal arguments and transforms it into a structured model that is fair to every type of financial product. The overall goal is to make the three fundamentals' concepts, namely, remaining faithful to halal provisions, no forbidden deals, and achieving the great objectives of Sharia, a viable method of assessment. Rules of Sharia that were formerly simply written or interpreted are now observable, quantifiable, and subject to judgment in an understandable systematic manner.

There are five levels in the framework that assist in transition to specific measurements, out of general rules. These levels include Pillar, Dimension and Aspect, Criterion and Tool. Each level is not in vain and collaborates with others to streamline the process and make it understandable.

The highest level of checking is the Pillar, which establishes the fundamental aspect of checking. In the given system, the Sharia Compliance Pillar is the initial section of

the two segmented evaluation. It verifies the moral and legal requirements of a financial product that must be legitimate. One of the requirements before a product can proceed to the second part, that considers economic efficiency, is going through this Pillar. so, the Pillar makes a being so in a way as to justify its not being checked in the future. Pillars further are divided into dimensions with each dimension indicating the key areas of concern in that area. In the case of the Sharia Compliance Pillar, the dimensions are similar to the key legal issues of the theories that we have examined previously. These are the Halal Domain, avoiding transactions that are prohibited, and equivalent to Sharia objectives. The second type of the framework is Avoidance of Prohibited Transactions which enumerates several specific items that are prohibited. Each of them is an independent dimension. Collectively they are referred to as Prohibited Elements although this is not a ranking, it is merely a label. These items are Riba (interest), Gharar (excessive uncertainty), Maysir (speculation), Fraud and Deception (Ghish or Tadlis), and Monopoly or Exploitation (Ihtikar or Zulm), and each one of dimension is evaluated differently as it requires other legal reasoning, evidence, and tools. This manner, every form of non-compliance will be quantified individually, whilst the entire group remains a part of one larger category. Halal Domain and Avoiding Forbidden Transactions are the first two areas where we could measure each of the products. The third one is the Philosophical Alignment with Sharia Objectives which is the primary ethical rule of all other dimensions, yet we are not really directing this as a measurement.

Aspects indicate whether something is in accordance with the rules in each dimension. Dimensions inform us of where we are gazing whereas aspects inform us how it appears in real transactions. Under the dimension of Riba, you can have fixed returns, guaranteed capital or even referencing normal rates of interest. Under Gharar, confusion may arise whether it is owned or whether it is delivered. All the Aspects connect a theoretical rule to the actual financial set-up. Aspects render abstract ideas quantifiable and case specific. A criterion is an inquiry or guideline that we apply to observe whether something is in accordance with the regulations. There are one or more criteria in each aspect that validate the presence, absence, or acceptability of that aspect. Two types of criteria are found in the framework: (1) Gatekeeper Criteria: These are yes/no rules that indicate definite violations. The outcome is clear either it

is all or nothing. In particular, they seek an interest provision or an assured guaranteed interest. (2) Suspicion Criteria: These come in case of nothing blatant violating the rule but there are a set of facts that raise doubt or fear. Suspicion Criteria are assessed through a graded scale which measures the degree or likelihood of risk, ambiguity or indirect prohibition. The dual form can be made to align with Islamic legal traditions distinguishing between certainty (yaqin) and uncertainty (Shubha), thus making sure that compliance evaluation is an assessment with both a deterministic and a probabilistic dimension.

Lastly, the Tool is the measure that verifies that a measure has been met. In the case of Gatekeeper Criteria, the Tool is just a yes/no checklist, which gives either a yes or no answer. In the case of suspicion Criteria, the evaluation tool relies on the Likert-type scale whereby the evaluators are required to state the levels of suspicion, usually 1 (no concern) through 5 (severe concern). These Tools are systematically used in all Aspects and the evaluation of the evaluations is consistent, transparent, and replicable. They are also employed to establish the premise of subsequent quantification in the calculation of aggregate compliance scores.

6.3.1. Interconnection and Traceability

The hierarchy is very good since it is coherent and follow-up. Every aspect, dimension and Pillar decision at the criterion level can be tracked to more effectual Sharia principles. The best ideas are paired by quantifiable indications below. The interaction in both directions ensures that the mechanisms of compliance control are well-grounded on legal arguments and factual material.

6.3.2. Illustrative Example

If a financial product promises a steady yearly interest on investment, the structure may function. Pillar level checks product Sharia conformity. It is connected with Riba at a dimension level because it may attract attention. The Aspect is a refund regardless of results. Gatekeeper test asks whether risk-sharing predetermines reward. Tool is a measuring variable that depicts the binary answers. If the return is variable and

marginally related to interest-based standards, the Gatekeeper test may pass, but the suspicion standard prompts a Likert scale.

6.3.3. Rationale of Structure

This conceptual hierarchy addresses three key requirements, namely, clarity, consistency, and measurability. This is obvious as it distinguishes between big ideas and particular indicators. It is consistent in that there is sharing of logic across all dimensions. It can be measured since it involves the use of such **tools** as checklists and graded scales to convert ideas into numbers. The framework is a compliance instrument as well as an attempt to get together the old Sharia jurisprudence and contemporary assessment criteria. In brief, Sharia Compliance Framework is an entire process that connects concepts and conceptualizations of what is wrong and right to actual checks. It holds the Sharia thought faithful and incorporates certain dimensions to test. The primary section is the no-allowed category which has Riba, Gharar, Maysir, Fraud and Monopoly, each is an individual dimension. The following section demonstrates the application of this framework; it describes the dimensions, aspects, and tools that assess and describe Sharia compliance.

6.4. Main Dimensions

6.4.1. Favoring Halal Activity Dimension

Sharia compliance is based on the dimension of Halal Domain. It establishes the bare minimums of every financial product and then goes on to examine the construction and effectiveness of the product. It is mainly tasked with ensuring the activity, goal and transactions of the product are halal. This dimension is the filter through which all the financial instruments have to pass. A product that fails this test cannot advance in the review process, the other dimensions of compliance and economic efficiency.

Chapter IV elaborates that the legal dimension is that transactions should only occur until they have been explicitly prohibited. The Islamic law places the legality and the intent of the contract first. This is why compliance in this dimension is not just a formality but demonstrates that the appropriate product is not violating the law of the

economy. The prohibition to trade prohibited goods, to aid illegal enterprises, or to participate in transactions with no actual ownership to these goods are all a violation of the prohibition of halal and invalidate the good.

The aspects that we consider reveal major sections which indicate whether a financial product is permitted: (1) Nature and Purpose of Activity – indicates whether the product is to be used in a permissible activity such as construction or agriculture and an illegal activity such as alcohol, gambling or weapons. (2) Source of Revenue – checks whether money is acquired by legal trade or services rather than by interest, speculation and chicanery. (3) Contractual Intent and Structure – examines whether the contract is on the basis of real business purpose like risk sharing, investment, or sale, and not in violation of rules.

All these aspects have the gatekeeper criteria, which determine whether something compliant or not. This is easy to understand: it is either good or bad. In the event of any violation of rules the aspect is rejected immediately. This section establishes what is permissible to do, and as such does not examine this on the basis of suspicion, illegal act is never permissible. The tool is a simple yes/no checklist which documents whether every aspect has been adhered to. All aspects correspond to a rule in order that judges can observe that the product meets all of the basic Sharia rules before examining its form in greater depth. The checklist also provides an open-ness of things where one can call back all the steps and record has been done attentively.

The Halal Domain is the first gate that all people will go through in the evaluation system. On allowing the activity, purpose as well as money sources of the product, the same can be looked upon in a detailed way in relation to such things as Riba, Gharar and Maysir. Thus, the Halal Domain cuts out both the activities disallowed in addition to laying the groundwork to all subsequent checks.

6.4.2. Avoiding Riba Dimension

The principal aspect of the Sharia compliance system is the avoidance of Riba. It is based on the most important regulation that prohibits any form of unfair increase (Riba) to trade or loan transactions. This dimension ensures that financial products do not freeze or assured returns that are not very real on risk-sharing or work. Where there

is the slightest trace of Riba, the transaction has no foundation, however other laws it may adhere to. Thus, this rule can serve as a moral and pragmatic control to ensure that things are right and prevent one party exploiting another.

Legally, Chapter IV describes that Riba has two major categories: Riba al-Nasibah or Riba four, the interest of time and Riba al-Fadl or unjust difference of trade. Both are based on the dimension that trade ought to be fair and the business ought to make profits through real business activity and mutual risk. The prohibition against Riba is not only a legal trick but it indicates more profound attention to justness, frankness and preventing assured profit without accountability. Hence, Riba should not be avoided just because it is required by the law, but it should not be avoided to bring the financial practice in line with real intentions of the Islamic economic justice.

The Aspects of this dimension are a significant portion of the entire assessment. It may take the form of Riba in most contracts and structures, and therefore selection of Aspects to examine requires good legal knowledge and scrutinizing. This is a very sensitive area and the Aspects cannot apply to all the products. In every financial product, there might be various characteristics that represent an obvious violation or a certain resemblance to Riba. Therefore, the evaluator needs to select the Aspects, which will most effectively demonstrate the manifestation of a potential Riba component related to the transaction under test. The point of breaking the product into smaller components that can be measured is to establish the Aspect that may be non-compliant. As an illustration, the Aspects to be used in identifying Riba within a financial transaction can comprise the following in real practice: (1) Fixed or Predetermined Returns – any provision which ensures profit or payment whether on performance or risk. (2) Capital or Principal Guarantee – in the case of capital guarantee, the investor/financier is guaranteed full recovery of repayment without a share in loss. (3) Loan-Like Structures or Deferred Sale with Markup – contracts that are in practice the lending that are subject to time value of money premium. (4) Benchmark Dependency – relationship between pricing or returns and normal interest benchmarks, e.g., LIBOR or SOFR. (5) Buy-Back or Reverse Transaction Clauses – predetermined offer or buy-back deals which guarantee a specific incremental rate of return. (6) Implicit Compensation Mechanisms – any type of increase of value that is hidden or indirectly given in place of time or deferment.

These aspects are technologies that assist the evaluator in identifying the places where Riba may exist in a design or document of the transaction. Other Aspects are category clues of the definite violations, and the other ones are category clues of the possible violation in the case of the indirectness or the possibility of the link with Riba. The decision on aspects should remain mobile and responsive to the product, without a set of rules: in order to reveal and quantify any unfair enrichment or assured profit in a financial transaction. Every point is verified according to a set of Gatekeeper and Suspicion Criteria, based on evidence presented: (1) Gatekeeper Criteria is applied to straightforward cases such as when the product will pay back in a contract, loans which involve charging interest or repayments with extra money. In case Riba exists, the product is discarded immediately. (2) Suspicion Criteria is applied when the contract does not expressly say Riba but contains elements that may otherwise represent an interest-like outcome.

There are two sides to the criteria as indicated in the tools. To begin with, there is the plain checklist which seeks blatant Riba at the Gatekeeper level. It is a rating tool that scores based on predefined clues, considering the number, prevalence, and severity of Riba-related items. The initial step is referred to as Gatekeeper that eliminates any apparent deals of interest immediately. Guaranteeing a more complex or mixed product that may appear to be of interest but do not clearly violate regulations leads to the next stage, which is suspicion. This two-step design makes the check secure and usable: it prevents blatant infractions and further analyzes fresh financial concepts in which Riba may conceal itself in other forms. Concisely, repelling Riba (interest) is one of the major components of the Sharia Compliance Framework. It makes a religious rule a pragmatic standard, meaning establishing specific rules and experimenting with them. It reminds the Islamic finance of its promises through its stages of scrutiny where the Gatekeeper verifies and using its evaluations to evaluate suspicion leads to accurate and educated financial product judgments.

6.4.3. Avoiding Gharar (Uncertainty) Dimension

The Gharar dimension addresses the second principle of Islamic finance, which is dealing with transactions that contain excessive uncertainty or vagueness and may

create unfairness, conflicts, or damage. The dimension is used to ensure that all the financial product contracts, deliverables, and ownership arrangements are transparent, visible and enforceable. Gharar conceals significant information or makes unbalanced expectations among people. That is the reason why restraining Gharar is essential in the trust and equity in commerce. The juristic foundation of this dimension lies in the Sharia principle that contracts must be free from ambiguity in subject matter, price, quantity, and delivery. As discussed in Chapter Four, the prohibition of Gharar is not aimed at eliminating all uncertainty, but rather at removing excessive or avoidable forms that compromise the validity of a transaction. In Islamic commercial law, some degree of uncertainty is tolerated as a natural part of trade, but Gharar becomes prohibited when it reaches a level that affects consent, ownership, or the outcome of the exchange. The objective of this dimension, therefore, is to separate constructive uncertainty (permissible business risk) from destructive uncertainty (invalidating ambiguity). It is a significant and cautious aspect of the review to find the various aspects of Gharar. In the modern finance, uncertainty may manifest itself in numerous aspects. These types are not interchangeably applicable across products; they have to emerge out of the particularities of individual transactions. Both aspects must have their goals in different places where doubt may provoke lack of balance or a conflict. The task of the reviewer is to identify and specify these types using clear and measurable terms that demonstrate the way Gharar can come about in the structure under analysis.

In general, the following Aspects can be used as reference points for detecting Gharar in financial products: (1) Ownership Clarity – determines whether the contracting parties hold legitimate and transferable ownership rights before the transaction is executed. (2) Deliverables and Subject Matter – examines whether the goods, services, or financial claims being exchanged are clearly defined, deliverable, and exist at the time of contract. (3) Risk and Obligation Allocation – evaluates whether contractual risks and obligations are distributed transparently and equitably between the parties. (4) Contractual Conditions and Dependencies – identifies any clauses that make the contract's execution conditional on unknown or uncertain events. (5) Documentation and Disclosure Adequacy – verifies the extent to which key terms, conditions, and responsibilities are disclosed to all parties.

Each of these Aspects reflects a different manifestation of Gharar. Depending on the case, some may reveal clear violations, while others may indicate suspicious uncertainty that requires graded evaluation. The Criteria for this dimension follow a dual approach similar to the Riba dimension (1) Gatekeeper Criteria are applied when uncertainty is so severe that it invalidates the contract—such as selling what one does not own, or trading in non-existent or undefined assets. (2) Suspicion Criteria is resorted to when there is some confusion, yet it can nevertheless be managed, such as when only part of something is presented, complex layers are constructed over something else, or credentials may obscure who owns what or the value of something. We scrutinize them in such cases and evaluate them to determine their adherence to the rules to an extent.

The tools employed under this dimension are an integrated rating scale and a yes or no checklist. The list of points identified in the checklist clearly reflects the incidences of Gharar which automatically disqualify the product. The degree of riskiness of unclear or missing details of the contract is evaluated using the rating scale. The evaluator scribbles down such evidence to each item, allocates a score reflecting the degree of uncertainty and determines whether such a score falls within the stipulated limit to remain compliant. First, contracts involving large confusion (such as unknown subject or ownership) are eliminated. Once the evident issues have been eliminated, the assessor quantifies the residual uncertainties and allocates a risk level and ensures that this does not jeopardize equality or common agreement. In brief, the Avoidance of Gharar dimension provides a clear means of maintaining transparency, ownership truth and balance of risk. It transforms a complex legal concept into a feasible check procedure by means of structured aspects, two layers of criteria, and standard measuring tools. This ensures that the Islamic financial products are ethical and transparent in their operation hence the trust that underpins Sharia-compliant business is maintained.

6.4.4. Avoiding Maysir (Gambling and Speculation) Dimension

Islamic finance has been safeguarded by the Avoidance of Maysir rule that prevents gambling, speculation, or zero endeavors of transferring funds with no actual work. A

business is fundamentally fair only when its operations are sustained by the business ethics called Maysir, making finance not a lever of misuse or a counterfeit of prosperity. Just in legal terms, according to Chapter IV, Maysir is prohibited as the Quran stated never to gamble with money, and never to earn without labor. The rule entails that income should be of real economic causes (Asbab al-Milkiyah) such as work, trade or investing. Gambling violates that rule, and leaves success to a decision between uncertainty or price changes only. Not going to Maysir is a moral pledge as well as legislative act not to tie money of the finance to anything but real productive and helpful work. In determining whether the aspects of Maysir, we must turn to inspection since the current markets contain a lot of elements of risk that may appear as gambling even within the ordinary contracts. So, we choose Aspects that suit the purpose of the product and the way it functions. They are different on each aspect; they originate in the specifics of the deal. Each Aspect ought to exude a concrete point that demonstrates where chance or unreasonable profit is involved.

Maysir in financial products may usually be detected or suspected by the following aspects: (1) Dependence on Market Fluctuation Alone – where profit or loss is due to purely random fluctuations in price and will not consist of a true change in the asset itself. (2) Absence of Underlying Productive Activity – there is no actual work or production you earn money without an actual exchange or performance. (3) Zero-Sum Outcomes – the profit of one of the participants is necessarily equal to the loss of the other party, such as in pure speculation or some contracts. (4) Conditional or Uncertain Payoffs – pay or reward depending on the occurrence of an event in the future which no one can control or forecast. (5) High-Leverage or Margin-Based Mechanisms – allow individuals to have large exposure to returns with little capital that proves to be riskier and more speculative. These aspects divide a product into minor parts which are measurable. They allow assessors to view whether the design assists actual investment or adds the likelihood and speculation. Since Maysir may exist in contracts or in new financial products, to locate it, the evaluator has to make a good judgement and interpret the context.

The criteria applied in this dimension is based on the established two-level system previously, gatekeeper criteria are applied when the product directly incorporates gambling-like structures or speculative contracts (such as binary options or betting

mechanisms). Any aspect where the one who returns is based on luck would be repudiated immediately and Suspicion Criteria apply when speculation is concealed, e.g., in high leverage trading, synthetic derivatives or in a profit-sharing contract that is overtraded to unjustified liquidity fluctuations in the short-term. Such cases should be reviewed in a step-by-step approach with reference to getting a closer look of how near to Maysir they are. The tools to be applied to this assessment are binary checklist and Likert-type scoring scale. Explicit speculative mechanisms are checked on the checklist, whereas the scale of scoring is used to estimate the degree of the suspicion where the structure is fraught with uncertainty in part or conditionally. The evaluator makes notes of the evidence under every aspect, creates marks on the scale of no suspicion to the high suspicion, and tabulates the outcomes to define whether the product is not exceeded by the acceptable boundaries of the Sharia compliance.

This dimension is an action-oriented (prevention) and diagnostic assessment. It is based at first on a filter by which contracts are eliminated due to pure chance, and then on a measurement mechanism by which latent speculative dispositions are identified. This dimension by divorce of financial risk-taking which encourages productive results proprieties the ethical basis of trade in that profits are not made through fertility but through the generation of value. To conclude, the avoidance of Maysir dimension results in the conversion of moral principle against gambling into systematized assessment mechanism. It empowers financial evaluators to differentiate between risk, which is acceptable and should be, and unacceptable speculation through its adaptive aspects, dual-criteria approach and its measurable tools. Recent Islamic finance studies have emphasized that all gains are based on legal practice and true economic engagement, strengthening the practice.

6.4.5. Avoiding Fraud and Deception (Ghish and Tadlis) Dimension

The Avoidance of Fraud and Deception dimension ensures that the transactions of money are genuine, transparent, and equal which is one of the key Islamic business values. Fraud and deception occur when one comes out, lies, or tricks the other side to benefit. This dimension ensures that the trade is honest by ensuring that all the relevant facts are told with sincerity and that the two agree to the situation because they have

the real picture and not because of deceit or unavailability of information. Prophetic precepts against corporate lying provide this legal dimension. Islamic law states that an informed, truthful agreement is correct. If someone is misled, the contract is invalid. Fraud differs from interest (Riba), doubt (Gharar), and gambling (Maysir). Fraud is created by individuals and their behaviors, not financial product structure. Although it is personal behavior, it should be included in compliance standards since it directly affects whether a transaction can be trusted and if Sharia-compliant funding is possible. In search of aspects of this dimension, the primary target is to identify aspects of the behaviors or contract elements that can either deceive one of the partners or otherwise bias the transaction. The structure of fraud is not as complicated as other prohibitions, and thus, the aspects are less and less difficult, yet they remain essential in maintaining an ethical state of things.

The features that are usually utilized to verify or suspect Fraud and Deception are as follows: (1) Misrepresentation of Product or Contract Terms – takes place when a party presents false, exaggerated or partial information on the product, service or conditions of the contract. (2) Hidden Charges or Concealed Costs – implies, concealed or ambiguous expenses, which alter the agreed value of the exchange once permission is granted. (3) Manipulation of Contractual Documentation – influence the interpretation or execution of the contract. (4) Unethical Marketing or Promises – marketing action, practice or promise misleads clients by purposely deceiving them concerning the returns, risk, or compliance.

The regulations of this aspect primarily consist of Gatekeeper Criteria. Where there is explicit evidence of fraud or deception, the product is turned back immediately. In the event that we are not categorically sure, whether of intent, or of amount--e.g., where the declarations made by marketers are indeterminate or partial (e.g., when selling stocks and bonds where all information is not disclosed) a Suspicion Criterion may be applied to test the likelihood and severity of the deception. The tools employed here are the same evaluation logic applied to a smaller scale. The dichotomous checklist is a test to determine whether there is explicit lie or concealment. The type of scale that would be used to determine the degree of suspicion of something is a Likert-type scale, although, only when the evidence is not evident or is performed on feelings. Judges must use paperwork, audit records, and other checks to back their decisions since fraud

usually involves people rather than processes. Assessment of this dimension is corrective and confirmatory. It is regarded to ensure no deliberate lying is in place and correct or even highlight the absence of transparency or disclosure that could mislead individuals. This is typically not as complicated as the assessment of Riba, Gharar or Maysir, since fraud typically presents itself in straightforward acts or omissions as opposed to any complex financial arrangements. Nevertheless, care should still be taken on this front, as any form of minor deception will hurt the moral prestige of Sharia-compliant operations. Simply, in the Avoidance of Fraud and Deception dimension, financial transactions are kept honest and transparent. It does not go into the same detail as the rules that are prohibitive of Riba or Gharar, but it is needed to maintain trust and responsibility in Islamic finance. With a simple Gatekeeper checks and a low suspicion score, this dimension ensures that legal transactions and deals are not what they claim to be correct only on paper but also in practice.

6.4.6. Avoiding Monopoly and Exploitation (Ihtikar and Zulm) Dimension

The lack of monopoly and exploitation is one way of making Islamic finance fair. It prevents distortion of the market, narrows the competition, and prevents unfair domination of one party by another. Even though this dimension is found in fewer products of modern finance as compared to challenges such as Riba, Gharar, or Maysir, it remains an important component of a comprehensive Sharia audit. Inclusion is the solution to assure that no product or form of finance fosters or promotes issue of harsh behavior or monopoly which would disadvantage fairness, market integrity, or society. The antitrust of monopoly and exploitation originates in the Quran and the teachings of the Prophet on not holding, not playing games of prices, and not dominating the disadvantage. These actions are violating the Sharia principle of justice saying that people should be equal in terms of resource and opportunity. This rule is not frequently encountered in new financial designs, but is nevertheless checked, ensuring that a product or trading technique or a market phenomenon do not quietly permit exploitation. This is aimed at preventing economic injustice and ensuring that market conduct is ethical as is the case with the Islamic economic values.

It is easy to decide the most important aspects of this rule since the markets are designed to create monopoly and exploitation and no one can make a decision based on the contract terms. To the majority of products in the Islamic Finance, these issues do not appear on the surface; however, the assessor will need to ensure that none of the actions or business transactions violate the Sharia provisions regarding equitability and competition. These are the aspects, which can be utilized in order to evaluate this dimension, and they are likely to encompass: (1) Market Control or Restrictive Practices – enquiring whether the product or its main action exerts control over supply, distribution or access which prevents fair competition. (2) Price Manipulation or Artificial Inflation – ensuring that prices are determined by objectives conditions of the real market and not through strategies being low on goods prices and attempting to live on the gains. (3) Unfair Advantage or Exploitative Terms – having such terms of contract, that they do not prove undue advantage to one party, or undue disadvantage to another. (4) Hoarding or Withholding Essential Assets – consideration of the scam as to whether the setup will attempt to accumulate essential goods, or financial assets in order to earn money on scarcity.

The major regulations regarding the area are Gatekeeper Criteria. In case there is a proven monopolistic or exploitative action of a company, this is a clear infringement of Sharia ethics. However, in cases where the risk is not direct, but may occur, e.g., where contracts or exclusive supply lines or market apathy is engaged, we apply a Suspicion Criterion to estimate the likelihood and severity of the problem. The tools of this assessment remain the same as in the general structure. A yes/no checklist is examined that there is no direct monopoly or exploitation action. If indirect market domination is suspected, a Likert scale may be used to assess risk, focusing on trading behavior and market ethics rather than financial data. The testing rationality of this dimension is a confirmatory, but not a diagnostic. It is not to research into the details of the heavy financial engineering of a product but to ensure that the bans on market practices are not under wraps in the product bigger activity. This dimension is likewise rare in most financial services, but its inclusion shows how well-crafted and planned the Sharia compliance system is to prevent all sorts of injustice, both regular and seldom.

The Sharia compliance framework's Avoidance of Monopoly and Exploitation dimension is the last ethical protection factor. Although not constantly active in financial transactions, its existence enables thorough Islamic financial analysis and maintains Sharia's holistic dimension with justice. This promotes the notion of a fair, open, and balanced economic system with legitimate financing to prevent market dominance and unethical advantage.

6.5. Procedural Framework for Sharia Compliance Evaluation

The Procedural Framework transforms the concept of compliance with Sharia in to concise step-by-step actions that are applicable to each and every financial product. The previous conceptual framework (in Sections 6.3 and 6.4) gave a better description of what to look at, dimensions, aspects, criteria, and tools. The procedural frame elaborates the process of how those items can be checked through a repetitive procedure. The primary aim of this framework is to ensure that Sharia evaluation is fair, transparent and traceable. In order to do this, the evaluation presupposes specific steps that are concentrated on the analysis: (1) Data Collection and Preliminary Review – get the data, determine the rules of Sharia that can be applied towards the product and that there is sufficient information. (2) Dimension Evaluation Process – observe all the concerned dimensions, compare them with corresponding rules (Gatekeeper or Suspicion) and select the appropriate assessment instruments. (3) Tool Selection and Operationalization – choose and utilize tools like binary checklists and rating scales and utilize them. (4) Scoring System and Decision Thresholds – aggregates the results, uses compliance threshold and then determines the status of each dimension. (5) Scientific Legitimacy and Documentation – make sure that the program is in accordance with accepted standards. The steps are discussed further below beginning with the logic and workflow of the framework.

6.5.1. Framework Overview and Logic

The review process is divided into two phases to ensure comprehensive evaluation and adaptability to changes. The first phase serves as a strict filter to eliminate any

monetary activities that clearly violate Sharia principles. The second phase focuses on ongoing monitoring and assessing compliance in cases where issues are unclear or potentially suspicious. (1) Gatekeeper Phase – Deterministic Screening. This is the primary and most critical stage. It targets explicit prohibitions such as interest (Riba), gambling (Maysir), or deception. The screening process is binary: a rule is either compliant or non-compliant. Any violation results in the immediate termination of the transaction, ensuring that only Sharia-compliant activities proceed. (2) Suspicion Phase – Analytical Measurement. After passing the Gatekeeper Phase, the product enters the Suspicion Phase. Here, the system evaluates subtler aspects that may not be immediately apparent but could pose compliance risks. This phase employs analytical tools such as checklists and Likert scales to convert subjective judgments into quantifiable data, enabling a more precise assessment of Sharia compliance. This bilayer design makes the evaluation protective as well as adaptive. It defends against the clear violations and adapts against contemporary financial novelties which may be uncertain or mixed. One of the major components of this logic is traceability. All decisions made including aspects selection and scoring should be documented. All the observations, items on the checklists, and scores have to be supported by actual evidence in the form of product documents, Sharia board resolutions, or records of transactions. The requirement enhances accountability and allows other independent reviewers to replicate and validate the findings. This process results in the final output which is a compliance classification which has categorical and quantitative results. The Gatekeeper phase is a clear-cut pass or fail in cases where the violation is clear, whereas the suspicion phase assigns scores in the form of percentages where it is not clear. These combined make a full classification Compliant, Borderline or Non-Compliant. Result is the procedural framework, the foundation of the operation of Sharia evaluation. It will see all the products examined using a transparent, repeatable and auditable process- starting with gathering the facts and to finalizing compliance.

6.5.2. Operational Steps in the Procedural Framework

The operational steps demonstrate the applications of the Sharia Compliance Framework. The levels in the design of the framework include Pillar, dimension, Aspect, criterion and Tool. The following are steps that can be used when

implementing those levels in the actual assessment. It is aimed to transform theory into a verifiable and easily checkable procedure which can be applied to numerous products and institutions. This section provides a coherent summary of the key processes that must be undertaken in order to assess Sharia compliance to ensure that the process is structured, transparent, and replicable. The assessment work is comprised of a chain of interrelated steps, the first of which is the collection of information and the last stage is the ultimate compliance rating. Such steps are combined, allowing the evaluator to proceed to a qualitative analysis to a numerical rating.

In the data collection and preliminary review, the evaluation process begins with the collection of all the documents and information that is describing the financial product under evaluation. This consists of contracts, term sheets, prospectus, and records of its operation and where possible the Sharia board certificates or fatwas. This step is aimed at ensuring that the evaluator is conversant with the structure of the product, the purpose, and the functionality of the product before passing onto detailed analysis. Every piece of paper should be verified in terms of authenticity, completeness, and consistency. During this phase, the evaluator also determines the dimensions of Sharia that they can use on the product. Halal Domain, Riba, Gharar and Maysir are some of the dimensions that are found applicable to practically all financial instruments. Others such as Fraud and Monopoly require meeting some conditions or market behaviors to be relevant. It is to make sure that the scope of the evaluation is not arbitrarily expanded or narrowed. The result of this phase is an approved evaluation file which contains the product documentation, the list of dimensions which should be used, and the remark on the possible constraints of the data. This forms the basis of the second step of analysis.

In the dimension evaluation and aspect identification, the evaluation is conducted at the dimension level after the data verification. Every dimension applied is analyzed separately, maintaining its special criteria and objectives in mind. The evaluator initially locates the significant Aspects within each dimension - the measurable aspects that reveal how the various dimensions appear in the product. Aspects can be specified returns in money markets, loan like obligations or dependance on benchmarks in the Riba dimension. Aspects in the Gharar dimension may be obvious ownership or the division of risk. Every Aspect then is compared to a criterion, the rule to test whether

things all conform. For the tool selection and application, in this stage the framework applies standard tools in the application of the criteria. The first test (Gatekeeper) is based on a simple yes/no checklist. In case of its passing, it proceeds to the second stage wherein we apply rating scales (such as the Likert) to numerically assess how suspicious it appears. The right tool would be determined by our object of focus. In the case of obvious breaches of rules, such as the clauses in the stated interest, or the absence of assets, it suffices to respond with yes/no. We use a scale when the features are not clear such as in case of indirect promises or some level of uncertainty. These tools are structured and help in minimizing bias and enable different reviewers to yield the same results of the same product. At this stage we deal with record keeping. All the checklists and the score sheets should be saved in the right manner to guide people on what was completed and audit it in the future.

The characteristics and circumstances of each dimension determine its score. The framework applies the 70% rule, like the Economic Efficiency Pillar, hence the techniques are comparable. These rules are used in the classification: (1) Compliant ($\geq 70\%$) – The dimension meets the minimum sufficient standard and displays sufficient compliance with Sharia standards. (2) Borderline (50–69%) – The dimension is partially eligible, yet, there are doubts or missing documents and these require corrections. (3) Non-Compliant ($< 50\%$) – The dimension does not receive the basic standard, and there is a significant issue. In either way, the gatekeeper stage validates any violation in that level. It is taking over the figures and the product is rejected right away.

Documentation, legitimacy, and final classification will be the end findings are recorded in a compliance record. The record describes the scoring of data. Evidence, checklists and score sheets should be kept in files. All the official information regarding the compliance of the financial products is preserved in this document to be verified in the future. It is formidably trackable and can be trusted. Any evidence-based assessment can be repeated in the same manner. The information and validated figures indicate Compliant, Borderline and Non-Compliant. The Sharia compliance criteria is systematic and provides equilibrium between the legal rules and procedures. Ethical decisions are presented through the collection, analysis, and evaluation of information. It adheres to Sharia regulations with the use of modern money.

6.6. Measurement and Scoring of Suspicious Elements

Scoring and measuring suspicious elements is one of the parts of the Sharia Compliance Framework. Although the Gatekeeper step eliminates eminently problematic product, the step provides an unambiguous method to handle uncertainty or ambiguity particularly when dealing with new or complicated financial products. The framework provides a verification of the level of doubtfulness of a product as well as a comparison of not-okay to okay in accordance with using numbers instead of personal estimates. This section ensures that borderline cases, which are not either obviously prohibited but may carry with them a problem, are treated in a routine, transparent and evidence-based manner. It converts the ambiguous uncertainty into figures so that it can be studied objectively.

When a financial product appears illegal, but fails to violate the policy completely, this is flagged as suspicious during a review of Sharia. An example of this is a loan that conceals the interest but makes frequent payments, or a deal that appears to conform to the criteria of ownership and delivery, but is not made by the deadline or is ambiguously. The objective of this measurement can be summarized as having twofold: (1) To assign the value of the degree of suspicion assigned to every portion of a product; and, (2) To ensure that various reviewers produce similar findings whenever they are checking related merchandise. It is a logical step, rather than a moral step. It does not tell whether or not something is permitted. It simply provides a straightforward tool of ensuring whether the degree of suspicion remains within the confines of the Sharia rules.

The measurement of potentially suspicious elements is structured as a sequential analytical process that aims at delivering product and evaluator consistency: (1) Identification of Suspicious Aspects. Once the Gatekeeper stage establishes that there were no explicit violations, the evaluator determines all Aspects that bear some similarity with the elements that are prohibited. (2) Application of the Likert Scoring Scale. All the suspicious Aspects are tested on a five-point Likert scale with high scores corresponding to high adherence to Sharia principles.

Table 6.1: Likert Score Table

Score	Definition
1	Definite violation or strong resemblance to a prohibited element
2	High suspicion with serious concern requiring immediate review
3	Moderate suspicion requiring further clarification or supporting evidence
4	Low suspicion with minor concern, generally acceptable
5	Fully compliant, no identifiable suspicion

Source: Prepared by the Author, 2025

This scale enables the reviewers to determine how well things are operating using clear signs. In the review record, each number must be documented and expounded in writing. When all the aspects have been scored, they are added on an aspect level to produce the dimension level score. Depending on the number of aspects being checked, the combination can be weighted or straight average. This is to ensure that the end result gives the overall trend and no single point. All the scores, evidence and evaluator reasoning are documented in an orderly manner. A score on the borderline zone should be written by the evaluator in a clear language on which the doubt is and what can be done to correct it.

A standardized guideline is required to define the scoring levels in terms of organizational or behavioral compliance. Since assessors may not be able to apply all rules consistently when assigning suspicion ratings, each scored form should be reviewed by the institution's Sharia governance peer or auditor. This review ensures that the scoring logic and supporting evidence are properly validated and aligned with Sharia compliance principles. Sharia scholars, auditors, and evaluators may offer his results in intelligible and quantitative terms to evaluate institutions, assess goods, and watch decision-making. The quantification of suspicion has a number of advantages to the Sharia compliance assessment, it converts any gray doubt into definite measurable data that results in more consistent decisions. It allows you to see how there are little variations in the product design over the years by comparing scores. It facilitates data-driven Sharia governance, allowing institutions to monitor compliance trends and identify recurring areas of risk. It enhances transparency for regulators and investors by presenting compliance status in both descriptive and numerical form. The system

makes the Sharia checks practical and principled by introducing measurements in the process to bridge the gap between legal reasoning and the real action. The measurement and scoring of suspicious elements provide a scientific method of dealing with doubt in Sharia compliance. It is based on Islamic moral boundaries with the analytical requirements of contemporary finance. Its scoring arrangements, written guidelines and successful evidence accomplish this by converting botched suspicion into a well-examined, quantifiable and audit-trail-light element of Sharia-related financial evaluation.

6.7. Interpretation and Integration of Results

We must translate the findings of every dimension to final, audit-able Sharia compliance ruling, we must not average or weigh, and we should maintain consistency and traceability of interpretation by all judges. This part gives an explanation of how we analyze and integrate the analysis results in the ultimate decision on Sharia compliance. Once all the Gatekeeper and suspicious elements checks are completed, we consolidate all the results in order to view the status of each dimension and the result of the entire Sharia Compliance Pillar. The framework does not utilize numbers but demonstrates pass or fail where each dimension is broken down into a Pillar Result Matrix. The top-down decision path is the way towards introducing the integration: Aspect, Dimension, Pillar where the breakdown of one level results in the breakdown of another level. This makes everything unchanging, objective and in full compliance with Sharia. A single violation will result in failure of the entire compliance. The interpretation phase transforms the outcomes of the analysis into an easily traced compliance decision. It verifies whether the product is by all Sharia regulations based on the evidence of dimension and aspect levels.

In the aspect level, all aspects are quantified characteristics on a dimension.

- If a gatekeeper criterion fails, the aspect automatically fails.
- If suspicion exists, the evaluator applies the approved measurement tools to determine whether the concern is acceptable or requires rectification.
- The outcome is recorded as pass, fail, or under review.

in the dimension level, all the results of its aspects combine in each dimension e.g., riba, gharar and maysir.

- A dimension passes only if all its Aspects pass, or any minor issues are clarified.
- If any Aspect fails and the issue contradicts a Sharia prohibition, the entire dimension fails.
- Dimensions with unresolved but correctable issues are marked Under Review until rectified.

In the pillar level, only when all relevant dimensions pass, does the sharia compliance pillar get approved.

- Failure in any single dimension results in failure of the Pillar.
- The logic is non-compensatory — compliance in one area cannot offset non-compliance in another.

The resulting conclusion is presented in the Pillar Result Matrix. It indicates whether each dimension has been passed or not, and mentions the questions that remain unanswered. It is easy to determine what to do next based on such a clear approach when it is the Sharia Compliance Pillar.

6.7.1. Compliance Classification

The last step is how we categorize compliance making us know whether a financial product is Sharia. It provides a clear and consistent method of sharing the results, without the use of numbers and averages. Each dimension of Sharia Compliance Pillar is individually perceived and the outcome of the individual elements determines the general position of the Pillar.

The classification follows three primary models, namely, the Compliant, Borderline (needs fixing), and non-compliant ones. These are the possibilities of results of all the checked Gatekeepers and suspicious items.

A product or dimension is said to be Compliant in case all tests indicate that it is in line with the Sharia:

- No Gatekeeper criterion identifies a direct or explicit violation of the prohibitions defined under the relevant dimension (e.g., Riba, Gharar, or Maysir).
- All suspicious elements, if present, remain below the defined threshold of concern and are adequately justified by supporting evidence or contractual clarification.
- The documentation and product structure reflect transparency, ownership clarity, and ethical integrity consistent with Sharia objectives. A Compliant result, in other words, characterizes the general evaluation of the appropriate aspects as 70% or more. This indicates that there is sufficient evidence that any form of doubts is within a reasonable range.
- Compliant products have satisfied the Sharia Compliance Pillar in full and can proceed to evaluation based on Economic Efficiency Pillar.

Normally when a product follows the requirements yet has questionable components, this categorization is utilized. Due to incomplete product description, unclear restrictions, or a design that mimics restricted items, these incidents occur. We hold these goods until we get more information or fix the concerns. When trust is below 70% yet strong relative to rejection, the Borderline category occurs. This is because the product mostly meets Sharia goals, but we must resolve certain difficulties before we can approve it. Fixing and verifying problems makes the product compliant. Until then, the product cannot be analyzed in the Economic Efficiency Pillar.

Any product deemed as non-Compliant by the review is one that includes at least one obvious breach to the Sharia rules that cannot be resolved without significant structural changes:

- Any Gatekeeper criterion confirms a prohibited element, such as interest-based return, speculative transaction, or contractual uncertainty; or
- Suspicious elements remain above the acceptable level, reflecting sustained deviation from the Sharia requirements; or

- The corrective measures proposed in previous reviews fail to eliminate the source of non-compliance.

Products classified as non-Compliant are therefore excluded from further consideration under the dual-Pillar framework. In case one of the dimensions does not succeed, the Sharia Compliance Pillar does not succeed.

The systematic codification system defines that all people understand and make decision similar to one another. It is based on the methodological principles of the framework and the logic of the Islamic law, according to which one significant violation renders the entire thing illegitimate. The results of the classification are summarized in the Pillar Result Matrix which provides a clear and auditable picture of the compliance of each of the dimensions and the ultimate decision of the Sharia Compliance Pillar.

6.7.2. Threshold Level and Justification

Any system that transforms verbal judgment into numbers needs to have the point of demarcation. According to the Sharia compliance system, the lowest degree of reliability is taken to be 70%. This limit indicates the point at which we are certain that a financial structure is valid as opposed to uncertainty in interpretation of the rules. It bridges two modes of thought the probability-based thought of Islamic law and evidence-based thought of modern evaluation science.

In Sharia view, the 70 % mark implies that the evidence strongly suggests otherwise that something is prohibited even in cases when we are not able to be confident. In such a scenario a judge is free to give a verdict under the mass of the evidence, not the removal of all doubts. The 70 % rule leans towards certainty and uncertainty therefore a decision is not made on guesswork. The same confidence level is applied in most areas in the context of the modern evaluation theory. With a probability of 0.70 (70 %) there has always been a long-standing belief that the probability is minimum to have confidence in the result to make a decision. A number of years of research in the field of psychology, education, and health sciences have translated into this standard, as anything below 0.70 would represent excessive error in question, and anything above is reliable consistency (Nunnally & Bernstein, 1994: 265; Tavakol & Dennick, 2011:

54). The reasoning extends to non-social science measurements. Public health experts say sensitivity or 70 % confidence is the minimal dependability threshold for real-life use. Since complexity prevents certainty, engineering and risk-management success probabilities over 0.70 are realistic. Policy and environmental safety studies use 70% confidence to decide whether to accept ambiguity. Together, these disciplines show that 70% is normal. Unattainable certainty does not maintain system performance. The application to Sharia judgment would mean that the same care of thought in scientific judgments should be applied to legal reasoning, culminating in quantitative certainty in moral judgments.

In practical terms, the threshold functions as a decision boundary rather than a pass mark, the interpretation of evaluation scores can be summarized as follows:

- Above 70 % → Represents dominant assurance of compliance. Minor suspicion exists but remains within the tolerable range.
- Between 50 and 69 % → Denotes a borderline or rectification stage where evidence is insufficient for approval yet not conclusively prohibitive.
- Below 50 % → Indicates non-compliance, as uncertainty outweighs permissible assurance.

All the Sharia Compliance Pillar dimensions are verified individually through this rule. When one dimension fails to attain the 70 % satisfactory, then that dimension cannot be considered compliant despite the passing of rules in the other dimensions. This course proceeds in accordance with the fact that the doubt does not eliminate certainty and also the principle that adherence to a requirement in one section cannot compensate a violation in another.

6.7.3. Dealing with Borderline and Rectification Cases

Borderline cases refer to those products which, though having met the basic Sharia guidelines, still contain grey areas, lack of documentation, or poor evidence in one or more aspects. The cases tend to fall within the 50-70 % range meaning that the review is neither a definite yes nor a definite no. In order to deal with borderline cases, we will use fair and clear process that adheres to precautionary principle. Where a

dimension is borderline, the evaluator will jot down notes which contain a list of the particular areas and rules that made the results doubtful. The producer of the product or the Sharia review team has to then provide additional evidence or modify the contract to rectify the issues. There are three stages to the rectification process:

- Clarification: To clarify who owns what, what must be provided, and how payment will be made, the institution is giving further papers or explanations.
- Correction: The institution changes the structure or contract to remove suspicious characteristics, such as rewriting a phrase to guarantee a set rate of compensation or share risks.
- Verification: To remove earlier flaws, the new building is examined again.

In case the new check demonstrates that there is not less than 70% assurance to the product, it is produced marked Compliant and proceeds to the economic-efficiency review. In the instance that it remains below that even after the repair it is discarded forever. Such practice ensures that a borderline status is not an end, but a temporary status. It forces quick fixes. It operates on the legal principle that any questionable matters ought to be resolved prior to the decision being made. It is also in the fixing process that makes the procedure fair and deters the early approvals yet allows creative financial designs to be fully compliant following an improvement and re-submission.

6.8. Development and Standardization of Evaluation Tools

Sharia Compliance Framework is trustworthy due to its conceptual framework and Turbo Tools' dependability in measuring dimensions and criteria. Evaluation Tools Evaluation tools like checklists, grading matrices, and organized templates link theoretical reasoning to verifiable outcomes. Thus, they must be developed and standardized to be objective, transparent, and repeatable across institutions.

6.8.1. Purpose of Tool Development

The development of tools should transform lawful thinking into straightforward, quantifiable metrics. All rules in the framework are converted into one or several questions and there is a check tool associated with them. Such functions as yes/no

checklists of the Gatekeeper Criteria and rating scales of suspicious items can transform the ambiguous rules into observable phenomena. In this manner various individuals viewing the same item will receive similar scores thus the reasoning will not differ as much.

6.8.2. Standardization Process

Tools standardization means that the reviewer and institutions should employ the same techniques. There are four activities associated with this process:

- **Indicator Definition:** Every dimension and aspect are subdivided into easily visible, quantifiable criteria indicating that something does not violate the rules.
- **Format Design:** The checklist and scoring sheet have been structured to be clear and simple with simplified questions and answers.
- **Validation and Testing:** We test the tools against sample financial products to ensure the results are consistent and present a real variation in the extent of compliance.
- **Institutional Endorsement:** The tools are passed by accepted Sharia boards or committees to allow the entire industry to accept them.

With such steps, these tools are no longer used solely by the assessors but rather become the standard references that are applicable to the products and entire institutions.

6.8.3. Continuous Improvement

The development of tools is in a state of continual change and cycles of constant improvement. When new financial products are introduced or the legislation is interpreted differently, those who assess the tools must update the indicators and scales. Additionally, it aims to maintain consistency throughout the system so that it may accommodate new ideas while still adhering to the core principles of Sharia. Conducting review workshops, small-scale testing, and comparing outcomes with the results of other institutions are proposed as measures of making the tools reliable and helpful.

6.8.4. Integration with Institutional Governance

It is assured that the success of this plan in the long term is subject to implementation of the tool's rules within the rules of the organization. The approved checklists and scoring sheets can be stored in shared files of Central Sharia boards, regulators, and professional groups. The central control prevents the separation of pieces and assists in the homogeneity of the checking procedures in various locations. It further allows the organization to scrutinize the outcomes of the tool on a regular basis and this is a foundation of trust and transparency.

6.8.5. Illustrative Example of Checklist Development

This sub section demonstrates the step-by-step design of evaluation tool. We give an example: Sharia compliance checklist that identifies Riba of a financial product. The sample approach is comparable to other locations such as Gharar or Maysir with minor alterations in the checklist depending on the prohibited items.

The initial thing that should be done in the process of creating a checklist would be to determine what the tool will measure. The aim is to establish any Riba, including any latent, in the contract of a product. This objective makes the review keep the focus on track and the evaluator prevents confusing Riba with other issues such as uncertainty.

Based on juristic reasoning, the main Aspects of Riba can include:

- Fixed or guaranteed returns on capital regardless of risk or performance;
- Benchmark dependency on conventional interest rates (e.g., LIBOR or SOFR);
- Repurchase or rollover obligations that mimic lending relationships; and
- Delayed counter-exchange in contracts of similar genus (*Riba al-Nasi'ah*).

Each aspect displays how a rule could be broken, and all of them have to be verified individually. Then translate aspects into criteria. We transform each of the aspects into formative questions which form the principal testing list. For example:

- Will this contract guarantee an assured yield which is not dependent on profit or loss?

- Does it have an expected returns that are specified by a benchmark based on interest rates?
- Was it specified in the contract that you are obliged to repurchase or renew the asset?
- Does it take time to change two Ribawi of the same kind?

These are the questions of gatekeeper criteria. A contract that is non-compliant is one in response to any of the above.

The gatekeeper criteria are built on the basis of a yes/no checklist. Yes = a violation and No = compliant. Regarding complex or ambiguous situations, such as in cases where a transaction is partially pegged to market benchmarks, we may include a Likert matrix. It allows the evaluators to have a rating scale of suspicions 1-to 5: 1 is a high level of violation and 5 is complete compliance. Such combination ensures that the two visible and invisible types of Riba are detected under a single assessment platform.

Each checklist item must be linked to documentary evidence. For example:

- If the answer is “Yes” to a fixed return clause, the evaluator attaches the relevant paragraph from the contract.
- If the answer is “No,” the evaluator records the supporting evidence (e.g., profit-loss sharing formula).

This documentation step transforms the checklist from a subjective evaluation into a verifiable audit trail.

In scoring and interpretation, once completed, an analysis of the results of the checklist is presented in form of a summary table displaying every criterion, the outcome, and the logic behind it.

- In case there is a mark in any Gatekeeper item the yes is rejected in the dimension of Riba.
- In the event that all Gatekeeper questions are passed but one or more suspicion scores become lower than 3 (mediate concern), it is forwarded to further review or fix.

After the checklist is prepared, it is tried on sample products so as to ensure that it is clear and that the reviewers are consistent. Once it is checked it is forwarded to a Sharia Supervisory board or an institutional committee, where it is approved. The accepted checklist will further be included in the standard toolkit and can be applied to comparable product analysis.

6.9. Illustrative Example of Checklists and Scoring Methods

6.9.1. Example A: Gatekeeper Application — Clear Gharar

Here the evaluator deems the framework to examine the way to prevent Gharar, or too much uncertainty. It is emphasized to ensure that the items sold or rented out are definite and their ownership. This is critical to a certain contract. According to the rule, when the contract is made, the basic specifications should be easily understood such as the existent sold, its price and when or how it is going to reach the intended destination. The evaluator begins by reading one of the clauses in a draft sale agreement between a financier and a client: The Seller will transfer the asset to the Buyer at a later date yet to be agreed upon, and the value of payment on delivery will be based on the market value.

On the face of it, the sentence presents two unambiguous sources of uncertainty:

- **Delivery Time is Not Stipulated:** to be agreed upon later exposes the date and therefore, it is not known when ownership will be subject to change.
- **The Price is Not Established:** determined upon delivery makes a variable unknown amount, which is forbidden since it prevents the parties to know what each other have to pay when they enter into the agreement.

The evaluator will then reference the Gatekeeper checklist whose questions are basic yes or no questions according to Sharia regulations (AAOIFI Sharia Standard No. 8 on Murabaha and Standard No. 9 on Ijarah). The two checklist items that are experts in this case are:

- Are the subject matter and delivery conditions clearly identified and documented at the time of agreement?
- Is the price or consideration fixed, known, and agreed upon in advance?

- Does the contract specify ownership transfer upon a defined act of delivery?

Here, the evaluator indicated pointers to all the answers of No indicating obvious violations. The assessment outcome is summed up as follows:

- Dimension: Avoidance of Gharar
- Aspect: Clarity of deliverables and ownership
- Criterion: All essential contract elements must be defined and known.
- Gatekeeper Result: Violation confirmed (undefined price and delivery).
- Decision: The product is rejected at the Gatekeeper stage; no further scoring is applied.

This example demonstrates how the Gatekeeper checklist functions as the first and non-negotiable layer of control. Its binary character ensures that any product that is uncertain in terms of contracts is preemptively excluded before there is even any quantitative or suspicious-elements analysis. The evaluator supports the decision with the contract text itself which will serve as the evidence of the violation.

6.9.2. Example B: Suspicious Element Evaluation — Riba in Fixed-Return Structure

This is an example of how the framework is applied to a case clearing the Gatekeeper test and still has suspicious aspects that require a quantitative test. The evaluated dimension is Avoidance of Riba (interest-based gain), and the selected Aspect is profit or return determination. The criterion requires that any return must originate from a genuine trade or asset-based activity, not from a pre-agreed or guaranteed interest mechanism.

The following clause is extracted from an *Ijarah-based Sukuk* term sheet commonly used in structured finance: “Periodic rental payments shall be benchmarked to the six-month LIBOR rate, subject to review and adjustment every six months in line with prevailing market conditions.” At the Gatekeeper level, this clause does not represent explicit Riba because the payments are generated from an underlying lease transaction, not a debt instrument.

However, it introduces a level of suspicion since the benchmark used to calculate rent is derived from an interest-based reference rate (LIBOR). This creates a Shubha (doubt) about potential imitation of interest mechanisms.

Checklist for Suspicious Elements: To capture this ambiguity, the evaluator refers to the Suspicion-Element Checklist developed for the Riba dimension. Each statement is reviewed on a Likert scale (1 = serious violation → 5 = no concern) to quantify the degree of compliance.

Table 6.2: Checklist for Suspicious Elements

Checklist Item	Observations from Clause	Likert Score (1–5)
1. Is the rental generated from asset use rather than a lending arrangement?	Lease structure confirmed; return derived from usufruct.	5
2. Does the clause involve a predetermined or guaranteed profit irrespective of asset performance?	No guarantee; rent arises from use, not capital.	5
3. Is the benchmark linkage purely referential without automatic interest replication?	Benchmark used for pricing calibration; partial imitation risk.	3
4. Does the clause allow risk-sharing adjustments (e.g., renegotiation under market stress)?	Rent revision clause present; shows flexibility.	4
5. Are ownership and risk transfer clearly documented in the lease structure?	SPV retains title; risk transfer defined.	4

Source: Prepared by the Author, 2025

Score Computation and Interpretation. Average Score = $(5 + 5 + 3 + 4 + 4) \div 5 = 4.2$

Percentage Conversion = $((4.2 - 1) \div 4) \times 100 = 80 \%$

Because the result exceeds the 70 % threshold, the clause is classified as compliant under the suspicious -element scale. Although a benchmark link exists, the structure's return stems from a legitimate lease, and the pricing mechanism remains adjustable and asset-based.

A borderline case occurs when benchmark linkage becomes more determinative or when ancillary clauses indirectly guarantee a fixed yield.

Consider this modified clause from another Sukuk prospectus: “The rental rate shall equal LIBOR + 2 % fixed margin and shall remain constant throughout the lease period. In the event of default, the lessee shall continue to pay rental amounts until full settlement.” Although the structure is known as Ijarah, the lease rate is determined and it is not contingent on the performance of the property. The need to continue paying rent till the entire sum is recouped serves as a form of interest on an abate loan. The checklist will be re-scored by the evaluator:

Table 6.3: Checklist for Re-Assessment under Modified Clause

Checklist Item	Re-assessment under Modified Clause	Likert Score
1. Return comes from assets	Lease still present but economically overshadowed by debt-like return.	3
2. Profit is ensured regardless of the performance of anything	Present (fixed margin).	2
3. Is it only to be connected to a benchmark?	No – directly formulaic.	2
4. Is it possible to share risk through changes?	None; rate locked.	2
5. Certainty of ownership and risk-transfers.	Remains adequate.	4

Source: Prepared by the Author, 2025

$$\text{Mean} = (3 + 2 + 2 + 2 + 4)/5 = 2.6 \rightarrow ((2.6 - 1)/4) \times 100 = 40 \%$$

Interpretation: 40 % < 70 % → Non-Compliant (Borderline-Fail).

The evaluator suggests the following changes in an effort to rectify this show of mediocrity within the borderlines, which will eliminate interest mimicry, and re-establish asset slacking, like:

- Replace interest benchmark and use some neutral commercial index such as an index of commodity-prices or inflation to ensure things are open and not to make use of indicators based on usury.
- Introduce performance-based variability, whereby the rent price can be varied based on actual usage or market value of the property being leased.
- Revise default clause will be provided in the form of payments after defaulting date shall be relative to the actual loss, and not time-value of money.

Once these corrections have been done, one must re-test the framework using the same checklist in order to test improvement. The re-evaluation would provide the overall average of 4.0, that is, one-fourth, and that would put the product back into the compliant range. The assessor documents both the original borderline score and the modified score in the compliance file providing an excellent audit trail of the corrective process.

6.9.3. Analytical Reflection on the Illustrative Examples

The Sharia Compliance Framework implements juristic reasoning using organized tools, as seen in the two examples. The Gatekeeper checklist operates like a filter, preventing any product from being utilized even if there is an evident violation, such as between essential contract clauses. This makes Sharia rulings robust and prevents them from being interpreted loosely. Suspicion-based tests quantify uncertainty. By turning uncertain ideas into numbers using a Likert scale, the framework makes decisions clear and justified. It uses individual academics and shows how each aspect was considered and borderline instances were solved. Grading and binary exclusion show how hard norms and flexibility are weighted. The framework states that certain infractions are obvious and cannot be bargained, while others should be appropriately examined based on process, not intuition. This two-fold method makes Sharia compliance strong yet practical, enabling banks to explain their efforts, justify choices, and improve product morality.

6.10. Conclusion

We previously examined Sharia compliance theory, but this chapter turns it into quantifiable practical material. First, organize Pillar, Dimension, Aspect, Criterion, and Tool logically. It turns legal theories into a practical system for Islamic finance. The approach blends financial methods with Islamic rules to produce clear, testable results instead of relying only on ethical views. The chapter shows that all dimensions of compliance, including avoiding Riba, Gharar, and Maysir and incorporating more general ethical principles like fairness, ownership, and openness in contracts, are traditional. All aspects are measurable with defined criteria to trace each choice to text or legal argument. This stratified approach simplifies and stabilizes analysis throughout.

The framework works using two tools. First, the Gatekeeper Criterion rejects products that violate interest norms, speculative risk, or misleading formulation. Test failure results in non-compliance rejection. Second, the Suspicion Element Evaluation considers ambiguous or borderline instances. It uses a Likert scale to assess suspicion so it may be appropriately managed and altered if needed. The examples of how the tools are applicable in real life are also provided in the chapter. The example of the Gatekeeper demonstrates how the system may infer and rebuff contracts with significant Gharar such as the ones involving undefined price or delivery. Another example involving Riba explains that how the suspicious components, like benchmark-related returns, are rated and fixed with the help of a systematic procedure. These examples illustrate that the framework does not only maintain legal suitability, but it also provides an evidence-based approach that may be adopted by compliance departments.

In general, this paper's Sharia Compliance Framework is a scientific method that structures judicial decision review. It combines true Sharia principles with excellent technique to establish adherence by verifiable and consistent logic rather than guessing. The same foundation preconditions the Economic Efficiency Framework, which will apply structure, measurability, and integration to Islamic product financial performance in later chapters. Combining the Pillars Sharia Compliance and Economic Efficiency completes the two-fold framework under examination, providing an analytical and practical mechanism for analyzing Islamic financial innovation.

CHAPTER VII

DEVELOPING A CONCEPTUAL AND PROCEDURAL FRAMEWORK FOR ECONOMIC EFFICIENCY

7.1. Introduction

Islamic Financial Engineering involves the design and assessment of financial products to ensure Sharia compliance and meet the demands of the modern financial market. As shown in Chapter V, Sharia compliance is the first evaluative pillar, serving as a safeguard to ensure that every financial instrument is both legally and ethically Islamic, as well as morally and ethically acceptable. However, passing the Sharia test is only the first milestone. Principle-compliant financial products may underwhelm in terms of performance and sustainability and may also fail to attract investors. Therefore, to operate effectively in the real economy and not be priced out of the Islamic financial products market, the products must display additional economic characteristics. This chapter provides the last building block of the evaluative framework: an analysis of economic efficiency. While Chapter V provided an extensive theoretical understanding of the principles of financial performance, including risk-return, liquidity, profitability, and capital stability, this chapter seeks to convert those principles into an organized framework for thorough product evaluations. The goal is to move beyond a theoretical description of economic efficiency to develop a layered approach that allows different kinds of Islamic financial instruments to be evaluated in an organized, repeatable, and analytically rigorous manner. To this end, the economic efficiency framework is organized into three layers, which have separate but related purposes for the evaluation.

Theoretical framework, this is the level of the framework that draws on the existing literature in economics and finance to derive an understanding of what is meant by an efficient financial product. This framework will include the examination of risk-return equilibrium, profitability, and/or cost-benefit efficiency analysis, liquidity, Capital Preservation, and the theory of competitive market theory. This and other theoretical

frameworks will form the epistemological and analytical basis for building the remaining aspects of the framework.

Conceptual framework, the second level of the framework takes the theoretical abstract ideas and arranges them into the evaluative dimensions. The theoretical general notions are translated into definable evaluative dimensions located within each evaluative domain related to the previously noted notions, for example, the risk-return analysis dimension, the cost-benefit efficiency dimension, the liquidity dimension, and the Capital Preservation dimension. This level of the framework provides the conceptual scaffolding necessary to establish a rigorous, multidimensional, and, most importantly, standardized evaluative framework.

Procedural framework, the last layer refers to the actual implementation of the conceptual model. Here, the model describes the assessment procedures of actual financial products, which incorporate definitional components such as methods, financial equations, scores of each criterion. Techniques such as Net Present Value (NPV) and Sharpe Ratio, are used in qualitative approach. This layer will put the ideas into action, allowing the evaluation model to examine various types of financial instruments.

This chapter demonstrates a justifiable manner of evaluating the financial performance of Islamic financial products by organizing the three layers into a logical process in straightforward and easily understood steps. The logical progression of each layer contributes to the internal cohesion of the system, as well as its applicability and coherence in external contexts. The Sharia compliance model, introduced in Chapter 5, and the Sharia-compliant economic model developed in this Chapter, fulfil part of the whole. The model presented in this Chapter would assist regulators during product development, as well as investors, in conducting a comprehensive scientific financial evaluation. This chapter expands the ethical legitimacy associated with Sharia screening to include economic efficiency, stressing the latter as a complement to the former. The three pillars of Sharia compliance, economic efficiency, and ethical legitimacy are the interdependent bases of Islamic Financial Engineering to assess a Sharia-compliant financial instrument. The following sections of this chapter will elaborate on the proposed evaluation model, which begins by covering the theoretical

traditions that inform the conceptual and procedural frameworks of the evaluation model in developing the proposed Islamic finance economic efficiency model.

7.2. Theoretical Framework of Economic Efficiency

The theoretical foundations of economic efficiency were discussed in detail in Chapter V, where the main concepts and theories underlying financial performance were analyzed. This section provides only a concise overview to reconnect the reader with those foundations before proceeding to the framework construction. Economic efficiency, in its broad sense, refers to the optimal use of available resources to achieve maximum value and minimal waste. Classical and modern economic thought define efficiency through three interrelated perspectives: allocative efficiency, which ensures resources are directed toward their most valuable uses; productive efficiency, which focuses on achieving the highest output from given inputs; and dynamic efficiency, which emphasizes innovation and long-term adaptability (Varian, 2019: 478–480). Together, these perspectives establish the intellectual basis for evaluating how financial systems and products contribute to sustainable value creation.

Within financial economics, efficiency is expressed through several functional dimensions that translate theory into measurable outcomes. These include the Risk–Return balance, Cost–Benefit relationship, Liquidity Strength, and Capital Preservation. Each dimension represents a specific channel through which financial instruments can be evaluated for their performance, sustainability, and resilience. This multidimensional understanding transforms abstract theoretical notions into structured analytical components that support a systematic evaluation process (Fama, 1970: 383). The following subsections elaborate these theoretical premises in an effort to design the conceptual and procedural frameworks for economic efficiency. These processes transform the mentioned principles into practical tools that could be consistently used in simple, accurate, and replicable way to assess financial products.

7.3. Conceptual Framework Construction Logic: Dimensions, Aspects, and Criteria

This method requires logical rigor in order to develop a framework that operationalizes economic theory into quantifiable aspects. Being created so as to manifest economic efficiency, the model arranges itself into three levels, namely dimensions, aspects, and criteria, which play a specific role in the assessment. The first level is made up of dimensions. It has a main indicator of the manifestation of the economic efficiency in the real economy within each dimension. This study has given a definition of four dimensions: Risk -Return, Cost-benefit, Liquidity Strength and Capital Preservation. These dimensions can summarize the most critical areas of the financial performance hence deciding the viability and success of the Islamic product under consideration. The aspects are divided into each dimension. Aspects are the internals of that part or manner of acting that brings performance about in that part. Their theory is an attachment to what can be perceived. This is exemplified in the case of the Risk-Return dimension, where one can see how risk and reward are realized in practice, as evidenced by return stability, risk exposure, and risk-adjusted profitability. The aspects allow the evaluator to examine each dimension individually rather than as a single number.

Lastly, specific criteria are considered in every matter. The ideas are transformed into measurable things using criteria. A criterion informs us of what is to be measured and how to evaluate performance. Every criterion included in the methodology is linked to a financial tool, a formula in analytics, or a ratio that will help to justify it, such as the Sharpe Ratio, which increases risk-adjusted returns, or the Debt Service Coverage Ratio (DSCR), which analyzes strong liquidity. The granularity of this step is where the concept theory changes to concrete measurement, but the procedures used are the same. The model relies on the chain of dimensions, aspects as well as criteria arranged in a logical order. It ensures that the appraisal is methodical, transparent, and reproducible, thereby minimizing subjective judgments and applying it to various financial products. Theoretically, such a three-level structure has the same flow as the entire research- the connection between theory, ideas, and practical steps. This structure is followed in the subsequent sections (7.3.1 to 7.3.4) of this work, which

describe each dimension of economic efficiency, the aspect it relates to, and the tool applied to determine it.

Table 7.1: Illustrative Hierarchy of the Conceptual Framework

Level	Definition	Illustrative Example (Risk–Return Dimension)
Dimension	The principal domain of evaluation representing one major component of economic efficiency.	Risk–Return
Aspect	The core element or mechanism within a dimension that explains how performance is achieved or constrained.	Return Stability • Risk Exposure • Risk-Adjusted Profitability
Criterion	The measurable indicator or variable used to assess an aspect empirically.	Volatility of returns • Return per unit of risk

Source: Prepared by the Author, 2025

This strict ranking ensures uniformity of ideas throughout the entire structure. It aligns the subsequent evaluation with the high ISO requirements of financial theory and the ethical and practical provisions of Islamic finance to get a single basis for the following procedural model.

7.3.1. Determining the Main Aspects of Each Dimension

The identification of aspects on any given dimension is a highly stringent methodological procedure that is meant to maintain academic accuracy and consistency. All the elements outline a specific performance measure that bears witness of the dynamics of operations within a specific facet of economic efficiency. The choice of the elements is based on objective principles, enlightened by good theoretical, analytical and methodological basis as opposed to subjectivity.

Overall, the derivation process follows a deductive-inductive paradigm whereby the derivation is based on the deductive aspect guiding the derivation of the theory through extant literature after which it shifts to the inductive aspect, which is basing the inductive processes on comparative studies of financial models and instruments. This twofold model is both practical and conceptually sound, ensuring that all points made

are defensible methodologically. The rest of this paper will apply this reasoning to the first dimension of the Risk-Return.

7.3.1.1. Risk–Return Dimension

The primary concept of financial assessment is the risk-return relationship, which demonstrates the effectiveness of money utilization in the face of uncertainty. Higher risk should indicate higher returns to be efficient, and there should be a reasonable balance of risk and reward in investments. Modern Portfolio Theory, developed by Markowitz and Sharpe, gives rise to this idea. They stated that in decision-making, not only should there be an attempt to achieve maximum returns, but decisions should also examine the relationship between the anticipated returns and the extent to which the returns are expected to be variable. Expenses that can be examined to measure the efficiency of an investment are numerous, including volatility, diversification, the presence of correlation, the extent of losses, and the repetition of earnings, among others. However, such things do not need to be equally valuable when viewing one product. Others emphasize the combination of assets more than product efficiency. Others offer general market portfolios, which are challenging to quantify.

Considering numerous models and studies, a list of factors has emerged as the most valuable indicators of economic performance. These two are visible, well-founded in theory, and are measurable. They state how much investment generates value relative to risk. Among the available options, the most helpful and practical to use are Return Stability, Risk Exposure, and Risk-adjusted Profitability. Return stability refers to the predictability and consistency of income or profit over time. When returns are stable and the business is well-organized, then the design is solid and management is disciplined. Substantially, stable returns enable long-term planning and reduce the ambiguity of future cash flows, which is one of the most essential reasons for rational capital decisions. Practically, you find stability by observing the extent of change of periodic returns or the degree of fluctuation of performance over time. And the criterion will be Volatility of Returns. This criterion is used to determine the standard deviation or variance in periodic returns over a specified period. The volatility is lower, the returns are stable, and the business is efficient in maintaining a predictable

performance. The extent to which uncertainty is incorporated in a financial product or investment is known as risk exposure. It considers the change in its performance in relation to the market, economic shocks, or changes in the price of the particular asset. Exposure is essential because you cannot assess its efficiency without understanding its size in relation to the expected return. In normal finance, individuals test this by comparing numbers such as beta, value-at-risk, or sensitivity coefficients, which consider the exposure from a different perspective. The criterion of this aspect is Variance or beta of returns relative to market benchmarks. This criterion is used to analyze how much returns earned by an investment are sensitive to the market at large as compared to in-house. The exposure is moderate and clear, which points to the fact that the investment is well-balanced. An over or unregulated exposure suggests that there exist structural problems in the investment.

Risk-adjusted profitability is a valuable analysis tool in determining whether the risk taken by a company is just balanced with the returns. It is relevant because it offers a measure of the level of operational efficiency. It is worthwhile noting that the high returns might not necessarily be advantageous. Sharpe formalized the idea in 1966. He said that it is not the best investment with the highest payoff, but it offers the highest payoff per unit of risk. Such an approach enables us to compare various investments and markets. And the criterion of this aspect is Return per unit of Risk. This is a criterion for the additional amount of return received on each unit of risk, providing a standardized measure of efficiency. An increased ratio indicates that risk-return is well managed, while a low ratio suggests an inability or imbalance between volatility and reward. These were Return Stability, Risk Exposure, and Risk-Adjusted Profitability. This is the selection that was arrived at as a result of synthesizing the concepts of financial theory with actual data evidence. Collectively, they demonstrate the consistency in an investment performance, the size of uncertainty, and the amount of value generated. This is a simple logic that forms the criteria of the entire structure. All the rules will be transformed into working financial tools and indicators. The model is still a proposal and is subject to change. Financial engineers may add other criteria or factors that represent aspects more descriptive of a given product or market. The change shall be permitted provided it is theoretically empowered and is also directly connected to the measurement or evaluation being assessed.

7.3.1.2. Cost–Benefit Dimension

The Cost-Benefit dimension considers whether the money invested in an entity/financial product is worth the money and effort invested. In simple language, one can say that something is efficient where the cumulative benefits exceed the cumulative costs, both in terms of dollars and in terms of whatever cannot have been done. The concept is based on the Cost-Benefit Analysis (CBA) technique, which is widely used in the fields of finance and project evaluation (Boardman et al., 2018: 96). The one rule is that decisions are efficient when they result in the most significant net social or financial value. Therefore, money and effort are spent on the most productive locations.

Practically, most things can be considered on this dimension, such as the combination of debt and equity, the cost of selling, buying, or running, value over time, or the productivity of things. Not every one of them, however, usually answers when you examine one product. Others are part of the overall company performance reviews, while others heavily depend on accounting regulations, which vary by industry. Financial Cost Efficiency, Net Benefit Assessment, and Profitability Sustainability are three key factors that continue to be presented as the most helpful and measurable in the Cost-Benefit analysis, as demonstrated through a comparison of financial evaluation models and actual studies. These are used to determine the effectiveness of cost control, the benefits compared to the costs, and the ability of the profit to be sustainable in the long run.

Financial cost efficiency examines how effectively a product's economic structure maintains low costs while also adding value. It is a measure of the correspondence between the expense of issuing, running, or managing the item and the anticipated benefits. The economic sense in this part is good, as high or poorly utilized expenses will reduce the real value when the total returns appear to be high. Theoretically, productive efficiency, as the idea of achieving the highest output of what you put in, is identical to cost efficiency (Varian, 2019: 478-480). And the criterion is Ratio of total costs to total benefits (Cost Efficiency Ratio). This criterion is used to demonstrate the relationship between all the expenses you pay (issuing, operating, and maintenance expenses) and the financial values you receive. The lower the ratio, the more efficiently you utilize resources. Net benefit analysis examines the economic

value of the benefits generated by the financial product, ensuring that the benefits remain positive after all expenses are factored in. It summarizes both direct and indirect benefits. This section reveals efficiency in utilizing resources by making an investment where it is doing better than the cost of the action. It also forms the basis of investment decisions and the Cost-Benefit analysis of project evaluation. And the criterion is Net Present Value or Benefit–Cost Ratio. These criteria ensure that the benefits of the future calculated in terms of value are greater than the costs calculated in the same manner. In a scenario where NPV is positive or when the BCR of one is higher than one, it indicates that investment is economically viable and it will result in the creation of real net value.

The three aspects mentioned above, i.e., Financial Cost Efficiency, Net Benefit Assessment, and Profitability Sustainability, were selected as a result of an equal measure of deductive rationale from economic theory and inductive verification through financial practice. They all quantify the quality of resource utilization, benefits against costs, and profit sustainability. They take a summative analysis perspective in assessing the efficiency of the Cost-Benefit field. This structure is the model proposed by a writer; however, financial engineers may include additional factors or other requirements that can be applied to particular goods or in a specific market situation. These changes are more readily accepted when presented in a theoretical framework and are directly related to the aspect being measured or evaluated.

7.3.1.3. Liquidity Strength Dimension

Liquidity Strength demonstrates the ability of a financial product to meet short-term payment obligations and accommodate modifications to cash-flow requirements without compromising value. The extent to which an investment can be applied to actual market situations and is of a lasting nature is measured by liquidity, which is vital to economic efficiency. According to Keynes and Hicks, liquidity influences the stability of financial markets, interest rate changes, market flexibility, and the efficiency of transactions. Economically, a good financial product must be financially liquid enough to be active in both normal and stressed markets. This dimension involves the presence of sufficient cash flow to the firm, the ability of the firm to

refinance, the tradability of the firm, the sales cost, and the speed at which it can sell. Not everything that is mentioned measures the product itself. Some are more suitable for in-depth picture research, while others overlap with solvency or profit. We can see from alternative financial evaluation techniques and actual liquidity research that several indicators of liquidity performance are always feasible and quantifiable.

Short-term liquidity assessments of whether a product can finance the daily cash expenditure and payments. It examines the possibility of financing short-term expenditure without borrowing using the money that is inflowing due to operations or investments. Financial trouble can be predicted by short-term crises related to liquidity, regardless of a firm's profitability. The criterion will be Cash Flow Coverage Ratio (CFCR) or Debt Service Coverage Ratio (DSCR). These ratios examine whether a company will utilize operating cash flow to fulfill its short-term debts or other obligations. The greater the ratio, the better the liquidity in the short term and the greater the efficiency.

Liquidity in the market refers to the ease with which a financial product can be sold or converted into cash in the secondary market without a significant loss of its value. It informs us of the extent to which the product is accepted in the market and how it can maintain its value through trading. Liquidity is good, which will help keep prices in line and build investor confidence. Liquidity is poor, which makes transactions more expensive and decreases the price accuracy. The traditional ones include bid-ask spread and volume. The criterion is Bid–Ask Spread or Turnover Ratio. These criteria examine the tightening of the spread and the level of trading that is taking place. Liquidity resilience involves more than the possibility or actual mobilization of cash flow or trade. It relates to the capacity of a financial instrument to have sufficient liquidity during stressful periods.

The fact that the notions of Short-term Liquidity, Market Liquidity and Liquidity Resilience are included can be explained by the long way of looking into the theoretical concepts and the empirical data. They serve as a reminder of how elastic money can be at a given time, how readily things tend to exchange on the market, and how well the system can endure good times. All three measures serve as a comprehensive perspective on how liquidity contributes to maintaining confidence and stability in the

market. Changes can be made if it seems logical and pertinent to the specific liquidity dimension under investigation.

7.3.1.4. Capital Preservation Dimension

Capital preservation refers to the avoidance of loss of the money invested in an investment. One of the dimensions of evaluating the efficiency of an investment is its return. While generating more money or simply withdrawing it are about growth and flexibility, Capital Preservation is about keeping value over time. Modern financial experts have demonstrated that capital security, risk management, and capital retention are essential in monetary theory for preserving value. It shows how a good product should evolve and protect investors from market fluctuations. Capital protection may be measured by product market exposure, default risk, collateral, time sensitivity, and recoverability in the case of a disaster. However, they may not be excellent at demonstrating product efficiency alone. Some affect firm health, others market or legal problems. Having reviewed theory and real model, three points appear to be the most beneficial and measurable methods of measuring Capital Preservation, namely: 1) Financial Resilience, 2) Risk of Capital Erosion, and 3) Asset-Backed Security Adequacy.

Financial resilience refers to a financial product's ability to withstand impairments resulting from adverse economic conditions or market shocks without losing its principal value. It indicates the level of strength that the product possesses when subjected to pressure, and it is the ability of the product to continue functioning without losing its initial investment. Financial stability studies indicate that stable products typically have minimal borrowing, smooth cash flow, and multiple sources of income. Resilience measurement helps the analyst to know whether a product will be able to survive large economic fluctuations or cash -flow shocks without experiencing huge losses. The criterion is Stress Testing or Sensitivity Analysis. The criterion can be used to measure the responsiveness of the value of a product to unfavorable factors, including changes in interest rates, price fluctuations, or caused by cash-flows. A sound product will have a virtually similar valuation during an emergency hence showing a good construction.

This element represents the likelihood and the extent of loss to which invested capital is prone to. It examines the extent to which adverse occurrences, such as a market decline, a bad borrower, or significant price fluctuations may erode the capital. It presents a vulnerable financial product, analyzing resilience and calculating downside risks. We frequently employ the value-at-risk (VaR) ratio or loss given default in finance to assess the probability of capital loss. The criterion is Value at Risk (VaR) or Expected Shortfall. These criteria demonstrate the most significant loss that you can experience within a specific period and level of confidence. Less capital will provide greater security to the capital, whereas more capital will imply that the capital risks losing money.

Asset-backed security adequacy examines the protection that the tangible or collateral assets offer the investment. It cross-checks the sufficient value of good assets to hold investor funds safe in case of a market movement or a defaulting counterparty. When there is no risk of default, a primary method of reducing credit and market risks is the use of collateral. Testing asset adequacy demonstrates the fact that the protective mechanisms are tangible, measurable, and transparent. The criterion is Loan-to-Value (LTV) Ratio or Collateral Coverage Ratio. These criteria analyze whether the security value is sufficient to fund the overall exposure. Lower ratios will indicate greater security of assets and superior coverage of the funds invested.

Financial resilience, risk of capital erosion, and adequacy of asset-backed securities have been chosen logically based on economic theory and studies in the real risk model. The two of them indicate that capital preservation is viewed as an evolving process, involving resilience, vulnerability, and protection strategies, rather than merely as fixed indicators. Yet financial engineers may be able to identify superior standards of particular product characteristics or even the market conditions. These transformations can be permitted in case they have a valid theoretical foundation and relevance to the review.

7.3.2. Summary of the Conceptual Framework for Economic Efficiency

The economic efficiency model transforms theory into a concise, quantifiable dimension, which evaluates the aptness of money affairs. It employs a three-step logic,

involving dimensions, aspects, and criteria, used to relate the theory to real-world checks. It is believed that these four dimensions, Risk-Return, Cost-Benefit, Liquidity Strength, and Capital Preservation, are fixed since they are direct theories. They tend to remain similar irrespective of the dimension of application. A dimension, however, may not apply to all products.

To illustrate, aspects such as Liquidity Strength are not crucial in long-term investments, such as closed-ended infrastructure funds, where liquidity is often constrained; however, they are essential in short-term or marketable investments. The parameters and preconditions that are relevant to any dimension are adaptive in nature. In fact, there might be a need to make use of various goods in order to add emphasis on certain dimensions, present new features or use various financial indicators as a way of explaining them. This flexibility is the key to why the framework can be relevant in science and allow its practical application.

Table 7.2: Summary of Conceptual Framework for Economic Efficiency

Dimension	Aspect	Criterion (Measurement Tool)	Purpose / Interpretation
Risk–Return	Return Stability	Volatility of returns	Measures consistency and predictability of income over time. Lower volatility = higher stability.
	Risk Exposure	Variance or Beta of returns relative to market	Quantifies uncertainty and sensitivity to market conditions. Moderate exposure indicates balance.
	Risk-Adjusted Profitability	Return per unit of risk (e.g., Sharpe Ratio)	Evaluates proportionality between return and risk; higher ratio indicates better efficiency.
Cost–Benefit	Financial Cost Efficiency	Cost Efficiency Ratio (Total Costs / Total Benefits)	Evaluates how effectively costs are managed relative to benefits generated.
	Net Benefit Assessment	Net Present Value (NPV) or Benefit–	Determines whether discounted benefits exceed discounted costs.

		Cost Ratio (BCR)	
	Profitability Sustainability	Profitability Index (PI) or Internal Rate of Return (IRR) vs. Cost of Capital	Measures whether profitability can be sustained relative to financing costs.
Liquidity Strength	Short-Term Liquidity	Cash Flow Coverage Ratio (CFCR) or Debt Service Coverage Ratio (DSCR)	Assesses the ability to meet immediate cash obligations.
	Market Liquidity	Bid–Ask Spread or Turnover Ratio	Evaluates tradability and market activity; narrower spread = stronger liquidity.
	Liquidity Resilience	Liquidity Stress Test or Scenario Analysis	Measures adaptability under stress and liquidity shocks.
Capital Preservation	Financial Resilience	Stress Testing or Sensitivity Analysis	Tests the product’s ability to maintain value under adverse conditions.
	Risk of Capital Erosion	Value at Risk (VaR) or Expected Shortfall	Estimates potential capital loss probability within a confidence level.
	Asset-Backed Security Adequacy	Loan-to-Value (LTV) Ratio or Collateral Coverage Ratio	Evaluates sufficiency of collateral to protect investor capital.

Source: Prepared by the Author, 2025

This framework provides a solid foundation for understanding economic efficiency theory and its practical applications. The four dimensions do not change the original way they are available and are based on the well-established principles in the world of finance and economics, and these aspects and criteria can be modified to suit the particular needs of a specific product. As an example, Capital Preservation and Cost-Benefit analysis should be given attention in regard to a government infrastructure

bond. Equally, in assessing short term financial instruments in the money market, Liquidity and Risk-Return trade off should be put into consideration. The framework keeps its consistency but allows financial engineers to override the granularity of their analysis based on product and the information, as well as the purpose of the analysis. It specifies the guidelines that Section 7.4 will use to execute every requirement based on measurable metrics, requests, and rating programs.

7.4. Procedural Framework for Evaluating Economic Efficiency

The implementation model is a utilitarian application of the conceptual model mentioned above, which is the procedural framework. The model identifies the dimensions, aspects and criteria used to establish economic efficiency. The procedural system takes these concepts and transforms them into a quantifiable, step-wise process that is measurable, comparable and testable. Its main aim is to provide a replicable and open methodology to measure the efficiency of financial instruments by the application of common instruments, quantitative measures, and scoring rubric. Therefore, the framework makes the evaluation scientifically sound and easily adaptable.

The four types of dimensions, namely, Risk-Return, Cost-Benefit, Liquidity Strength, and Capital Preservation that were there before, and are supported by economic theory as well. They are used depending on a specific instrument. Some products would place more focus on a dimension and derail other dimensions. Indicatively, liquidity is of utmost importance in short-term investment instruments like commercial papers, but not in illiquid long-term assets like infrastructure bonds. The procedural framework, therefore, provides a unique, though loose, guideline framework. It also provides the financial engineers with the ability to recognize the relevant aspects and implement the relevant rules in all aspects. It makes economic efficiency measurable, comparable and also capable of action by connecting theoretical constructions with empirical measurement. In this framework, the assessors will be able to examine the performance of each of the products concerning the major pillars of efficiencies, hence drawing objective judgments that will guide financial judgment and product development.

7.4.1. Framework Logic and Structure

The procedural model operates by bringing the ideas to a process that can be quantified. Rather than considering high-level relationships, it assists the financial engineer to take a logical series of steps that maintain results, whether accurate, consistent, and comparable. It is possible to summarize the process with six connected stages: data collection, dimension evaluation, aspect identification, tool selection, formula application, scoring, and decision-making. Data collection normally begins with the collection of all the information that we should use to assess the financial product. This involves financial statements, market returns, cost details, liquidity reports, or any information that may be of interest. The level of accuracy of this initial data set will determine the extent of reliability of the entire testing.

Evaluating the dimension and determining the proper aspect, then after collecting the data, the evaluator picks the product-relevant economic efficiency dimensions from Risk-Return, Cost-Benefit, Liquidity Strength, and Capital Preservation. The assessor chooses study areas for each dimension. Bonds may offer risk-return and Capital Preservation, whereas short-term investments may emphasize liquidity strength. After identifying significant elements, the evaluator selects the most suitable analytical techniques or models to quantify them. Financial ratios, statistical variables, and simulation models that meet specific requirements are frequently used tools.

Every chosen instrument is a formula that converts raw data into a quantifiable result, including ratios on returns, cost-benefit index, measures of liquidity, or quantitative measures of risk. These equations guarantee that all aspects undergo a comparable scholarly evaluation strategy. Once the indicators are calculated, the results are converted into standardized scores, typically on a 15/0100 scale, to be able to compare them between dimensions. Standardization eliminates the differences in units and permits us to use standard thresholds to measure the temperature of efficiency.

Lastly, the person who evaluated it examines the scores and makes up his mind on the efficiency of the product. Depending on the evaluation goal, the decision may be based on a threshold model, a weighted scoring model, or an integration of the two. Depending on the overall, combined results of the scores on each dimension to which the product is applicable, the product is then categorized as either efficient, moderately

efficient, or inefficient. This flow process is logical in its decision-making and clear in its reasoning and traceability, as well as being theoretically consistent and flexible in its choice of aspects, tools, and scoring models.

Table 7.3: Summary of the Evaluation Process

Step	Title	Objective	Output
1	Data Collection	Gather accurate and verifiable input data.	Dataset of financial and market information.
2	Dimension Evaluation	Identify applicable dimensions of efficiency.	Selected dimensions (e.g., Risk–Return, Liquidity).
3	Aspect Selection	Determine the relevant performance aspects.	Chosen aspects under each dimension.
4	Tool & Formula Application	Apply suitable analytical methods.	Calculated quantitative indicators.
5	Scoring & Standardization	Normalize results into a comparable scale.	Standardized efficiency scores.
6	Decision & Interpretation	Classify and interpret efficiency level.	Efficiency judgment and recommendations.

Source: Prepared by the Author, 2025

7.4.2. Scope and Applicability

This evaluation relies on four key dimensions: Risk-Return, Cost-Benefit, Liquidity Strength, and Capital Preservation. The use of these dimensions is explained by the fact that they address the key aspects of financial analysis. They are based on economic theory and help guide each evaluation. The dimensions are fixed, but they vary depending on the product. Not every financial instrument has all its significant and measurable dimensions. Considering the example of Liquidity Strength in long-term project funds or infrastructure bonds, such instruments would not be very useful in analysis since they are not traded and are held until the maturity date. On the contrary, Liquidity Strength and Risk-Return also become the two key factors to measure performance when it comes to short-term money-market instruments. The procedure framework is not fixed or something rigid, but allows the evaluator to add, delete, or prioritize specific dimensions as part of the economic rationality and purpose of the product. The specifics and regulations of every dimension may be modified in accordance with the evaluator's approach, the available data, and the product's

structure. Financial engineers can add or adjust rules to accommodate new tools or market changes. They could apply the Sharpe Ratio in determining the profit after risk adjustment when verifying portfolios. In cases where products do not have equalized returns, they may apply the Sorting Ratio or Information Ratio.

Hence, it applies to investment portfolios, bonds, Sukuk, mutual funds, and REITs. Its flexibility allows its use in studies as a repeatable model, in business as a means to make decisions, to scan performance, identify inefficiencies, and enhance product design. The model is a strategy that is able to grow, diversify or stabilize according to the change in markets and instruments. Combined coherent theory and flexible processes allow ensuring the further applicability of the theory during a long-time frame as well as preserving the scientific quality.

7.4.3. Main Principles in Determining Criteria and Selecting Tools

To select the tools and define the criteria, there should be four methodology-based principles that guarantee consistency and credibility:

- **Theoretical Alignment**

Every criterion must be directly related to what it purports to measure. As an illustration, the measurement of risk exposure should be done using measures associated with the modern portfolio theory (such as beta or variance), as opposed to other financial measures that do not correlate with risk exposure. The theory compatibility ensures that the data measured is actually that which is supposed to be measured in the intended behavior in an economy.

- **Empirical Measurability**

The criteria and tools used must be based on quantifiable and measurable data rather than opinions and general descriptions. The evaluator should ensure that all the indicators can be determined based on reliable market or financial data. Measurability is necessary so that the results can be replicated, verified by others, and compared with the results of many products.

- **Analytical Relevance**

The tools should accurately represent the product's economic characteristics

and its response to performance variables. Select instruments that reveal the strengths and weaknesses, not simple financial ratios. An example is Value at Risk (VaR), which provides more information on the potential loss of capital compared to a naive return variance.

- **Comparability and Standardization**

Measures must allow us to compare the outcomes of products, industries, or even periods. It implies that instruments need to generate uniform numbers that are simple to interpret, such as ratios or percentage indices. Efficiency tests are not limited to a single product due to comparability.

The manner in which we transform criteria and tool choice in action can be summarized in four constant dimensions of economic efficiency. On every side, the reviewers identify the significant dimensions, establish quantifiable benchmarks, and select the appropriate analysis tools to gauge the effectiveness of each aspect.

Table 7.4: Operationalization and Tool Selection for Economic Efficiency Dimensions

Dimension	Aspect	Criterion (What to Measure)	Tool / Formula (How to Measure)	Purpose of Measurement
Risk–Return	Return Stability	Volatility of returns	Standard Deviation of periodic returns	Measures consistency and predictability of income; lower volatility implies greater efficiency.
	Risk Exposure	Sensitivity to market changes	Beta or Variance (Cov (Rp, Rm)/Var (Rm))	Captures exposure to systemic risk; a balanced beta (~1) reflects controlled exposure.
	Risk-Adjusted Profitability	Return per unit of risk	Sharpe Ratio = $(R_p - R_f)/\sigma_p$	Evaluates proportionality between risk and reward.

Cost–Benefit	Financial Cost Efficiency	Total costs relative to benefits	Cost Efficiency Ratio = Total Costs / Total Benefits	Measures resource utilization effectiveness.
	Net Benefit Assessment	Net value Creation	NPV or BCR = $\sum (B_t - C_t) / (1 + r)^t$	Determines whether total discounted benefits exceed total discounted costs.
	Profitability Sustainability	Long-Term Profitability vs. Financing Costs	IRR vs. WACC or Profitability Index	Evaluates Continuity of Profit Generation
Liquidity Strength	Short-Term Liquidity	Ability to meet short-term obligations	CFCR or DSCR = Operating CF / Debt Service	Assesses cash flow adequacy.
	Market Liquidity	Ease of conversion to cash	Bid–Ask Spread or Turnover Ratio	Indicates market activity and price stability.
	Liquidity Resilience	Ability to maintain liquidity under stress	Liquidity Stress Test / Scenario Simulation	Tests liquidity endurance under shocks.
Capital Preservation	Financial Resilience	Value retention under adverse conditions	Stress Test / Sensitivity Analysis	Measures capacity to absorb shocks without major loss.
	Risk of Capital Erosion	Potential loss magnitude	VaR or Expected Shortfall	Estimates potential loss probability and extent.
	Asset-Backed Security Adequacy	Degree of collateral protection	LTV or Collateral Coverage Ratio	Evaluates the strength of asset backing to secure capital.

Source: Prepared by the Author, 2025

This operationalization process corresponds to the fact that there is a clear and measurable tool for each part of efficiency. The tools mentioned above may be created and improved by the evaluator in iterative processes, which depends on the continuity of methodological rigor and validity and reliability of measurements used. The next area outlines how the results of standardization of measurement are transformed into

similar scores, and thus, provide a single experimental construct to interpret and make decisions.

7.5. Scoring and Evaluation of Results

7.5.1. Purpose of Quantitative Scoring

Quantitative scoring makes it possible to measure economic efficiency precisely, verifiably, and objectively. It is a stricter method to replace the imprecise and ambiguous judgment-based evaluations, as it uses readily verifiable financial numbers. Converting qualitative data to quantitative results, economic experts and financial leaders can evaluate products, oversee performance and detect problems in accordance with the shared framework.

Quantitative scoring gets rid of the subjectivity and guarantees consistency. All the calculations are made based on objective market data and explicit formulas as opposed to personal opinion. Due to replication of the same procedures, a practitioner applying the same information will get the same outcome, thus enhancing reliability of the method available. The conventional financial indicators, including the volatility of returns, cost-benefit ratios, liquidity coverage and capital resilience, are elements of steady similar evaluations across institutions. The evaluative process will be more transparent and accountable with the help of quantitative grading. The process is credible because each result is described with the use of numerical justifications in a step-by-step manner, making it easy to compare the outcomes in the time and in the framework of any policy. The use of quantifiable data validates the objectivity of evidenced economic efficiency and is in compliance with the financial standards that are accepted worldwide.

7.5.2. Principle of Independent Dimension Evaluation

The assessment system considers the individual efficiency dimension, as being of its components. The outcome of one dimension of our lives should not conceal the issues in another. We individually assess Risk-Return Efficiency, Cost-Benefit, Liquidity Strength and Capital Preservation which have their own references, standards and

internationally or market financial standards criterion. This autonomy maintains the evaluation goal and focus. When a dimension performs poorly in a particular liquidity or capital adequacy, we do not average the poorer liquidity or capital adequacy dimension with the stronger dimensions to obtain a high aggregate score. We write down the weakness instead, making the decision makers aware on exactly where the inefficiency will be. This non-Pay-back method is based on current performance audit and portfolio analysis, according to which every dimension should be aligned with its standard to ensure that the overall efficiency will be achieved. All the results can be ascribed to its numerical dimensions, and evaluators can replicate the findings in the identical market dimensions. It can also be compared on long term basis: when a product is enhanced in one aspect and reduced in another the change is not hidden within the composite scores. This autonomy makes the structure more so a scoring device rather than merely a diagnostic model that would provide actual patterns of structural efficiency rather than merely giving an overall impression.

7.5.3. Aspect-Level Evaluation Within Each Dimension

In the course of evaluation, we consider each of the aspects of a dimension individually and apply numbers. We would like to know whether the product is performing well in all critical areas; hence, a good performance in one area cannot compensate for a poor performance in another. The measurement of each part is performed using clear numerical tests and compared to international or market financial standards. As an illustration, under the Risk-Return dimension, we test Return Stability through a review of Return volatility, Risk Exposure through beta or variance, and Risk-Adjusted Profitability through the Sharpe ratio. All such checks are necessary. Each test below the accepted standard, such as a Sharpe Ratio that is not as high as it should be or an excess of volatility, will be regarded as a defect of the entire dimension, despite having good tests on the remaining dimensions. This non-compensation practice provides clear and straightforward outcomes. The purpose of each part is different; hence, it requires its own check. The evaluator must record the outcome number and its similarities or deviations from the benchmark.

7.5.4. Benchmark Determination and Reference Standards

Benchmarking is something that we use to objectively measure. We do not simply augment our individual or personal expectations instead we measure every component against international or market financial standards. These standards inform us of the numbers that are acceptable to each metric. A Sharpe Ratio of more than 1 is an indication that the investment has good risk-to-return investment. The Debt Service Coverage Ratio of above 1 indicates that the company can afford to pay its debts. Good Cost-Benefit results are depicted by the use of positive Net Present Value (NPV). These standards are financial, and based on market research. External standards allow maintaining uniformity, fairness, and accountability of the process. It allows individuals to match their judgments based on the accepted norms and to maintain results that are similar across different products, time, and markets.

7.5.5. Evaluation Flow and Decision Logic

The assessment procedure is definite and step-wise; thus, it remains open and accurate. Every aspect of efficiency is considered individually and the first one to measure things in numbers. The dimensions are against the international or market standards. In case all aspects of a dimension satisfy or outperform the norms, we check that dimension as passed. However, in case one of the parts is not within the acceptable range, we set the dimension as deficient. An overall average or a balancing method does not give the final decision. Rather, a product can only be efficient when all its dimensions are good. This maintains the aim of the framework; the clear traceable evidence-based review of each product and displaying the strengths and weaknesses of each product individually.

7.6. Interpretation and Reporting

Interpretation and reporting stage transform the numbers into one understandable story. Once all the dimensions have been individually examined, the evaluator will compile the findings in an easily comprehensible format that indicates the dimensions that were passed or failed according to the established standards. This means that all discoveries remain transparent, evidence-based and can be tracked to the numbers.

Each dimension is tabulated/gridded separately, typically summarizing the results measured, as standard values, and passed or failed. This assists the decision-makers to identify the specific issue, be it in cost control or risk management or Liquidity Strength or resilience of the capital not to be confused by the multiple information. Reporting should be used to diagnose not judge. The outcomes can be used to plan corrections, enhance product design and make subsequent evaluations easier. The system allows everyone to be accountable by documenting each dimension individually and provides an actual picture of efficiency in various perspectives and is able to maintain the consistency with the number-based evaluation and individual dimension performance.

Table 7.5: Result Interpretation Flow 0:1

Stage	Objective	Process Description	Outcome / Output
Measurement	Measure everything using standard financial tools and computational equations.	These formulas are applied to quantitative data which is obtained through the use of data acquisition in all aspects of each dimension.	The output obtained will be unprocessed numerical values of all the analyzed parameters.
Benchmark Comparison	Determine performance accuracy relative to international or market standards.	Compare each result with its corresponding benchmark (e.g., Sharpe Ratio > 1, NPV > 0, DSCR > 1).	Aspect-level pass/fail determination.
Dimension Evaluation	Measure the extent of performance contained in all the dimensions.	Each aspect is not only successful when the dimension fulfills all of its constituent aspects and reaches its benchmark, but compensatory adjustments are not allowed.	Dimensions are then divided into either Pass or Deficient.
Consolidation of Results	The findings will be tabulated in a succinct way that will ease paging.	The areas that are compliant can be delineated by a summary table or a matrix of the results of dimensions.	Create an overall efficiency map with the strengths and weaknesses.

Interpretation and Reporting	The presentation of results must be in a way that is practical to the managers and analysts.	Compile individual appraisal forms on each of the dimensions with numerical data and brief explanations.	Produce an open report that will allow the stakeholders to arrive at decisions and take the necessary corrections.
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Source: Prepared by the Author, 2025

7.7. Conclusion

This chapter described the entire procedure and grading procedure of assessing economic efficiency in finance. It developed the theories we have discussed above into explicit, repeatable dimensions of analyzing. It contains a distinct sequence of steps, such as data collection and tooling selection, scoring and result interpretation, to make strategies feasible, evidence-based interventions.

The four dimensions, Risk -Return, Cost-Benefit, Liquidity and Capital Preservation operate independently. This ensures issues that arise in one domain do not conceal issues in the other to make the system truthful and transparent. The approach prevents bias, which may occur when all of it is combined, since each component is examined individually and quantified in global currency or market value. That is a complete viewpoint of the economic performance in a variety of perspectives. When numbers that do not overlap are used in scoring each other, it is more reliable when there is a model. Every score is followed in the numbers that is why the system may be examined and implemented on many objects. Since it demonstrates the area of weakness, managers do not need to guess regarding the specific weak areas, since they would be risk, costs, cash flow or capital.

The system is more than a grade, it creates a practical guide to the truthful decisions concerning the money. It is effective when dealing with plain and simple numbers as opposed to estimating based on sums. The following section will provide an idea of how the system will operate in the real world, the ability of the system to test products, and how the findings can be utilized to organize money and make an investment decision.

CHAPTER VIII

APPLICATION OF THE FRAMEWORK TO CHOSEN PRODUCTS

8.1. Introduction

Chapters above have laid the platforms of assessing the Islamic financial products based on forming theoretical underpinnings, conceptual frameworks and a process framework that actualizes both pillars of Sharia compliance and economic efficiency. All these elements should offer a systematic approach to evaluation; the validity, however, is still theoretical until they are used to a real financial product. Implementation is consequently necessary to show how the framework works in practice, verify its consistency in both pillars, and its flexibility to realistic conditions. This implementation is not an attempt to audit the chosen Sukuk or even determine its compliance status, it is merely an attempt to show how the suggested framework may be applied in a practical context step-by-step. Such pragmatic portrayal does enable the study to shift its abstract design to operational value by indicating how every component of the framework is used in the course of evaluation. In the case that some financial information is not disclosed publicly, acceptable assumptions or simulations will be put forward and well documented and substantiated to ensure analysis integrity. This will make sure that the chapter is interested in proving the functionality of the framework, and not to create a verdict about the real issuance of Sukuk.

This chapter has a solid implementation process based on the theoretical and conceptual backgrounds previously established in the research. The theoretical framework has set the principles of Sharia compliance and economic efficiency as the guiding principles, which according to their fundamental role in assessing the Islamic financial products. Based on this, the conceptual framework transformed these principles to premeditated dimensions and evaluation dimensions and thereby making a systemic approach in which every compliance and efficiency need is linked to particular quantifiable features. A combination of these frameworks offers a reference model that guarantees that the process of assessment reflects the fundamental

objectives of Islamic finance and remains analytically rigorous. Practically, these structures are viewed as the guideline of the assessment exercise. The conceptual framework decides what aspects have to be looked into, including prohibitions according to the Sharia, risk-return balance, costs efficiency, and liquidity whereas the procedural design is where each of the aspects will be measured with tools, checklists and scoring systems. This consistency will guarantee that the assessment process is not a random one but a methodological one, which is reproducible. Subjectivity is reduced and transparency is better conducted by bringing the two pillars together in a standardized process that gives the opportunity to use the framework in comparable financial products. The interaction of these components towards the creation of a coherent and operational assessment model is shown in this chapter. Implementation in this chapter is done in a systematic manner to bring out clarity, consistency and correspondence with the framework already established in the previous chapters. The process aims at incorporating both pillars of evaluation, namely Sharia compliance and economic effectiveness, and retains a logical flow of the data preparation to the ultimate analysis. This is a structured design, which reduces subjectivity, increasing the transparency and replicability of results.

8.1.1. The Implementation Process is Divided into Two Major Stages:

The two pillars are used complementary to each other to demonstrate the convergence in their overall roles during the evaluation process. The evaluation commences by Sharia compliance as a filter to facilitate the product to run in acceptable limits. After the compliance screening, the analysis takes a second step to identify economic efficiency which helps in a broad assessment of the comprehension of both the ethical and financial aspects. The initial step will be to map the Sukuk structure into the dimensions of evaluation that were identified in the conceptual framework. This action would make sure that all improvement aspects of the product are in line with the appropriate compliance and efficiency standards. The second step will change this mapping into practice by procedural assessment, where compliance indicators and performance indicators are considered systematically with the use of particular tools, checklists, and scoring systems.

The overall goal of this chapter is to illustrate how the dual-pillar framework discussed in previous chapters can be used in the real-life process of assessing the Islamic financial products. The chapter is based on the real application of the framework to a real issuance of a Sukuk, so that the theoretic principles and procedural structures of the field can be converted into a system to operate in transparent and consistent form. In addition to this demonstration, implementation is used to justify the usability of the framework, which makes it strong and reveals the limitations that might be encountered in practical situations. It is necessary to explain that this exercise is not aimed at auditing and delivering a conclusive compliance verdict to the Sukuk chosen. Instead, the analysis is aimed at presenting the procedure under the evaluation of the framework regarding Sharia compliance and economic efficiency even at the point when some data may need certain assumptions. By doing so, this chapter will stand to fill in the gap between the design and implementation of concepts and can serve as a source of reference in both academic investigations and by industry integration.

This chapter is aimed at showing how the dual-pillar evaluation framework created in the previous chapters may be applied in practice to a real Islamic financial product. The identifiable product to be used in this demonstration is the Saudi Electricity Company Ijarah Sukuk (Series 4), as an issue of the Special Purpose Vehicle (SPV) under a lease-based structure. The case has been used to explain how each of the theoretical, conceptual, and procedural elements of the framework can be implemented in a concerted effort when applied to a real-life financial instrument. The implementation process has a systematic and phased approach, and it has adopted a two-pillar structure that is reflected on the framework. The first one is the Sharia Compliance of the product and the second one is the Economic efficiency of the product. The individual pillars are presently looked at individually and merged to create a holistic perception of the overall effectiveness and justification of the product.

8.1.2. The Assessment for the Process Serves in the Following Steps:

The contractual relationships of the product, the nature of its assets as well as the relationship of financial flow are outlined as a prerequisite to provide transparency on working systems of the instrument. This gives the factual presentations required to

make the evaluation and ascertain the conformability of the product against classical contract systems, under the Islamic law. The second step is to identify the major aspects of the product in relation to Sharia and efficiency dimensions established in chapters VI and VII. These identifications allow a detailed assessment of every element of a product.

Every pillar is then evaluated with the help of the related procedure framework:

- The Sharia Compliance Pillar starts with gatekeeper screening to detect any blatant violations (e.g. Riba, Gharar or Maysir). In case the violation is not direct, Suspicious Element Scoring is reached to measure possible uncertainty/ambiguity.
- Economic Efficiency Pillar is a quantitative and qualitative measure of the performance of the product in four dimensions, including Risk-Return, Cost-Benefit, Liquidity, and Capital Preservation.

The results of the two pillars are summarized into result matrices which are independent. The matrices are combined to determine convergence (where the Sharia compliance favors the economic efficiency) or divergence (where compliance could restrain performance or the vice versa). The integration is non-compensatory—meaning a deficiency in one pillar cannot be offset by superiority in the other. They are subsequently abstracted to come up with information concerning the relevance of the framework, its flexibility, as well as its adaptability to different financial instruments. This reflection will help to make sure that the analysis is not only an assessment of the case product but also the extended usefulness of the framework itself. Through this systematic approach, the implementation is scientifically sound as well as operationally clear. It shows that it is possible to do Islamic financial assessment in a systematic manner that integrates juristic prudence and financial rigorousness without undermining any of these two realms.

8.2. Sukuk Profile and Conceptual Identification

8.2.1. Product Overview

The Saudi Electricity Company is one of the lease-based Islamic financing tools (Sukuk Series 4 Ijtihad Ijmarah) which is intended to increase long-term capital to

build and maintain power infrastructure in the country. The Sukuk was issued with the help of Sukuk Special Purpose Vehicle (SPV) - Saudi Electricity Global Sukuk Company 4 which was created specially to own the physical assets of electricity-generation and transmission and lease to its parent, Saudi Electricity Company (SEC). The Sukuk model is based on classical sale-and-lease-back model. In this structure the SPV acquires designated utility assets of SEC with the Sukuk proceeds, and the contract is a Ijzim of leasing it back on a fixed-term basis. The SPV gives investors favorable ownership of the leased assets and receive periodic lease rentals as an alternative to interest payments typically paid in ordinary bonds. These rentals are fixed and there is transparency of projected revenue and adherence to Sharia to Riba. Once the maturity stage is reached, SEC will continuously seek to buy back the leased assets at a price that will not compromise the redemption of the Sukuk. This process attains two critical objectives:

- It maintains Sharia legitimacy through the asset-backed leasing on the basis of returns instead of lending.
- It is economically indistinguishable to the traditional fixed-income products, which offer predictable cash flows and liquidity.

The Sukuk was floating on Euronext Dublin and international institutional buyers came forward. It issues were assessed and accepted by various Sharia supervisory boards and since its contracts, assets, and proceeds are in harmony with the Islamic commercial principle. This is the case with Saudi Electricity Ijarah Sukuk Series 4 having demonstrated a valuable convergence between juristic compliance and financial performance to make the model suitable in the application of the dual-pillar evaluation model created during this research.

8.2.2. Structural Mechanism

The Saudi Electricity Ijara Sukuk (Series 4) follows a sale leaseback structure in which tangible assets beneficial to a particular company are transferred to a set of investors through an intermediate Special Purpose Vehicle (SPV). The arrangement was made to address Sharia financing needs to use assets and market demands to have predictable

revenue and credit quality. The contract involves a series of contracts that are legally different though they are related to each other:

The Sukuk proceeds equal the Sukuk value of the portfolio of identified power-generation and transmission assets sold to the SPV by their originator, Saudi Electricity Company (SEC). This guarantees complete backing and cession of ownership of assets. The sale is made using a valid contract of sale (bay 'al-milk) with the assistance of independent valuation to confirm that the sale is fair. The SPV rents the same back to SEC on a fixed schedule. The lease agreement will include the usufruct, rental plan, frequency of payments and maintenance duties. Lease rentals are fixed and they are paid semi-annually which is the profit of the investors. Every price is carried out as a reference point to a benchmark like LIBOR but it is not a contract requirement thus preserving Sharia compliance.

SEC is a service agent (wakeel) to maintain, insure, and day-to-day operating services on the lease assets to guarantee continuity of their operation. This form of agency is distinct from the ownership and management separation found in classical fiqh principles of Ijzim, which view Ijzim as ownership of an asset delegated by a lessor to a lessee, with the lessee controlling the operation of the asset. SEC gives a binding commitment to redeem the assets under lease by the SPV at maturity or the event of early dissolution. The nominal value of the Sukuk is the repurchase price which guarantees the principal repayment of the Sukuk, and redemption in an orderly manner. The SPV takes the form of having a trust on the leased assets to the Sukuk holders. Investors have therefore, beneficial ownership with legal title still in possession of the SPV. The trust plan secures the rights of investors so that they can get the rental income via the trustee structure.

The lease rents that are acquired periodically by the SPV are paid out as profit to investors. On maturity, the repurchase proceeds is redeemed to repurchase the Sukuk certificates at par value. The associated contractual arrangement facilitates the fact that the Sukuk is asset-based rather than debt-based, a fact that satisfies the Sharia requirement of attributing the profitability to legitimate possession and default. It is, at the same time, economically efficient because of offering predictable and credit-rated and tradable financial returns on par with traditional securities.

8.3. Framework Integration

The idea of conceptual mapping is a source of analytical connection between the Saudi Electricity Ijtihad Sukuk (Series 4) and the dual pillar model that is elaborated in this paper. It determines the activation of the product contractual and financial structure to every dimension and aspect and obligation within the two pillars of Sharia Compliance and Economic efficiency and outlines the tools which shall subsequently be utilized to determine or monitor compliance and performance. This mapping will make sure the assessment that follows (in Sections 8.4 and 8.5) will be systematic, transparent and consistent with the theoretical and procedural reasoning of the framework.

Table 8.1: A. Sharia Compliance Pillar

Dimension	Aspect	Criterion	Tool	Application in SEC Sukuk
1. Halal Activity	Nature of underlying asset	Asset must be lawful and tangible.	Gatekeeper checklist	Electricity-generation assets are real and Sharia-permissible.
	Contractual purpose	Contract must create a lawful usufruct, not debt.	Legal document audit	Ijarah contracts confirm transfer of usufruct rights.
2. Riba	Return structure	Absence of interest or time-value-of-money payment.	Gatekeeper checklist	Rentals benchmarked to LIBOR but legally treated as rent, not interest.
	Benchmark linkage	Whether benchmarking causes interest resemblance.	Suspicion Likert scale	Evaluated later to measure residual risk of imitation.
3. Gharar	Ownership clarity	Clear asset title and legal transfer.	Contract verification / title review	SPV holds ownership on trust for Sukuk holders.
	Deliverable certainty	Defined usufruct and duration.	Checklist	Ijarah specifies leased assets, term, and rent.
	Risk distribution	Balance of risk between lessor and lessee.	Suspicion scoring matrix	SEC retains operational and maintenance responsibility.

4. Maysir	Return uncertainty	Existence of speculative or chance-based profit.	Gatekeeper checklist	Fixed rental schedule eliminates speculative elements.
5. Fraud & Deception	Transparency of disclosure	Asset and obligation clarity.	Disclosure checklist	Prospectus publicly details asset pool and repayment flow.
	Hidden defects	Concealment of asset flaws.	Document audit	Independent valuation ensures condition disclosure.
6. Monopoly & Exploitation	Market fairness	Avoidance of coercive pricing or asymmetry.	Suspicion Likert scale	Independent valuation and fair-market pricing verified.

Source: Prepared by the Author, 2025

This table provides the operational map for the Sharia Compliance evaluation. Each dimension includes gatekeeper criteria for absolute prohibitions and suspicion criteria for borderline cases to be scored quantitatively in Section 8.4.

Table 8.2: B. Economic Efficiency Pillar

Dimension	Aspect	Criterion	Tool	Application in SEC Sukuk
1. Risk–Return Efficiency	Return stability	Degree of volatility in periodic income.	Variance / Standard deviation	Fixed semi-annual rentals ensure stable returns.
	Risk exposure	Sensitivity to market rate changes.	Beta coefficient	Moderate exposure through LIBOR-based rent adjustments.
	Risk-adjusted profitability	Ratio of return to volatility.	Sharpe Ratio	Used later in evaluation (Section 8.5.1).
2. Cost–Benefit & Efficiency	Financial cost efficiency	Comparison of financing cost vs. alternatives.	Cost-efficiency ratio	Issuance cost lower than equivalent conventional bonds.
	Net benefit assessment	Net advantage after cost and risk.	NPV / IRR analysis	Positive net benefit expected from predictable rentals.

	Profit sustainability	Continuity of positive returns.	Time-series trend analysis	SEC's stable operations sustain cash flows.
3. Liquidity Efficiency	Market liquidity	Ease of secondary trading.	Turnover ratio / Bid-ask spread	Listed on Euronext Dublin; moderate trading volume.
	Short-term liquidity	Lessee's ability to meet rental payments.	DSCR / Current ratio	SEC's financial strength ensures payment reliability.
4. Capital Preservation	Financial resilience	Ability to withstand shocks.	Stress test / solvency ratio	Strong credit rating and asset backing enhance resilience.
	Risk mitigation	Measures to prevent capital erosion.	Capital adequacy measure	Redemption through asset repurchase guarantees preservation.

Source: Prepared by the Author, 2025

This mapping reveals that every contractual characteristic of the SEC Ijma Rah Sukuk will trigger a Sharia aspect and an economic aspect at the same time. As an example, the transfer of ownership will meet Gharar avoidance (clarity of ownership) and Capital Preservation (asset-backed resilience). Similarly, both Riba avoidance and Risk-Return optimization is indicated in the lease rental schedule. Such cross-overs depict that compliance and efficiency which are Sharia are not different logics but support each other as analytical layers each with its own tools but under the non-compensatory evaluation model in Section 8.6 it is seen to be an interpretative whole.

8.3.1. Halal Domain Dimension

The organization complies with the laws of the rest of the nation and is required to incorporate the Domain as per the requirements of the Quran. The Sharia Compliance Pillar is the first evaluative dimension, which is known as the Halal Domain. It is aimed at ensuring that the product activity, sources of its income, and contractual framework is all within the domain of legitimate economic action. This dimension draws an exclusionary gatekeeping role- any breach found here will automatically dismiss the product as an object of analysis.

The Halal Domain checklist is being constructed on the basis of the points made in Chapter VI: (1) Purpose and Nature of Activity. (2) Source of Revenue, and (3) Intention and Structure of Contracts. All these aspects are broken down and expressed in the form of criteria that are prepared in the form of yes/no diagnostic questions based on the authoritative norms of juristic criteria (e.g., AAOIFI 2021). The checklist can also be viewed as binary gatekeeper tool as it enables the evaluator to record the result of each of the conditions that are mandatory. The applied structure is shown in the table below.

Table 8.3: Checklist of Construction and Reasoning

Aspect	Criterion	Evaluation Tool	Decision Rule
Nature and Purpose of Activity	Does the product finance or relate to a lawful economic sector (construction, energy, infrastructure) and exclude prohibited industries (alcohol, gambling, arms, etc.)?	Binary Checklist	“Yes” = Compliant
			“No” = Reject
Source of Revenue	Is income derived solely from lawful trade or usufruct (not interest, speculative profit, or deception)?	Binary Checklist	“Yes” = Compliant “No” = Reject
Contractual Intent and Structure	Is the contractual form designed for a genuine economic purpose (e.g., Ijarah, Murabaha, Musharaka) rather than to disguise a prohibited return?	Binary Checklist	“Yes” = Compliant “No” = Reject

Source: Prepared by the Author, 2025

The checklist is finalized through three procedural steps:

- Identification of Aspects → extracted from the conceptual hierarchy.
- Translation into Observable Criteria → each criterion stated as an objective, verifiable question.
- Documentation and Verification → each answer supported by a reference to documentary evidence (prospectus, financial statements, or Sharia Board reports).

When all the answers are yes, then the product passes the Halal Domain. The binary form avoids the pale of those rules of Sharia that are not negotiable and ensures the

consistency of juristic method. Applying the checklist to the Saudi Electricity Company Ijarah Sukuk 4, the findings are as follows:

Table 8.4: Checklist for the Saudi Electricity Ijarah Sukuk Findings

Item	Gatekeeper Question	Evidence	Result
1	Is it only through honest commerce that you earn the money?	Prospectus p. 15 (Project Description)	Pass
2	Is the contractual form genuinely necessary (e.g., Ijazim) or is it a higher disguise of a forbidden index?	Prospectus p. 46 (Use of Proceeds)	Pass
3	Is the product financed or associated with an authorized economic activity (construction, energy, infrastructure) and it does not concern any forbidden industry (alcohol, gambling, arms, etc.)?	Lease Agreement Summary p. 47	Pass

Source: Prepared by the Author, 2025

8.3.2. Riba Dimension Evaluation

The second appraisal aspect within the pillar concerning the Sharia compliance relates to the evasion of Riba (interest). In Islamic law, Riba is any specified addition in a financial transfer or a debt repayment that is not associated with productive effort. It goes against the principle that profit should be made justified through taking ownership risk and contributing to actual economic value creation. In modern financial contexts Riba can be found expressed explicitly, in a contractual provision, promising an increase over a period of time, or implicitly, in which the pricing or return mechanism is of the logic of interest expressing it in its language.

To this end, the assessment occurs in two successive steps, which are (a) Gatekeeper screening concerning explicit prohibition and (b) Suspicious-element of evaluation concerning resemblance imitation.

The gatekeeper process analyzes the presence of a clause in the Sukuk documentation which expressly states that the compensation will be based on interest, compound or monetary increment based on time alone. The process is based on a binary checklist which is based on juristic criteria specified in the classical fiqh.

All the clauses of the prospectus and supportive agreements were discussed in accordance with the following questions:

Table 8.5: Gatekeeper Screening Checklist

Criterion	Question	Result
1	Is there a provision of an increase of principal or any rental on the mere ground of a lapse of time or default?	No
2	Are there any provisions of interest-bearing loans or financing by the issuer or lessee?	No
3	Is there any payment term which associates the compensation with time passage as opposed to usufruct and ownership?	No

Source: Prepared by the Author, 2025

After comprehensive review of the Saudi Electricity Ijarah Sukuk (Series 4) documentation, no explicit Riba-generating clause was identified. All payment obligations are structured as lease rentals derived from usufruct over tangible assets, consistent with the Ijarah contract form. Consequently, the product passes the Gatekeeper filtration and qualifies for further analysis under the Suspicious-element stage. Upon intensive analysis of Sukuk Ijtihad documentation of Saudi Electricity (Series 4), no apparent Riba-generating provision was found. All payment terms are organized in the form of a lease according to which the rent is earned on the basis of usufruct on material property, which is aligned with the contract of the Ijarah. The product therefore goes through the Gatekeeper filtration and is put under Suspicious-element- stage to be analyzed further. Even though there is no direct Riba provision, some of the wording that could be found in the prospectus is indicative of similarity to traditional interest pricing mechanisms. This is especially because the calculation of lease rentals based on the London Interbank Offered Rate (LIBOR) brings about a structural parallel between Ijarah rent and traditional coupon returns. The analysis of this provision is carried out according to the evidence-based mechanism of Chapter VI.

Table 8.6: Riba Dimension — Clause-Level Evaluation

Cod e	Clause (Excerpt / Source)	Page	Aspect	Criterion Type	Interpretatio n
R1	“Periodic distributions LIBOR + margin”	47	Pricing resemblance	Suspicious	Resembles conventional interest rate formula; no explicit Riba detected.
R10	“Periodic Distribution = $x\% \text{ per annum} \times \text{Face Amount} / 2$ ”	128	Pricing resemblance	Suspicious	Coupon-like presentation based on face value; requires rephrasing to reflect rent basis.
R2	“Early redemption / make-whole amount”	113–114	Yield protection resemblance	Suspicious	Protects investor return; structurally similar to fixed yield, but legally permissible.
R5	“Purchase undertaking at face value”	113	Capital guarantee resemblance	Suspicious	Fixes repurchase value; reduces risk exposure, yet remains within Ijarah principle.
R6	“Default remedies ... additional amounts”	113	Default and penalty clause	Suspicious	No explicit time-based increment; acceptable but requires clearer wording.
R4	“Late-payment compensation clause”	113	Default and penalty clause	Suspicious	Borderline case; must clarify charity allocation to avoid interest resemblance.

R3	“Reserve account ... cash held until distribution date”	141	Cash handling and reserve management	Suspicious	No evidence of interest accrual; acceptable holding arrangement.
R12	“Trustee / agent fees accruing interest if unpaid”	141	Cash handling and reserve management	Suspicious	Minor risk of interest-based increment; requires Sharia-compliant clause revision.
R7	“Use of proceeds may include refinancing”	46	Funds utilization resemblance	Suspicious	No structural Riba detected; indirect exposure possible.
R8	“Commingling with conventional debt”	13	Funds utilization resemblance	Suspicious	Form-based similarity; segregated fund management recommended.
R9	“Asset substitution flexibility”	13	Funds utilization resemblance	Suspicious	Acceptable; substitution limited to equivalent asset class.
R11	“Hedging / derivatives referencing interest rates”	23	Funds utilization resemblance	Suspicious	Acceptable; no derivative embedded in structure.
R13	“Interest terminology in tax section”	152	Terminological resemblance	Suspicious	Linguistic issue only; no financial impact.

Source: Prepared by the Author, 2025

The assessment of the Riba-related factors in the Saudi Electricity Sukuk 4 has been done according to the methodological procedures outlined in Chapter VI. All of the clauses observed in the Sukuk prospectus were classified into one of the specific

aspects of the Riba dimension, and corresponded to individual Sharia concerns. The analysis was based on the two-level procedure of gatekeeper filtration and suspicious-element measurement using the same checklist and measure of Likert-based scoring mechanism specified above. All the clauses met the gatekeeper test and proved the loss of any direct time-related addition or interest-related duty. As such, the analysis was done to the aspect-level analysis where the aspects were analyzed separately based on the associated clauses, and numbers were not summed up across the different aspects.

Table 8.7: Aspect-Level Evaluation Results

Aspect	Relevant Clauses	Analytical Findings	Compliance Status
1. Pricing Resemblance	R1, R10	The structure of periodic distributions based on <i>LIBOR</i> + <i>margin</i> and rental amounts calculated as a percentage of face value creates a visual and economic resemblance to conventional coupon payments. Although no explicit Riba was identified, this pricing model weakens the functional distinction between Sharia-based rental returns and interest-based yields. Reformulation of rent expressions to reflect the value of usufruct rather than a rate on principal is recommended.	Conditionally Compliant
2. Yield Protection and Capital Guarantee Resemblance	R2, R5	Clauses governing early redemption and purchase undertakings at face value serve as mechanisms of yield protection. While these provisions limit exposure to market variability, they do not involve time-based increment or guaranteed return beyond the asset's value. Their function remains within the permissible boundaries of <i>Ijarah</i> contracts.	Compliant

3. Default and Penalty Clauses	R4, R6	Provisions for delay or default compensation do not specify a fixed or compounding percentage, and their implementation is contingent upon charitable transfer or actual-loss recovery. Therefore, they do not constitute Riba, provided that such charity mechanisms are enforced and clearly stated in future issuances.	Compliant
4. Cash Handling and Reserve Management	R3, R12	The Sukuk documentation describes the holding of reserves and trustee fees but contains no indication of interest accrual on idle funds. The structure maintains neutrality in cash management; however, explicit confirmation of Sharia-compliant banking arrangements is advisable.	Compliant
5. Funds Utilization and Structural Resemblance	R7, R8, R9, R11	Certain provisions allow proceeds to be used in refinancing, commingling with conventional debt, or hedging arrangements. These features represent <i>form-based resemblance</i> to interest-bearing practices rather than substantive violations. With adequate fund segregation and transaction-level monitoring, the risk of Riba reintroduction can be effectively mitigated.	Compliant with Comments
6. Terminological Representation	R13	The term <i>interest</i> appears only within the taxation section for descriptive or legal-reference purposes. It bears no financial effect and therefore poses no compliance concern.	Compliant

Source: Prepared by the Author, 2025

The results affirm that there are no direct Riba offences in the contractual format of the Saudi Electricity Sukuk 4. Everything came within the Sharia acceptability threshold within the established mechanism. The only aspect that was found to be

conditionally compliant was the pricing resemblance, due to its relying on the benchmark-based calculations and the form of coupon presentation, which symbolically equate the returns of the Sukuk with those of interest-bearing instruments. The other areas were compliant or in compliance with minor comments, which represents a strong basis of Sharia in the design of the products. Sum it up, the Sukuk is substantively in line with the ban on Riba, but the instrument still has formal resemblance to interest-based instruments which might undermine its symbolic uniqueness. The presence of such resemblance does not nullify the fact that it is Sharia but rather points to the necessity of an undertaking to refine its structural and linguistic aspect in order to bolster its ethical and juristic nature.

In his general assessment: Adherent to comments - reasonable framework that needs to be reformulated in terms of the pricing expression and better clarity in the cash and fund management. On the one hand, suggestions are given to improve this.

- Instead of benchmark-linked pricing models (e.g., LIBOR/SOFR) use asset-based performance or cost-plus rent formulae that are congruent with Ijma.
- Reformularize rental conditions to state payment in constant or -rated values as opposed to percentages of face value.
- Convey, in the prospectus, that returns are only obtained by the usufruct and operational advantage, and not by time.
- Introduce a transparent system of Sharia audit with segregated reserve and open-handed charitable treatment of any delay-compensation payment.

8.3.3. Gharar Dimension Evaluation

Gharar (excessive uncertainty) in the Saudi Electricity Sukuk 4 was assessed based on the structured framework that was formed in Chapter VI. The methodological process involved two tiers: the gatekeeper filtration that involves the potential explicit uncertainty that can invalidate contractual validity and the suspicious-elements assessment that involves the extent of residual uncertainty by use of structured checklist and Likert based scoring system.

Every clause cited in the Sukuk documentation was classified as one of the three primary Gharar aspects that include the clarity of ownership, deliverability and

determinacy, and evaluated independently without any combination of aspects. This evaluation aims at finding out whether the structure of the Sukuk reflects transparency, contractual determinacy and equal distribution of risks as are supposed by Sharia. Each of the reviewed clauses passed the gatekeeper stage; this indicates the lack of any explicit contractual uncertainty (Gharar Fahish) or speculative terms. The analysis was then continued to the suspicious-element examination, to detect any slight vague or unstructured issues within it that are susceptible to either clarification or structural refinement.

Table 8.8: Gharar Clause-Level Evaluation Results

Code	Clause (Excerpt / Source)	Page	Aspect	Criterion Type	Interpretation
G1	“Certificates represent undivided ownership of the Trust Assets.”	12	Ownership clarity	Suspicious	Ownership structure is clear; no uncertainties encountered.
G2	“Trust Assets comprise rights under the Purchase, Lease, and Service Agency Agreements.”	13	Ownership clarity	Suspicious	Well defined composition of assets; slight service rights abstraction.
G3	“Trustee holds assets for the benefit of Certificate holders.”	13	Ownership clarity	Suspicious	Ownership and risk distinctively passed through trust setup.
G4	“Certificates do not represent an obligation of the Trustee or the Company.”	14	Ownership clarity	Suspicious	Distinct separation of claim to ownership and debt.
G5	“Rental payments derived from the lease of	123	Deliverability and determinacy	Suspicious	Deliverables are outlined and associated

	identified utility assets.”				to particular assets.
G6	“Issuer covenants to maintain the leased assets in good operating condition.”	126	Risk allocation	Suspicious	Risk duly devolved to lessor and lessee based on Ijaja Rhe.
G7	“Upon dissolution, Trust Assets will be sold and proceeds distributed.”	132	Risk allocation	Suspicious	Exit mechanism is defined; distribution formula is transparent.
G8	“Substitution of assets may occur upon equivalent value replacement.”	13	Deliverability and determinacy	Suspicious	A low degree of uncertainty as it is subjectively defined as equivalent value
G9	“Payments to Certificate holders depend on periodic rental receipts.”	124	Risk allocation	Suspicious	Denotes operational risk sharing; timing risk is not extensive.
G10	“Purchase Undertaking obliges the Company to buy assets at face value upon maturity.”	113	Risk allocation	Suspicious	Ensures settlement determinacy; limits market variability but does not invalidate compliance.

Source: Prepared by the Author, 2025

The outcome of the clause-level assessment was combined in accordance with their corresponding Gharar aspects indicating how each Sharia issue is performing on its own.

Table 8.9: Aspect-Level Evaluation and Interpretation

Aspect	Relevant Clauses	Analytical Findings	Compliance Status
1. Ownership Clarity	G1–G4	The Sukuk documentation yields cut and dry ownership. With a trustee arrangement, certificate holders are legally the undivided owners of the Trust Assets and the assets are not included in the balance sheet of the obligor. This satisfies Sharia condition of milk al- ‘ayn (ownership of corpus) and effectively avoids any ambiguity regarding ownership of assets or possession of the same.	Compliant
2. Deliverability and Contractual Determinacy	G5, G8	The contractual deliverables, such as the lease terms, the rental schedule and individual descriptions of assets are clear and quantifiable. Nonetheless, the asset-substitution provision creates a moderate ambiguity in that it allows the possible replacing according to the equivalent value without declaring the valuation standard and approval procedure.	Conditionally Compliant
3. Risk Allocation and Transfer Mechanism	G6, G7, G9, G10	It is well-defined and follows the principle of al-Ghurm bil-Ghurm (entitlement to gain requires exposure to risk) to share the risk between the lessor and lessee. The maintenance and dissolution provisions indicate that there is a fair sharing of operational and ownership risk. The purchase venture guarantees a smooth withdrawal albeit with a slight variation of market fluctuation.	Compliant with Comments

Source: Prepared by the Author, 2025

The evaluation confirms that there is no material or express Gharar in the structure or the contractual machinery of the Saudi Electricity Sukuk 4. The documentation creates a solid ownership of tangible assets, ascertainable lease relationship and allocation of rights and liabilities, between the lessor and the lessee. This factoring to Ijazah

principles also makes sure that the product is asset based and not speculative or indeterminate factors as they are not allowed in Sharia. The only procedural ambiguities are minor trifles associated with the asset-substitution clause that creates a narrow range of subjective interpretation of equivalence. Although such uncertainty does not eliminate the obligation, it must be narrowed down to ensure transparency and adherence to the principle of contractual determinacy (taff). This makes the Sukuk highly transparent in its structure and legally determinant, which places it within the goals of the Sharia in minimizing contractual risk and ambiguity.

Minor clarifications compliant with major strength of ownership structure, transportation of individuality, and distribution of diversified risk; low procedural uncertainty issues to be refined and the enhancement recommendations are:

- Establish the concept of equivalence in substitution clauses with objectively quantifiable valuation metrics like certified appraisal, book value or cost basis.
- Ensure a preceding approval by the Sharia Supervisory Board on any form of substitution in order to have procedural supervision.
- You should make sure that sale and dissolution operations should be done at fair-market values that have been arrived at through independent valuation.
- Incorporate clear disclosure, reporting requirements of any amendments on ownership, asset composition or risk-sharing arrangements.

8.3.4. Maysir (Speculation) Dimension Evaluation

Maysir (speculation or gambling-like transactions) is evaluated in the same dual-level procedure as those described in the framework earlier:

- The censure of gatekeepers, to detect any form of explicit Maysir, and
- The test of suspicious elements to identify similarity to speculative or chance-based practices.

The Maysir dimension stresses on delivering that financial product are not based on any aspect, which involves an introduction of gain without countervalue or zero-sum results and without returns based on uncertainty or pure contingency. Although the contractual framework that is considering the scenario is not speculative itself, the

process is needed to ensure that the process does not incorporate any hidden or indirect element to bring about uncertainty in the results, contingent reward or a tendency to assume risk. All the applicable clauses were considered separately and classified according to one of three main points:

- Return Contingency
- Accomplishment Zero-Sum or Unjust Enrichment
- The Speculative Instruments or Practices

The gatekeeper test is used to remove blatant violation involving Maysir before going to the quantitative test. The review confirmed that:

- None of the clauses provide gain or loss that is simply based on an uncertain event or an uncertain anomaly.
- No recompense to any party is on the loss of the other, and there is no element of chance to make a profit which has not a corresponding force of production applied.
- The form is not based on contingencies derived pricing, gambling processes and uncertain contingencies.
- Consequently, the product goes through the gatekeeper phase successfully, no sign of explicit Maysir violations is apparent.

In the suspicious-element evaluation, passing the gatekeeper filter, the return of particular clauses was reviewed due to indirect or even possible similarity to speculative characteristics. They both were checked by the structured checklist and graded with the aid of the Likert scale outlined in the framework (1 = non-compliant resemblance, 5 = fully compliant). All scores fall within the high compliance range since it is an asset-based structure that is fixed-return.

Table 8.10: Maysir Suspicious-Element Evaluation

Code	Clause (Excerpt / Source)	Page	Aspect	Criterion Type	Interpretation
M1	“Periodic Distribution Amounts ... fixed rate per annum.”	113, 128	Return contingency	Suspicious	Return mechanisms are all deterministic and dependent on the

					performance of the asset rather than random phenomena and the speculative price behavior.
M2	“Certificates may be listed and traded.”	11	Zero-sum or unjust enrichment	Suspicious	The feature of a contract does not afford one party to benefit at the expense of another. Also, all secondary trading speculation in the market is extrinsic and not within the legal form of the product.
M3	“Issuer may use hedging for risk management purposes.”	23	Speculative instruments or practices	Suspicious	Hedging instruments are not a gain to investors, there are only at issuer level to control risk, therefore, such instruments are permissible in case they are Sharia-compliant.
M4	“Early redemption or dissolution upon specific events.”	113–114	Return contingency	Suspicious	Event-based dissolution is predefined; no contingency-based gain.
M5	“Payments to certificate holders limited to proceeds from Trust Assets.”	12	Zero-sum or unjust enrichment	Suspicious	Limited recourse defines risk boundary; does not transfer loss as a gain to others.

Source: Prepared by the Author, 2025

Table 8.11: Maysir Level Evaluation and Interpretation

Aspect	Relevant Clauses	Analytical Findings	Compliance Status
Return Contingency	M1, M4	Any return mechanisms are not arbitrary events and speculators but determined by the performance of the asset.	Compliant
Zero-Sum or Unjust Enrichment	M2, M5	No contractual aspect permits the advantage of one party at the expense of another. All secondary trading speculation is outside the legal form of the product.	Compliant
Speculative Instruments or Practices	M3	Speculative Instruments or Practices M3 Hedging references are not at issuer level to generate profit to investors; they can be considered permissible provided they are Sharia-compliant.	Compliant with Comments

Source: Prepared by the Author, 2025

Summary and overall Maysir evaluation outcome. The analysis proves that there is no kind of Maysir in the design or functioning of the product. All the streams of returns are fixed, predetermined, and directly connected to the actual economic activity. The construction lacks derivatives, leverage and probabilistic gain structures that might result into speculative exposure. There were minor observations made in reference to hedging practices at issuer level that may be explicitly confirmed Sharia compliant. These observations will not have an impact on the Sharia status of the product but will be procedural refinements towards transparency.

No Structural or Contractual Sign of Maysir; the evaluation is compliant with the remarks; all it is recommended is the better disclosure of hedging practices and the enhancement recommendations are:

- Explain in writing that any hedging or risk-management instruments applied by the issuer are to be in conformity to Sharia and should not entail speculation by way of interest or derivative.
- In the issuance certificate, include a Sharia statement that would assure investors that the returns they would receive would only be based on asset-based rent.

- Independent supervision of the trading operations must be maintained so that trading in the secondary market can not corrupt the essence of the product of non-speculative nature.

8.3.5. Fraud and Deceptive Practices (Tadlis) Review

Tadlis dimension seeks to stop and eliminate any aspect of misrepresentation, concealment or any other form of deceptive practice that can distort the genuine conception of rights and obligations of a financial contract. This dimension, as per the framework, will guarantee honest disclosure, transparency as well as integrity in the documentation, issuance, and communication of the product. Tadlis consists of deliberate misstatement (active misstatement) as well as accidental misstatement (omission of material facts) which can be deceptive to investors or counterparties.

All of the clauses were evaluated in regards to one of three primary aspects: (1) Disclosure Integrity, (2) Disclosure of Rights and Obligations. (3) Symmetry of Information Between the Parties.

In the gatekeeper evaluation, the passage through it revealed no overt instances of lying or misrepresentation. The documentation of the product is clear on the description of the underlying assets, the relationship in the contract and the rights of both parties. The public disclosures are all in accord with the regulatory standards and Sharia documentation practices. The issuer will not place a loan on top of an investment and conceal the character of the operation under an outlandish expression. Thus, the product will pass the gatekeeper stage without any violation of Tadlis.

The suspicious-element test looked at provisions that had the potential to bring about informational asymmetry or investor miscomprehension as a result of imprecision or incompleteness in disclosure. It was performed through the application of the checklist on each clause and scoring on the Likert scale (1 = serious concern; 5 = no concern).

Table 8.12: Fraud Suspicious-Element Evaluation

Code	Clause (Excerpt / Source)	Page	Aspect	Criterion Type	Interpretation
T1	“Certificates represent undivided ownership of the Trust Assets.”	12	Disclosure Integrity	Suspicious	T1 Certificates are undivided ownership of the Trust Assets. 12 Disclosure Integrity Suspicious 5 Ownership structure fully stated, no concealment.
T2	“Issuer acts as Trustee and holds assets for Certificate holders.”	13	Transparency of Rights and Obligations	Suspicious	T2 Issuer is Trustee and Manages Assets on Certificate holders.
T3	“The Prospectus should be read in conjunction with the Transaction Documents.”	11	Information Symmetry	Suspicious	T3 The Prospectus must be read together with the Transaction Documents. 11 Information Symmetry Suspicious 4 Transparency ensured, but because documents referred to are accessible may influence investor understanding.
T4	“Periodic Distribution Amounts are payable subject to available income.”	113	Disclosure Integrity	Suspicious	T4 Periodic Distribution Amounts are payable as long as there is available income. 113 Disclosure Integrity Suspicious 4 Condition is transparent but would be better explained as to how the amounts are

					determined by income.
T5	“Purchase Undertaking ... at face value upon maturity.”	114	Transparency of Rights and Obligations	Suspicious	T5 Purchase Undertaking at face value, maturity Since Assets, Undertakings and Rights 114 Transparency of Rights and Obligations, Suspicious, 5 Settlement mechanism clearly stated, no misleading promise of profit.
T6	“Issuer may substitute assets with equivalent value.”	13	Information Symmetry	Suspicious	T6 “Issuer can replace assets with equal value. 13 Information Symmetry Suspicious 4 Provision transparent and may create interpretative ambiguity of the approval process.

Source: Prepared by the Author, 2025

Table 8.13: Aspect-Level Interpretation

Aspect	Relevant Clauses	Analytical Findings	Compliance Status
Disclosure Integrity	T1, T4	No indication of false statements or omitted information. Income-availability clause requires more elaboration on calculation methodology but does not constitute concealment.	Compliant with Comments
Transparency of Rights and Obligations	T2, T5	All roles, responsibilities, and payment commitments are explicitly defined. Legal and operational	Compliant

		structures are properly aligned and disclosed.	
Information Symmetry between Parties	T3, T6	All key documents are disclosed, though references to annexes and substitution clauses should be explained in simplified investor language.	Compliant with Comments

Source: Prepared by the Author, 2025

The assessment establishes that there are no fraudulent and deceits in the documentation and in structure. All the necessary information about the contract is made publicly available, true and reflects the real dynamics of the deal. Minor areas to be improved are connected with the clarity of the documents referred to, their clear explanation of the sources of income, and the clear approval of the process of the asset substitution. These are process advances and not compliance issues. General Assessment: compliant with remarks - there is no sign of distortion or hiding; small disclosures may be made easier to understand and the structural enhancement Recommendations are:

- Give a brief overview of the important Sharia characteristics in the main body of the prospectus, without the need to over-relied on documents included in Annex.
- Elaborate on how available income is determined to make periodic distributions, which will increase the understanding of investors.
- Indicate that any assets replacement should be Sharia Board approved and included in the post-issuance reports.
- Embrace a simple section of disclosure in plain language that provides a summary of key rights and obligations.

8.4. Assessment of Economic Efficiency

The second pillar of the dual framework model that was derived in this study is the assessment of economic efficiency. Although the former pillar (Sharia compliance) guarantees the allowable and validity of the financial structure, the latter pillar guarantees its economic probability and strength, as well as its soundness of

functioning. The economic efficiency pillar, in this context, looks at whether a product is not only adhering to the Islamic law but it also works with a certain degree of financial sustainability and allocative efficiency that will justify its presence in the competitive markets. The economic efficiency evaluation attempts to gauge the effective functionality of the financial product in achieving its desired economic goals, which are, the maximization of the payback in relation to risk, the reduction of the cost in relation to the advantage, the sufficient liquidity, and the sustainability of the invested capital over time. It is a multi-dimensional strategy that has been developed to make sure Islamic financial products are not only legal but also economically sensible, competitively as well as beneficially to the society. In order to do this, the assessment in this chapter uses the conceptual and procedural assumption formulated in Chapter VII. All the dimensions will be discussed separately and according to the exact order:

Dimension → Aspect → Criterion → Tool → Evaluation

Both the qualitative and quantitative logic based on the character of the available information contained in the documentation is used in the analysis. Where the numerical information is not presented directly, it uses market- consistent suppositions, which is in line with the aim of this paper, which is not to conduct an empirical audit, but to show the methodological implementation of this framework.

Finally, the section also aims at confirming the financial viability of the financial structure discussed. Its aim is to find out whether it meets a reasonable and balanced efficiency profile in terms of its key dimensions risk -return, cost-benefit, liquidity and capital preservation and at the same time remain consistent with the Islamic ethical and financial principles. Such an overall analysis does not only quantify the aspect of economic efficiency in isolation but it also goes hand in hand with the Sharia compliance evaluation to form a complete base of overall evaluation of Islamic financial products.

8.4.1. Methodological Framework

The methodology to measure the efficiency of the economy is purely quantitative based on standardized financial formulae and benchmarks which are commonly

applicable in the current field of finance. This technique is based on quantifiable financial indicators only, unlike the qualitative or perception-based methods, this method has a high degree of replicability and transparency. The framework uses quantitative tools that are found in Chapter VII, including the Sharpe Ratio, Net Present Value (NPV), Internal Rate of Return (IRR), Debt Service coverage Ratio (DSCR) and Value at risk (VaR) and each of these tools is associated with certain dimensions and efficiency aspects.

All dimensions are considered separately in order to preserve diagnostic accuracy. The Risk -Return dimension uses volatility-adjusted measures of performance to determine proportionality of the anticipated returns and the risks undertaken. Cost-Benefit and Cost Efficiency apply the methods of discounted cash flow (NPV, Benefit Cost Ratio) to identify the presence of net positive value in the instrument discussed. To check the suitability of cash flows and the solvency in the short run, Liquidity is analyzed using ratios like DSCR and Current Ratio. Capital Preservation evaluates toughness by using stress testing and solvency ratios so that the worth will not be lost during unfavorable market conditions.

The procedure of methodology consists of three steps: (1) Data Collection and Verification, in which quantitative data are drawn out of financial disclosures or other similar sources in the market; (2) Calculation of Ratios and Indicators, use of the predefined formulae of each criterion; and (3) Benchmark Comparison and Interpretation, the comparison results with the international financial standards (e.g., Sharpe Ratio > 1 , DSCR 1.2, positive NPV). This is a standardized procedure whereby results can be replicated and all conclusions can be traced to numerical evidence. The result is an objective conclusion on efficiency sustained by facts and not subjective assessment and entirely consistent with the global financial analysis models.

8.4.2. Data Requirements, Availability, and Assumed Values

Economic-efficiency analysis of the sukuk will need the availability of a full financial dataset that will include market, operational as well as structural indicators. Nevertheless, since some quantitative information was not publicly revealed in the prospectus of the issuer, due to the regulation and the level of confidentiality, this

research paper uses a uniform pattern of assumptions across all aspects to ensure a methodological integrity and transparency.

The number of categories of data necessary to implement the complete quantitative framework are the following:

- Return parameters Periodic rate of distribution, risk free benchmark and return volatility.
- Cost elements: issuance cost, servicing cost and management cost.
- Asset-liability structure: the value of underlying assets, the total sukuk liabilities.
- Liquidity measures: current assets, current liabilities and stress-scenario inflows/outflows.
- Macroeconomic variables: market yield, inflation and discount rate.

Data provided in the prospectus include a fixed periodic distribution rate of 4.247% per annum, a cumulative sukuk issuance value of SAR 8.5 billion, an underlying asset portfolio valued at SAR 12 billion, a five-year tenor, and an Ijazim (lease-based) structure with fixed semi-annual rental payments. Data not provided in the prospectus include return volatility, sensitivity to market indices, detailed issuance and operational cost structures, and information related to trading volume and liquidity reserves. Data used consistently across all dimensions are summarized in Table 8.14, which consolidates all assumed and estimated parameters applied in the framework.

Table 8.14: Summary of Required Data

Variable	Symbol	Assumed Value	Rationale
Expected return	R_p	4.40%	Mid-range of disclosed rental yield.
Risk-free benchmark	R_f	3.80%	Based on sovereign sukuk yields.
Volatility	σ	0.10%	Reflects low variation typical for fixed-rental sukuk.
Beta	β	0.35	Consistent with government-linked utilities.
Total liabilities	L	SAR 8,500 m	Prospectus figure.
Total Asset value	A	SAR 12,000 m	Prospectus figure.
Annual benefit	B_t	42 m SAR	Derived from $R_p \times L$.

Annual cost	C_t	2 m SAR	Approx. 3 % of benefits.
Discount WACC /	r	3.80%	Market benchmark.
Inflation	π	2.30%	Based on recent CPI average.
Current assets	CA	1,000 m SAR	≈ 12 % of total asset base.
Current liabilities	CL	720 m SAR	$8.5 \text{ b} \times (0.085)$ approximation.

Source: Prepared by the Author, 2025

The rest of the calculations in the Risk-Return, Cost-Benefit and Liquidity and Capital-Preservation dimensions are based on this shared data set. This guarantees internal consistency, comparability on dimensions and traces of presumed inputs. In other subsequent tables wherever, one finds the term assumed, then it means these standardized base values.

8.4.3. Risk-Return Efficiency Dimension

The Risk Return Efficiency Dimension measures the proportion between the level of expected return and the level of risk associated with the product. It is a type of investment which guarantees that the investment does not perform worse than its degree of risk or produce disproportionately high returns which can be an indication of instability. This analysis is done based on the findings of Chapter VII and considers three features: Return Stability, Risk Exposure and Risk-Adjusted Profitability.

The aspects are analyzed in terms of their unique criteria and quantitative measures. Where the prospectus does not reveal the numerical data, rational assumptions of the market based are undertaken in order to show the process of evaluation.

Aspect 1 is Return Stability; criterion is periodic returns volatility that measures the Standard Deviation (σ) or Variance of Returns. The measurement objectives are to know whether the cash inflows (lease rentals or distributions) are consistent during the life of the instrument. Through high stability, the returns are well managed.

All the periodical payments are fixed meaning that $\sigma=0$, which implies that there is total stability of returns and complete efficiency in this respect.

Table 8.15: Result for Return Stability

Aspect	Criterion	Formula / Tool	Source	Result / Interpretation
Return Stability	Volatility of periodic returns	$\sigma = \sqrt{\sum (r_i - \bar{r})^2 / n}$	Prospectus, pp. 113–115	$\sigma \approx 0 \rightarrow$ Highly stable return stream

Source: Prepared by the Author, 2025

Aspect 2 is Risk Exposure, elasticity of the product to the market returns or system wiggles. Structural and obligor credit and operational exposure. The measurement objective is to determine whether the performance of the product is over-reliant on the external market volatility or internal credit conditions. A low 8 is a sign that the performance of the product does not have much exposure to systemic volatility. This low exposure in combination with high obligor support may be interpreted as high-risk management efficiency.

Table 8.16: Result for Risk Exposure

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Risk Exposure	Market sensitivity	$\beta = \text{Cov}(R_p, R_m) / \text{Var}(R_m)$	Assumed (not disclosed)	$\beta \approx 0.35 \rightarrow$ Low systematic risk
Risk Exposure	Credit and operational risk	Qualitative analysis	Prospectus, pp. 12, 15	Government-linked obligor $\rightarrow$ low default probability

Source: Prepared by the Author, 2025

Aspect 3 is Risk-Adjusted Profitability, criterion is pro-rata earnings. The measurement objective is to measure the amount of excess return per unit of risk assumed, $R_p = 4.4\%$ (average distribution), $R = 3.8\%$ (sovereign sukuk benchmark), against assumed low volatility, 0.10 is the standard deviation. A Sharpe ratio above 1 means that the performance is risk-adjusted; the figure of 6.0 (assumed) is high efficiency.

Table 8.17: Result of Risk Adjusted Profitability

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Risk-Adjusted Profitability	Return per unit of risk	$S = (R_p - R_f) / \sigma_p$	Assumed (illustrative)	$S = 6.0 \rightarrow$ Highly efficient

Source: Prepared by the Author, 2025

The three aspects confirm that the product has:

- Constant returns that have insignificant volatility.
- Minimal risk coverage with solid obligor and asset coverage.
- A high level of profitability on a risk-adjusted basis as compared to conservative levels. The methodological process demonstrates the logic of the operation of the framework even in those cases when some data was not available, and some assumptions had to be made.

All in all, the Risk- Return Efficiency Dimension is very economical in terms of its structure since it provides reasonable returns to its low risk profile.

8.4.4. Cost Efficiency Dimension

The Cost Dimension and the Benefit Dimension is a criterion of the proportionality of the economic benefits of the sukuk itself, and its direct and indirect costs. This evaluation will guarantee that the building is as efficient as possible in its value creation and sustainable profitability. They are deemed using three dimensions and these are: Financial Cost Efficiency, Net Benefit Assessment and Profitability Sustainability. Where the prospectus does not show certain figures there assumed data is explicitly portrayed to demonstrate on the prospectus.

Aspect 1 is Financial Cost Efficiency, this affected the company negatively because of the flat organizational structure. Criterion is total cost/total benefits ratio. The measurement objective is to find out how the issuance, management and transactional costs relate to overall financial returns earned. Assumed Data:

- Total Costs = 25 million SAR (assumed).

- Overall Benefits = 850 million SAR (assumed)

Table 8.18: Result of Financial Cost Efficiency

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Financial Cost Efficiency	Total costs relative to benefits	Cost Efficiency Ratio = Total Costs / Total Benefits	Data assumed for demonstration (not disclosed in prospectus)	0.029 → Highly efficient

Source: Prepared by the Author, 2025

Aspect 2 is the Net Benefit Assessment, and criterion is NPV = Benefits Less Costs. The measurement objective is to determine the net value of discounted future benefits more than discounted costs during the period of instrument lifetime. Assumed Data:

- Annual Benefit (B_n) = 42 million SAR (assumed) Annual Cost (C_n) = 2M SAR (assumed)
- Term (n) = 5 years
- Discount(r) = 4% (according market sovereign sukuk benchmark)
- Net Present Value (NPV): $NPV = \sum (B_t - C_t) / (1 + r)^t$
- Benefit–Cost Ratio (BCR): $BCR = \sum (B_t / (1 + r)^t) / \sum (C_t / (1 + r)^t)$

Table 8.19: Result of Net Benefit Assessment

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Net Benefit Assessment	Present value of benefits minus costs	NPV and BCR formulas (see above)	Assumed data used for illustration – values not disclosed in prospectus	$NPV \approx 177.6$ m / $BCR \approx 20$ → Strong viability

Source: Prepared by the Author, 2025

Aspect 3 is Profit Stability, criterion is Internal Rate of Return (IRR), in comparison with benchmark financing cost (WACC). The measurement objective is to ensure that long term returns are more than the financing cost, it is necessary to verify sustainable profitability. Assumed Data:

- Annual Benefit (B_t) = 42 million SAR
- Annual Cost (C_t) = 2 million SAR
- WACC = 3.8 % (assumed market average)
- Internal Rate of Return (IRR): $0 = \sum (B_t - C_t) / (1 + IRR)^t$
- Profitability Index (PI): $PI = \sum (B_t / (1 + r)^t) / \text{Initial Investment}$

IRR (4.6 %) is greater than WACC (3.8 %), which means that returns are higher than capital cost and $PI=1$, which means that every unit of investment will generate more than it is cost in present value terms. In this way, the structure has proven profitability.

Table 8.20: Result for Profit Stability

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Profit Stability	IRR vs. WACC / PI	IRR and PI formulas (see above)	Assumed data – values not disclosed in prospectus	$IRR \approx 4.6 \% > WACC 3.8 \% \rightarrow$ Sustainable returns

Source: Prepared by the Author, 2025

The main observations on all 3 aspects are:

- Cost Efficiency is high (= 3%), meaning optimized use of resources.
 - Net Benefit Assessment, positive NPV and BCR imply value creation.
 - Profitability Sustainability Confirms a higher amount of returns than capital.
- Even though certain data was made an assumption in order to demonstrate the framework, the process is used to show how the framework was applied.

Therefore, the Cost Benefit and Cost Efficiency Dimension shows the high economic efficiency and finance healthiness of the sukuk structure.

8.4.5. Liquidity Efficiency Dimension

The Liquidity Efficiency Dimension is assessing the ability of the sukuk to fulfill short-term commitments as well as tradability in the secondary-market being enabled

without material losses. Liquidity is very critical to economic efficiency; it affects investor confidence and effectiveness of the product in an ordinary and strained marketplace setup. The methodological consistency among all economic dimensions is attained by carrying out all quantitative estimates in this section using the standardized assumption dataset which was published in Section 8.5.2-A. Its total sukuk liabilities and underlying asset base stand at SAR 8.5 and SAR 12 billion respectively. The value of current assets and current liabilities are stated as percentages of these totals and any unreported liquidity parameters obtained by an academic appropriate assumption.

Aspect 1 measures the short-term liquidity position, the criterion is Sukuk structure capability to fulfill the current liabilities within the provisions of easily accessible assets. Current Assets (CA): current assets are assumed to be 12 percent of total assets (12,000 m $\times$ 0.12 = 1440m SAR). (2) Current Liabilities (CL) = 8.5 percent of the total sukuk liabilities (8,500 m $\times$ 0.085 = 722.5 m SAR).

The current ratio 1.99 suggests that the sukuk is able to meet its short-term obligations at least 2 times using liquid assets. Strong liquidity resilience in investment vehicles is reflected in a ratio of over 1.5, which is considered in financial literature and in the prudential guidelines (Basel Committee on Banking Supervision, 2017).

Table 8.21: Result of Short-Term Liquidity

Aspect	Criterion	Tool / Formula	Source / Assumption	Result / Interpretation
Short-Term Liquidity	Ability to meet short-term obligations	CR = CA / CL	Derived from standardized dataset (Section 8.5.2-A)	1.99 → Strong short-term coverage

Source: Prepared by the Author, 2025

Aspect 2 measures the market liquidity, and the criterion is the convenience in terms of which the sukuk units can be sold and bought in the streets without causing considerable price reduction.

- The prospectus did not give market information on bid-ask spreads. In order to maintain an analytical continuity, spreads of a similar character of the

sovereign Ijahrah sukuk are used and the average price of bid is 99.5 and ask price is 100.0.

- A 0.5 non-cumulative spread is an indication of high liquidity in the secondary market and aligns with the domestic sovereign sukuk rates (IMF, 2015). Reduction in the spread is a sign of less transaction frictions and improved investor confidence in the tradability of markets.

Table 8.22: Result of Market Liquidity

Aspect	Criterion	Tool / Formula	Source / Assumption	Result / Interpretation
Market Liquidity	Secondary-market tradability	$BASR = (Ask - Bid) / [(Ask + Bid)/2]$	Assumed market prices 99.5/100.0 based on regional averages	0.5 % → High liquidity

Source: Prepared by the Author, 2025

Aspect 3 measures the liquidity resilience, and the criterion is the liquidity capacity of the sukuk under stressful cash-flow situations. High-quality liquid assets (HQLA) = Current Assets=1,440 m SAR. Net cash outflows under stress = + Current Liabilities + 20 percent stress in inferior inflows. $22.5m \times 1.2 = 867m$ SAR $722.5 m \times 1.2 = 867 m$ SAR $722.5m \times 1.2 = 867m$ SAR. LCR of more than 100% will mean that the sukuk institutional can achieve one-month long-term liquidity shock, without outside assistance. This received 166 percent indicates a high structural liquidity strength (Basel Committee on Banking Supervision, 2017).

Table 8.23: Result of Liquidity Resilience

Aspect	Criterion	Tool / Formula	Source / Assumption	Result / Interpretation
Liquidity Resilience	Capacity to maintain liquidity under stress	$LCR = (HQLA / Net Outflows) \times 100$	Derived from standardized dataset (Section 8.5.2-A) with 20	166 % → Strong resilience

			% stress adjustment	
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Source: Prepared by the Author, 2025

All these results affirm the fact that the liquidity management in the sukuk structure complies with quantitative assumptions and prudential requirements that have been adopted internationally of the asset-backed securities. Numerical and conceptual consistency with the other economic-efficiency classes, specifically risk -reward, cost-benefit, and capital-preservation is guaranteed by the implementation of the same dataset as used in Section 8.5.2-A.

8.4.6. Capital Preservation Dimension

The Capital Preservation Dimension looks at how the financial structure preserves have an insurable value of the principal value of the investors over a period of time and the market circumstances. It aims to make sure that the capital invested in the sukuk is not jeopardized in any manner, both in nominal and real terms, to assure the investor of the safety thereof as well as ensuring its long-term sustainability. This dimension measures defensive efficiency in three dimensions that are established in Chapter VII, Financial Resilience, Risk of Capital Erosion and Asset-Backed Security Adequacy. Incoherent with the previous judgment, the same support assumptions as in the previous dimensions are kept.

Aspect 1 is the financing strength, criterion is Sukuk capacity to sustain its capital value in view of unfavorable market or operating environment. Measurement Objective is to measure the potential loss of value, in the event that one of the most important parameters- lease income or financing cost changes in the adverse direction. This analysis is a measure of the product tolerance to economic stress. Assumed Data: Base Value = SAR 1,000 million, Stressed Value = SAR 960 million.

These findings are consistent with sensible stress-testing levels that are recommended on investment-grade asset-backed instruments (Basel Committee on Banking Supervision, 2017).

Table 8.24: Result of Capital Stability

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Financial Resilience	Capital stability under stress	Stress Impact = $(\text{Base} - \text{Stressed}) / \text{Base} \times 100$	Assumed stress scenario (-15 %)	4 % impact → High resilience

Source: Prepared by the Author, 2025

Aspect 2 measures the Risk of Capital Erosion; criterion is the size and probability of possible loss of capital. Measurement objective is to determine the risk of losing the principal potentially in a given level of confidence and given time spell, to show the susceptibility of the capital to market fluctuations. Apply expected return (μ), standard deviation (σ) and factor of confidence (z). Calculate VaR of 95% confidence ($z = 1.65$). The maximum potential decrease in returns at 95% means is also 0.17% indicating a low chances of capital erosion and a high rate of protection of investor principal.

Table 8.25: Result of Risk of Capital Erosion

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Financial Resilience	Capital stability under stress	Stress Impact = $(\text{Base} - \text{Stressed}) / \text{Base} \times 100$	Assumed stress scenario (-15 %)	4 % impact → High resilience

Source: Prepared by the Author, 2025

Aspect 3 measures the Asset-Backed Security Adequacy, and criterion measures the adequacy of assets on the securing of sukuk principal. Asset: Loan-to-Value (LTV) Ratio / Collateral Coverage Ratio (CCR). The measurement objective is to establish whether the value of tangible assets that are leased out is greater than the total sukuk liabilities so as to ensure that the impairment of capital is not affected by default and liquidation in case of such. Assumed Data:

- Asset Value = SAR 12,000 million
- Sukuk Liabilities SAR 8,500 million

Table 8.26: Result of Asset-Backed Security Adequacy

Aspect	Criterion	Tool / Formula	Source	Result / Interpretation
Asset-Backed Security Adequacy	Collateral coverage strength	$LTV = (\text{Sukuk Liabilities} / \text{Asset Value}) \times 100$	Assumed values consistent with previous dimensions	LTV = 70.8 % → High collateral adequacy

Source: Prepared by the Author, 2025

The framework has a methodological integrity ensuring that the assumptions are running consistently on all dimensions of the economy and makes a comparative analysis possible. In general, the sukuk has a defensive economic capability, which guarantees long-term security of the capital of the investors and compliance with the international standards related to the prudence and asset-backing. The overall economic efficiency evaluation will be assessed through the adoption of the given approach in the given case.

8.4.7. Overall Economic Efficiency Evaluation

The general economic efficiency assessment sums up the results of the four analytical dimensions, which are Risk-Return, Cost-Benefit, Liquidity, and Capital Preservation, in order to arrive at the overall financial stability and sustainability of performance of the sukuk structure. The dimensions are concerns of attributes of functional efficiency of an economy and their joint interpretation would yield a wholesome picture of the ability of the product to achieve the goals of profitability, stability and resilience.

According to the methodological principles identified in Chapter VII, such fusion is not done by mechanical averaging. It takes rather a conceptual synthesis, to which the quantitative results of any given dimension are related to the relative weight which the theoretical framework assigns to it as an interpretation. This method eliminates distortion of results and avoids breach on the multidimensional accounts of efficiency.

8.4.7.1. Summary of Dimensional Results

Table 8.27: Summary of Dimensional Results

Dimension	Aspect Summary	Key Result	Interpretation
Risk–Return	Volatility (σ) 0.10 %, Beta 0.35	Sharpe Ratio $\approx$ 0.6, CAPM return 4.4 %	Stable returns within expected range; low systemic risk exposure.
Cost–Benefit	Annual benefit 42 m SAR; cost 2 m SAR; NPV > 0	Positive NPV and BCR > 1	Cost structure efficient relative to returns.
Liquidity	CR 1.99; BASR 0.5 %; LCR 166 %	High liquidity across all indicators	Strong short-term solvency and market tradability.
Capital Preservation	VaR within tolerance; LTV < 80 %; strong asset coverage	Excellent resilience under stress	Capital protection fully aligned with prudential norms.

Source: Prepared by the Author, 2025

All findings were obtained based on the composite assumption data (Section 8.5.2-A), which was cross-dimensionally comparable and internally consistent across methods.

8.4.7.2. Interpretation and Integration

According to the combined perception, it can be argued that the sukuk portrays balanced economic practices in all its main aspects. The fact that these results are interdependent helps enhance the internal logic of the framework:

- High liquidity has a direct effect on the conservation of capital by decreasing forced-sale risk.
- Cost efficient structures lead to the sustainability of returns.
- Better risk attributes Stable risk attributes enhance investor confidence and increase the depth dispensation of the secondary market.

Even though other data were made based on non-disclosure, the same assumptions were used throughout all the calculations and were checked with international standards (Basel Committee, 2017: 18; IMF, 2015: 54). The sensitivity analysis

suggests that other conditions of middle change in the presumed values would not significantly affect the result of the evaluation, which condition validates the credibility of the results.

According to combined evidence, the sukuk has high level of overall economic efficiency. It is stable on returns, cost is prudently managed, liquidity is resilient to a high level, and capital protection is high, all of which is consistent with the theoretical ideal levels of efficiency in Chapter VII. The analysis has confirmed that the structure of the sukuk represents a balanced combination of profitability and security which justifies the fact that the instrument is an economically efficient Islamic financial tool. The implication of this finding as well indicates how practically applicable the dual-pillar framework is when it comes to quantitative evaluation of financial products with regard to both Sharia compliance and economic efficiency parameters.

8.5. Joint Interpretation of Sharia and Economic

This part gives a combined meaning of the sukuk analysis findings acquired under the two pillars of the framework analysis, which are Sharia Compliance and Economic Efficiency. Although the Sharia pillar is used to guarantee the product legitimacy and ethical compliance, its economic pillar determines its performance and sustainability. It is necessary to integrate the two dimensions to see whether the product meets the dual goal of Islamic Financial Engineering; to comply with the divine law and to make the product economically functional. The analysis of the sukuk proves that the compliance to Sharia has a positive correlation with the economic efficiency in general. The structure had fulfilled the Sharia gatekeeping criterion without any direct Riba, Gharar, or Maysir breach, and the structure portrayed a stable trend of Shubuhahat (suspicious elements) that was not out of the rejection threshold. This is in line with the nature of the underlying product, the Ijazah nature, where the assets are shared in the form of ownership, asset-backing and risk-sharing, all contributing to increased Sharia credibility and risk-taking ability. The Sukuk performed well in terms of economics on the four dimensions:

- RiskReturn: Low volatility and stable yields in the market expected.
- Cost-Benefit: Positive net benefits showing efficiency in operation.

- Liquidity: Well-marketed and excellent stress-test.
- Capital Preservation: Strong collateralization and small risk of capital erosion.

Thus, the findings imply that the asset-backing, risk-sharing, and prohibitions on excessive leverage are the mechanisms of Sharia-compliant design that have a direct impact on the soundness of the economy. Therefore, interaction between the Sharia compliance and efficiency in the specified case is compatible but reinforcing at the same time. Though the two pillars of the analysis have good level of alignment, there are still some small tensions between the two pillars. Some of these contractual terms, though financially reasonable, have borderline terms, which will be questions of interpretation under Sharia screening in such areas as:

- Benchmark Association: The indirect correlation to Riba is brought by the use of traditional interest-based benchmarks (e.g., LIBOR, SOFR, or SAIBOR) to determine rental rates.
- The presence of an element of Shubuhah instead of an out-and-out violation, however, shows that its existence is conceptually inconsistent.
- Optimization of Liquidity: A few of the secondary-market techniques, including repurchase agreements (repos) or early buybacks, increase tradability at the cost of legal separation of ownership disposition under Ijtihad contracts.
- Guarantee Mechanisms: Economic guarantees, e.g. performance guarantees by originators enhance the protection of investors, but run the risk of turning Sharia risk-sharing into fixed-return guarantees unless carefully confined.

These design aspects underscore the fact that economic efficiency is repurposed in terms of methods that were initially developed in the traditional finance, which do not necessarily align with the ethical and contractual ethos of Sharia. Therefore, quantitative efficiency can be high, but the qualitative Sharia purity will still be an independent but vital area of evaluation. The two-pillar model indicates that Sharia compliance and economic efficiency do not constitute a matter of conflict but instead are parts of a consistent Islamic financial system. It is more likely that products based on solid Sharia bases have better economic complexity since the prohibitions (against Riba, excessive Gharar and speculative risk) are, by definition, at the systemic level. On the other hand, any economic efficiency will strengthen Sharia compliance at the user level by enhancing sustainability and value-preservation in the long term - both

of which are necessary to achieve Maqasid al-Shariah objectives to justice, equity and social welfare.

Therefore, the product may be also characterized as the one that is Sharia-compliant and economically efficient to represent the desired balance that is being desired in the framework. The correlation of results indicates that the two-pillar model is operationally practical and theoretical consistency. It helps the evaluators to differentiate between the superficial adherence and true performance-based adherence, which narrows the distance separating ethical legitimacy and market functionality. Although more eventualizations can be needed to normalize the weighting mechanisms or to create AI-assisted scoring to use in procedural applications, the current analysis has been effective in showing how the two pillars engage each other in practice to create a solid and evidence-based framework on the framework applications in the future.

8.6. Conclusion

The introduction of the dual-pillar model in assessing the sukuk product showed that the model is operational and methodologically consistent. The systematic evaluation of pillar number one (Sharia Compliance) and pillar number two (Economic Efficiency) furnished a clear procedure of analyzing the way in ethics legitimacy and financial performance interrelate under Islamic Financial Engineering. The analysis revealed that the sukuk does not have any traditional Sharia compliance requirements, and no direct Riba, Gharar, and Maysir mistakes were detected, and the identified Shubuhah (suspicious items) were below the rejection level. Regarding the economic dimension, the outcomes showed positive performance in all four efficiency dimensions stable returns, good cost-benefit balance, high liquidity, and great capital preservation. Together, these results made the sukuk among the Sharia compliant and economical outcomes within the context of the framework. It should also be noted though that a number of financial variables had to be assumed because of a lack of data disclosure in public documents issued by the issuer. Though the assumptions were made on realistic standards and cut across all the dimensions equally, the assumptions might not give a complete picture of the real position of the issuer in terms of finances.

Based on this, the obtained high scores on efficiency can be viewed as a measure of possible efficiency and not confirmed performance. In actual situations, differences in volatility, cost, or liquidity may provide contrasting quantitative outcomes, perhaps taming the total efficiency typing. In spite of this drawback, the chapter confirms the analytical framework and capability of the compliance integrity, as well as the financial viability, in the same evaluative dynamics. It therefore offers a good empirical basis to the theoretical and policy discussion to come in the final chapter.



CHAPTER IX

CRITICAL DISCUSSION AND JUSTIFICATION FOR THE INTEGRATED FRAMEWORK

9.1. Introduction

This chapter aims to go beyond the implementation of Sukuk which is descriptive in nature and to critically assess how it is evaluated. Although has shown how the proposed framework can be implemented in practice by utilizing it in the case of the Saudi Electricity Ijara Sukuk, this chapter questions the overall picture of the industry, methodological shortcomings, and conceptual lapses in the current practice. Its purpose is not merely to confirm the framework with the help of a single case study, but rather to explain why the framework, as a systematic alternative, replicable, and a whole, is needed as an alternative to existing models of evaluation.

This chapter specifically states that the evaluation of Sukuk could not and should not be limited to binary ones (compliant or non-compliant) or a partial assessment by the Sharia boards and the financial analyst. It however demands a model that incorporates substantive Sharia compliance and economic efficiency thus making sure that Sukuk would remain ethically tenable and economically viable. The chapter thus acts as a critical point of turn: it indicates why the integrated framework that has been constructed in this dissertation is not merely an academic affair but a practical requirement to the credibility and sustainability of the Islamic capital market.

9.2. The Contribution of the Integrated Framework

9.2.1. Transparency and Accountability

The lack of transparency of the process of compliance is one of the problems that is common to the Islamic finance and Sukuk evaluation in particular. The current practice is often characterized by statements by Sharia Supervisory Boards (SSBs) that are often short and give a statement that a product is Sharia-compliant and provide little information about how an approval was made. This gives investors and regulators very

little to understand on whether these approvals are a deeper juristic assessment or a superficial appreciation of form of contract.

The new integrated framework brings in paradigm-change in the sense that it involves internalized documentation and quantifiable scoring mechanisms into the evaluation process. All compliance decisions are backed by definite rules, which are clear prohibition (like Riba or Maysir), an unclear aspect, (like ownership rights and deliverables). The critics may say that with complete transparency there may be slacks in issuance or it may make innovation discouraged. The structure, however, responds to this by demonstrating that orderly transparency does not suffocatingly affect the innovativeness of the structuring; rather, it makes innovation divert towards products that are both morally justifiable and economically viable. Effectively, transparency is used to the effect of making Sukuk to mature according to the true values of Islamic finance, instead of tending toward imitation of conventional products.

9.2.2. Comparability of Various Sukuk Structures

The other important aspect of the integrated framework is that it ensures comparability of the Sukuk issuances and this is a feature that is currently lacking in the industry. Currently, two were Sukuk issued by various Sharia boards are both subject to the compliance label but their frameworks may be entirely different. One can rely on actual physical assets and real lease deals and another one can be concerned with artificial structures that only imitate traditional bonds. These structures cannot be reasonably compared between investors and regulators unless they are based on standardized criteria. The framework is a solution to this dilemma because it creates a standard yardstick to be used in assessment. Under compliance, any Sukuk has to succeed the same gatekeeper examination (halal activity, avoidance of Riba, forbid Maysir and Gharar) and receive the same scoring on suspicious elements. Sukuk is evaluated against the common financial parameters, including Net Present Value (NPV) of the Sukuk, risk-to-return ratios, liquidity, and tests of capital preservation, on efficiency aspect. The application of such common measures guarantees the comparison of Sukuk, issued in various jurisdictions and located in Saudi Arabia, Malaysia or the UAE, on the basis of likes.

9.2.2.1. The Comparability Implication is Far Reaching:

Comparability in turn lowers information inequity and enables decision-making in a better way. Investor may also consider a sovereign Ijara Sukuk to have better compliance integrity and more economic returns than a corporate Murabaha Sukuk. Comparability would facilitate cross-market monitoring, which, in turn, would allow them to see the systemic risks or dubious activities that would otherwise be hidden in the jurisdiction isolation. Comparability causes competition to issuers. Those that score between the lowest and the highest may be required to repackage their products to attract investor interest and higher ones enjoy reputational benefits and may lower financing cost.

Another objection that may be raised is that comparability may be unfair to innovative or hybrid Sukuk structures, which may not easily fit into the canons. Nonetheless, this issue is solved by the flexibility that the framework provides, as every product is considered through the prism of principles (ownership, risk-sharing, cost efficiency) but not strict templates. By doing so, comparability will enable a facilitator of innovation to take place- the ability to fairly judge new structures without necessarily being punished.

9.3. Potential Criticisms for the Approach

Any suggestion to reform Sukuk evaluation, especially that comprehensive as the integrated framework, will have to withstand criticisms and challenges. These arguments are based on industry perception, variations among the scholars, and practical limitations of players in the market. These concerns should be foreseen to tackle them with appropriate strong answers so that the framework can be found to be credible and implementable. This paper presents three frequent challenges, namely, how complicated the matter appears, jurisprudential diversity and fiqh variance, and market practitioner resistance.

9.3.1. Criticism for Complexity

One such criticism is that, the integrated framework seems too complicated to use in actual practice. The market industry stakeholders might claim that the solution that exists, which is the binary compliance certificates, is easy, quickly made, and adequate regarding the market requirements. In comparison, a multi-criterion, two-pillar approach with the use of checklists, Lickert-scale scores, and weighted efficiency indicators can be considered inconvenient. Albeit underlying concerns are:

- Time and Cost-Evaluation will be more time-consuming and demand more specialized knowledge than the issuers may care.
- Market Velocity-Investors and underwriters might be threatened that elaborate processes would slack issuances and decrease competitiveness with more than customary bonds.
- Information Overload - This is an argument presented by some practitioners that too much technical description can disorient the investors instead of making them understand compliance.

Although these worries are quite plausible, they do not highlight the benefits of structured assessments in the long run. One, not all designs that are complex are also difficult to use. As soon as the framework has been institutionalized, the checklists and scoring may be integrated into the digital framework, and the process becomes efficient and user-friendly. Second, it is a valuable trade-off higher credibility and confidence in the investor to squander a small amount of time on the evaluation. As a matter of fact, analogous areas like ESG (Environmental, Social, Governance) ratings or ISO quality certifications prove that seriousness is appreciated in markets, although it might need extra measures. Lastly, the framework is flexible: the detailed scoring can be offered to the regulators and researchers, whereas the simplified summary outputs (like the overall compliance and efficiency scores) can be offered to investors to facilitate their understanding. This sense of over-complexity is therefore an expression of a lack of familiarity and not impracticability in essence. In the long-term transparency and standardization will be more beneficial than transitional costs.

9.3.2. Resistance from Juristic Schools

The other criticism is the lack of uniformity in Sharia interpretation between the various schools of juristically thought. An illustration is that Tawarruq and other practices are similar in certain jurisdictions in the gulf; however, they are quite controversial in Malaysia. Equally, purchase undertakings are still subject to debate to Ijara Sukuk or whether some of the benchmarks of profits rates are allowable. Critics can suggest that an overarching structure cannot accommodate such diversity and they will be imposing a one-size-fits-all model to a pluralistic discipline.

Concerns covered in the background are: (1) Juristic Autonomy Lost - Sharia boards can be in opposition to structures that are seen to limit their interpretive powers. (2) Cross-Jurisdictional Conflict - The conflicting decisions between the jurisdictions can become an impediment to introducing a standard scoring system. (3) Confusion Among Investors - Varied outcomes in compliance in different jurisdictions can lead to loss of faith in the framework.

The school-specific framework is principle-driven and not school-specific. It does not give the fiqh opinion but it gives a methodological order of applying any of the interpretations that a person chooses. As an example, a jurisdiction that allows Tawarruq will still compare the product to its standards (ownership, risk transfer, deliverables), marking it on a non-transparent scale. In case Tawarruq is not allowed according to another jurisdiction, the same conditions are used though with the differences in terms of the thresholds that are based on the local standards. This flexibility guarantees that there is preservation of juristic diversity and consistency of evaluation. Besides, the framework promotes the use of AAOIFI standards or other accepted standards as default standards, which offer convergence and yet not pluralism. By doing this, the framework is not removing the fiqh variance, but appropriating it into a systematic process in which similar products are held. A third challenge comes as a result of market practitioners, issuers, underwriters, and investors who might be resistant to change. Their opposition is usually caused by the perceived danger to current practices and motivations. And examples for that:

- Commercial Interest-Issuers might be afraid of stricter judgments that will reveal the vulnerabilities of their structures, which will be difficult to get passages or attract investors.
- Consistency in the Existing System - Market actors might be more comfortable with their used streamlined system than with new systems, which need training and adjustments.
- Concern over Reputational Risk - Institutions might fear that publicizing detailed compliance scores is going to expose weaknesses and reputational harm or loss of investor trust.

Practitioners are not the only problem that Islamic finance faces resistance; it is a usual characteristic of reforming any system that brings accountability. However, it is credibility and not convenience that is long term in the health of the Sukuk market. It is possible to give several answers:

- Reputation as a reward: Opposite to being afraid of being exposed, issuers should become competitive by the great compliance and efficiency scores. Similarly to how high ESG ratings lead to capital inflow, high scores on integrated framework will have the same effect on investor demand.
- Stepwise implementation: The framework can also be adopted gradually, starting with voluntary aspects by leading institutions, and later broadening the regulations across the board. This softens the impact of unexpected transition.

Training and Capacity-Building - Resistance is usually the indicative of unfamiliarity. Because it provides training to Sharia scholars, compliance officers and financial analysts, the framework can be embedded easily into the current workflows.

Conformity with the international trends: Global investors are seeking accountability, transparency and ethical guarantees more and more. In choosing to oppose these developments, the practitioners will jeopardize the exclusion of Sukuk in the international capital market. They future-proof their products by picking the framework and make them meet international expectations. The mentioned criticisms are based on truthful concerns such as complexity, diversity in jurisprudence, and resistance by practitioners, but none of them is completely insurmountable. Rather to the contrary, they focus on the transformative nature of the framework: it challenges

the existing practices, in particular, because it is intended to help increase the standards. The complexity may be addressed by the method of digitalization and simplification; diversity may be respected with references to the postulates founded on adaptability; fear of changes may be eliminated with the help of the incentives, gradualism, and orientation towards the global tendencies.

Lastly, the mere existence of these criticisms is an indication that there is a need to reform. As long as the Sukuk market continues to follow the convenience, fragmentation, and non-transparency route, it will cease to be viewed as the true substitute to the traditional bonds. The integrated framework responds to these problems, directly addressing them, and proving to be quite robust and well-adapted to the reality.

9.4. Framework Beneficiaries

The integrated framework is not merely a contribution made as a theory, but also as a work tool intended to assist various stakeholders in Islamic finance ecosystem. Its pillar two composition, which is Sharia compliance and economic efficiency, is valuable both to institutional stakeholders, market stakeholders, and academic stakeholders. The groups will both benefit in unique yet interconnected ways.

9.4.1. Sharia Boards and Regulators

The institutional stakeholders play a prime position in regulating, keeping a watch and legitimizing the Sukuk market. They are regulators and standard setting bodies, Sharia Supervisory Boards (SSBs), and issuing entities.

Standard-Setters and Regulators, currently, regulators like central banks and securities commissions have a challenge in regulating Sukuk due to the different compliance processes in different institutions. The combination framework gives the regulators a consistent, transparent methodology of evaluation, which allows them to regulate issuances in a better way.

Stakeholders: It is the frame of operation that gives an international standard-setting body like AAOIFI and the IFSB an operational complement to the principles existing.

As much as these bodies capture the appearance of compliance in theory, the framework makes the same principles practical instruments. This bridges an old discrepancy between standards and practice. The framework will also help regulators enhance market discipline as those issuers that are characterized by poor compliance or efficiency scores will have to experience the result of the market. This will ease the regulation on the regulators to enforce credibility by means of punishments. Any SSBs the framework increases the credibility of the issuing of rulings by offering a structured and evidence-based approach to issuing its rulings. Board members are able to prove compliance by using documented checklists, scoring matrices, and threshold-based decisions as opposed to subjectivity. This will minimize charges of being inconsistent or biased and foster investor confidence. Moreover, the scheme increases the replications and defensibility of Sharia decisions characteristics that are becoming more important in academia and judicial circles.

9.4.2. Investors, Asset and Managers and Issuers

The demand side of Sukuk markets is in the form of market stakeholders who include institutional investors, asset managers and retail investors. Their confidence is basic to stability and growth of the markets.

The framework offers the investor with objective measures of compliance and efficiency information that is not dependent on the shrouded approvals by the board. This renders the decisions made on investments more evidence-based than relying on the trust in certain institutions. E.g., a Sukuk fund comparing two Sukuk issues, where the former has a high score in compliance, and moderate score in efficiency, with the latter having an equal score in compliance and efficiency, can invest in the former in a more strategically capital-intensive way based on its risk-return and ethical approaches. International investors, especially those that invest in Sukuk, tend not to invest in sukuk markets because of incongruency of Sharia ruling. Through standardization of evaluation, the framework will help them to have confidence in the market because Sukuk is evaluated on verifiable and quantifiable parameters. This is not a confidence of Muslim investors alone. The transparency of the framework can benefit ethical investment funds, ESG-oriented funds and socially responsible

investors as well because the framework can offer quantifiable indicators of ethical conduct. In the case of asset managers that manage Sukuk portfolios, the framework will allow comparability between issuances. This enables optimal portfolio to be determined since the management is able to evaluate the compliance-efficiency trade-offs in a systematic manner but not in a qualitative manner. In the long run, such comparability can also help the creation of Sukuk indices or benchmarks that use compliance scores and additional compliance of the Islamic finance can be integrated into the international capital markets.

9.4.3. Academics and Researchers

The framework is also useful to the academic and research community providing both conceptual and empirical opportunities.

Further Development of the Academic Research. This is also one of the long-standing critiques of the academic study of Islamic finance: It is not based on methodologies that are reproducible. The combined framework goes about this in providing them a structured and measurable model which is able to be tested, improved and argued out. The framework enables researchers to undertake comparative research across jurisdictions and determine the performance of various Sukuk structures concerning standardized compliance and performance indicators. This establishes novel possibilities of empirical research. The framework is a useful teaching technology among students and educators. The framework also enables instructors to demonstrate how Sharia compliance and efficiency may be assessed simultaneously in a systematic way as opposed to discussing them separately. This will help professionalize the Islamic finance training and equip future professionals to approach Sukuk markets with criticism and effectiveness. The framework also establishes the foundation of additional innovations, including the incorporation of digital tools and AI-based assessment models, transparency mechanisms based on blockchains. These extensions can be studied by academic researchers, and it can be assumed to develop their methodology on top of the framework. In the long run this may result in the accumulation of the literature which serves to make the study of Islamic finance as a more of a descriptive rather than rigorous and replicable methods-based field. The

users of the integrated framework are numerous yet connected to one another. Credibility and control the avenues through which to package Sukuk competitively can be availed to the regulators and Sharia boards; issuers are better placed to frame it; investors and asset managers are equipped with: transparency, comparability, and confidence; and the scholarly stakeholders can avail themselves with opportunities of new research, teaching, and innovation. All these benefits confirm the usefulness of the framework as a practical market tool and as an academic article that adds to the chain of theory and pragmatics of Islamic finance.

9.5. Implications for Islamic Financial Products

This combined framework created in this dissertation has a meaning that extends past its theoretical and methodological importance; the final advantage of the work is that it can bring a change to the way Islamic Financial Engineering products are created, tested and controlled in reality. Though the conceptual bases were established in the preceding chapters and practical applicability of the framework demonstrated with reference to specific case studies, the current part looks at the practical implication of the framework to the industry as a whole. The argument is no longer on how beneficiaries can be identified (as argued in Chapter IX) but how the framework can be constituted, institutionalized and utilized as a tool of transformation to Islamic finance. It will be in this segment that the theoretical consideration has to be translated into practical pathways and how the framework can constitute a reconstitution of market routine, improvement in quality of regulation and institution of professional and academic improvements. In this regard, three areas are analysed which are interconnected. The former (10.3.1) is an operation pathway, with major points mentioned on how the institutions may unify the framework to systems of compliance and digital infrastructures. The second one (10.3.2) focuses on change in the industry strategy, and it discusses how the systemic assessment can enhance innovation, credibility, and competitiveness in the international markets. The third (10.3.3) deals with policy and educational implications, demonstrating the way the framework can inform legislation, capacity building and academic research. These talks combined prove that the framework is not only a critical mechanism but a strategic facilitator of

the institutional maturity and sustainable development in the sphere of Islamic Financial Engineering.

Overall, the implementation of the framework has three steps: the introduction of the framework into the organizational processes, the standardization of the evaluation processes, and the systematic review of the framework to reinforce the outcomes. Combined, these are the means by which the framework can become a sustainable operational system which facilitates consistency, accountability, and trust in the Islamic Financial Engineering environment. The general model disclosed in this study also has its impacts and they are not limited to the uptake by the institutions; it is a catalyst to a system shift in the Islamic financial sector. The combination of Sharia compliance and economic efficiency in the same assessment platform has provided the point of change of thinking about the industry practices as being more regarding integrity, transparency and comparability. The utilization encourages the transition of the fragmented and form-based compliance to the culture of the substance-based evaluation one that engages the testing of how the financial products can satisfy the spirit of the Islamic law and be financially sustainable. It is a great step towards repositioning the credibility and originality of Islamic Financial Engineering within financial system of the world.

One of the most important transformative impacts is the establishment of market discipline and responsible innovation. The implication of performance based on some quantifiable criterion and scoring processes is an implicit benchmark of performance between issuers and markets. Those products with higher compliance and efficiency will automatically tend to gain more investor confidence, and reduced financing costs whereas those with weaker structures will have to adhere to the pressure. This has given healthy competition that has spurred innovation within the confines of the Sharia principles other than out of it. The effect of such a transparent environment over time could be the rise of ethical and professional standards of the industry, which would lose the reliance on personal interpretation and become more responsible to one another. The framework is also the source of the globalization of the Islamic finance. It enables regulators, investors and rating agencies to compare and interpret Islamic financial products in a common basis because it provides them with a common methodology which can be applied across jurisdictions. This comparability improves

cross-border investments as well as makes the international markets to acknowledge the Islamic instruments. This through it will bridge the conceptual and procedural divide between Islamic and conventional finance, without compromising the particular normative foundations of the former. This convergence is never assimilation but the way of maturing and becoming equal to the world capital markets. The contribution of the framework as a whole hence is that the framework can transform the orientation of the Islamic Financial Engineering that is reactive compliance to a proactive excellence. It provides a benchmark on which an action by future reforms will conform to both practices anchored on moral genuineness and rigorous examination. This change will not only lead to the improvement of the trust of the market when followed in the big scale, but also make Islamic finance one of the best formats of ethical innovation in the new global financial environment.

To sum up, the policy and teaching implications of the framework can make its effect felt well beyond the actual practice. The framework can introduce accountability, competence and the intellectual rigor culture in system by infusing its principles into regulatory frameworks, professional qualifications, and educational systems. These will make sure that it will continue to exist as a tool of policy and as a reference in academics in the long run and the maturity of Islamic Financial Engineering as an institution.

9.6. Recommendations for Future Practice and Development

The usefulness of any academic work is not just in the soundness of its conceptual and methodological thinking, but also on whether it can be converted into practice. Without this process, even the most elaborate frameworks have the chance of being stuck in the analyses of academia, a theorized view-point but not reflected in the life of financial markets. In the integrated framework that will be used in this dissertation, institutionalization becomes then not a superfluous step but a precondition to its effect. The framework aims to offer a complete assessment system of Islamic Financial Engineering products, which integrates the level of Sharia compliance with the level of economic efficiency in a unified system approach. Nonetheless, to make it more transformative than merely aspirational, it has to be entrenched on the levels of

regulatory, organizational, professional, and educative infrastructure of Islamic finance. It needs explicit policies on several levels, including regulatory integration, institutionalization by issuers and structure of organizations, professional training and certification, implementation by pilots and incremental deployment and refinement, and continuous monitoring and improvement.

Regulatory recognition and adoption are the first and the most important path to take place on the journey towards institutionalization. The ultimate gatekeepers to the Islamic financial markets are regulators and standard setting organizations. Unless they persist with the scattered Sharia approvals and simple disclosure standards, the shortcomings revealed in this dissertation namely absence of transparency, low level of comparability and superficial adherence will continue. In comparison, integrating the framework into the listing rules, disclosure regulations and approval processes would provide a consistent standard upon which to measure Islamic Financial Engineering products. The regulators might require that all new issues, be it a Sukuk, Murabaha facility, a Musharaka partnership, or an Ijara structure, be provided with a framework-based analysis appendix. This annex would show compliance and efficiency scores, reveal suspicious items, and record justifications, thus it would complement the opinion of Sharia Supervisory Board with quantifiable facts.

The adoption process by the regulatory sphere may take a phase like the global reforms:

- Phase 1 - Voluntary Use: Regulators encourage issuers to publish framework evaluations.
- Phase 2 - Comply or Explain: The issuers will be required to implement the framework or to explain the refusal enhancing transparency.
- Phase 3 - Mandatory Integration: The adoption becomes obligatory and the framework is entrenched in the all Islamic financial product approvals.

It is a similar direction taken by Basel banking agreements, IFRS accounting principles, and ESG reporting systems, whereby they started as voluntary codes and evolved into mandatory standards. It is also dependent on internal adoption by the issuers, banks and financial institutions in regards to institutionalization. Most of the current Islamic financial products are developed in a close direction of achieving

Sharia certification. When the fatwa has been obtained, few are concerned about compliance concerns on a deeper level and long-term cost-effectiveness. Such attitude of minimum compliance casts doubts on the entire industry.

The combined framework changes this rationale by offering issuers and structurers a design and evaluation framework. Issuers can incorporate the framework inside their in-house risk management, compliance, and governance (as opposed to taking evaluation as an external burden). The checklist, scoring system could be used in structuring the teams in the course of product development ensuring that clarity in ownership, deliverables, risk assignments and efficiency are incorporated into the product at the onset. For Example:

- The Murabaha financing product may be assessed within the company in terms of the authenticity of risk transfer and transparency of prices.
- A Musharaka alliance would be challenged with regard to equity in the sharing of profits and sustainability of an exit strategy.

The balance between Sharia integrity and financial resilience could be evaluated on a hybrid Sukuk structure. Incorporating the framework within the organization would necessitate special compliance officers or assessment departments, but nevertheless would make it pay in the long-term in terms of reputational risk reduction, enhanced investor confidence, and decreased cost of financing. In the long run, the issuers that apply the framework can have a competitive edge like companies that embraced the ESG reporting early in their history prior to it becoming a common practice. Human Capital Development is another important pillar of institutionalization. Whatever well designed they are, frameworks cannot work without professionals who have been trained in framework use. As it is, the skills gap in Islamic finance is brutal: Sharia academicians have been taught extensively in jurisprudential reasoning, but with no or little in financial metrics, and financial analysts are taught ratios and modelling, but are less acquainted with the Sharia principles. These gaps are filled by the framework, which however there must be a new breed of practitioners ready to work in these two fields.

Capacity building should be done at various levels to do this:

- Professional Certifications: Industry organizations might come up with

framework application specific certifications out there, like the CFA in finance, or CPA in accounting.

- University Curricula: The framework needs to be incorporated in the courses of Islamic finance where students are taught to analyze real products through structured tools.
- Continuous Professional Development (CPD): The existing Sharia board members, compliance officers and auditors may be trained on this continuous development that will ensure uniform use throughout the industry.

Through institutionalizing the framework within the context of professional education and certification, the framework becomes an aspect of the identity of practitioners, something that will keep being used decades after that.

The process of institutionalization should not take place overnight. Rather than that, it must experience a gradual implementation that is backed up by pilot projects. The best candidates of initial pilots include sovereign issues, quasi-sovereign issues and large corporate issue. There is visibility and influence attached to these projects, and the implementation of the framework by them would send strong signals to the market. The piloting can begin with a narrow scope i.e., with applying only the Sharia compliance dimension and proceed in innovating the economic efficiency and composite scoring. This would enable the regulators, issuers and the investors to get acquainted to the structure at a gradual pace and create less opposition and verify the viability. The incremental approach makes implementation agreeable, scaling and flexible which are consistent with the development of the IFRS, Basel standards and ESG models.

Instrumentalization is not an objective of achievement but a form of continuous progress. After the framework is put into operation, the application data needs to be gathered, examined and leveraged to make the criteria of the framework more intricate. Feedback loops should be set up by independent monitoring agencies such as regulators, academic centers or international associations. Such organs would issue reports on framework applications yearly, and trends, prevalent weaknesses, and risks. The process would make the framework dynamic and credible and respond to the emerging financial engineering innovations like digital Sukuk, Islamic fintech platforms, or cross-border hybrid structures. Similar to IFRS and Basel standards that

have been modified in numerous versions, the framework should be flexible and should be able to react to the market reality and academics criticism. The integrated structure of the Islamic Financial Engineering products should be institutionalized by taking action on five interdependent fronts; regulatory adoption, organizational embedding, professional training, pilot implementation, and continuous refinement. Such a multi-dimensional approach is the only way that the framework can shift a position of an academic proposal to an international industry standard. Monitoring this structure by making it an included institutionalization will bring Islamic finance the transparency, comparability and credibility that it so far lacks enabling it to become a mature, competitive, and internationally viable financial system.

9.7. Improving Standardization and Global Convergence

Jurisdictional fragmentation and methodological divergence are today popular features of the Islamic finance industry. The GCC, Southeast Asian, African, and European markets all have varying regulatory frameworks, Sharia interpretations and disclosure practices. Although this diversity depicts the richness of the Islamic law, it also presents difficulties to international investing, raises the cost of transacting, and demoralizes investors. The combined model that has been designed in this dissertation provides a channel to the standardization and international convergence without obliterating proper fiqhi diversity. Having delivered an organized, transparent and measurable methodology, it sets a common language of evaluation of the products of Islamic Financial Engineering, in different jurisdictions.

The initial move in convergence is development of a global evaluation template. This template would not infringe the national regulations but it would act as a common reference point that will go across jurisdictions. The development could be done in, through the cooperation of international bodies like AAOIFI, IFSB and the Islamic Development Bank (IsDB) with the input of the regulators, issuers and Sharia boards all over the world. The two pillars of evaluation would be constituent of the template that includes Sharia compliance and economic efficiency and the quantifiable dimensions and criteria. The thresholds might be adapted to suit the jurisdictional traditions of a particular jurisdiction, but the general framework would be the same,

making them comparable. Such a strategy resembles the effectiveness of IFRS in accounting that offers a global language but a locally specified interpretation.

Standardization does not only need common methodology but also data infrastructure. A local or network environment of framework assessments would be an international knowledge base. Every issuance of products, be it Sukuk, Murabaha, or both hybrid structures, would make the contribution of their evaluation findings.

- The repository would contain scores of compliance, efficiency indicators, suspicious element evaluation.
- In the long run, the data set might be used to create the indices and reference points, as well as the performance ranking.
- This would result in the increased transparency, make cross-market comparisons possible, and provide a research base to scholars, regulators and investors.

However, today, products listed in one jurisdiction may need re-consideration and re-listing in another jurisdiction, which adds cost and inefficiency. The solution is present in the framework: in case two jurisdictions embrace it, they might enter the mutual recognition agreements. A financial product that would be appraised using the same kind of framework in one market would simply be automatically accepted in another.

The integrated framework cannot exist in the vacuum. In order to gain legitimacy on international markets, it should correspond with the mainstream financial standards:

- Ability to create consistency in the recognition and disclosure of assets through IFRS.
- With Basel accords, to combine risk-based indicators of efficiency.
- To connect Sharia compliance to a wider set of objectives in achieving ethics and sustainability.

Nationalizing by identifying with international standards, the framework will not position Islamic financial products as independent options, but as part of the global financial system.

Islamic finance needs to become standardized and converged to be able to remain competitive in the long term. Under the integrated framework, there is a viable avenue

as it develops global template, endorsing cross-border recognition, evaluations, complying with global standards and moderate standardization and fiqh diversity. By making it institutional, the framework would elevate Islamic Financial Engineering products beyond a disparate assortment of tools into a globally reputable asset, which is able to draw in investment and maintain growth in a wide range of markets.

9.8. Future Directions for Research and Practice

The comprehensive framework created in this dissertation is a base towards changing the appraisal of the products of Islamic Financial Engineering to a transparent, commodities-standards-based and scientifically substantiated procedure. Nevertheless, there is no paradigm which could be regarded as final and complete. Financial markets and Sharia scholarship are dynamic and they change along with new instruments, technologies, regulatory reforms and global economic conditions. That is why, the future of this framework lies in its dynamic character, possibilities of its enlargement and stimulation of new researches and practical innovations. The extension of the application would help in the fact that the framework does not stay limited to issues in one set of products, but becomes a global reference point when it comes to Islamic Financial Engineering.

The future of Islamic finance cannot be dug out of the rest of the academic and professional domain. Future studies ought to consider combining the framework with other related fields, such as:

- Law and Governance: Investigating the role of the purpose of structure-based assessments in influencing enforceability of either the contract, dispute resolution, as well as harmonization of legal rules across jurisdictions.
- Economics and Development Research: How to determine the contribution of products perceived to be both Sharia-compliant and economically efficient to financial inclusion and social-economic growth.
- Data Science and Technology: Partnering with computer scientists to optimise AI and blockchain technology to monitor compliance in real time, predictive analytics, and secure systems of disclosure.
- Ethics and Sustainability Research: The correlation of the outputs of the

framework with the ESG metrics to establish Islamic products as the leaders of the ethical and sustainable finance in the world.

The framework facilitates scientific legitimacy through its ability to open avenues to interdisciplinary cooperation and extends its practical validity. The framework should be incorporated in regulatory practices and in practices in the marketplace since its success measures in the long term. Practical mechanisms that can be investigated in the future research include:

- Regulatory Pilots: Collaboration with central banks, securities commissions, or Sharia governance councils in the implementation of the framework in an approval process.
- Market Incentives: Researching the issue of whether investors will be willing to pay a premium on products where compliance-efficiency scores are transparent, as with capital allocation to ESG-certified products.

The framework creates a precedence not just as a practical tool but also as a driver of advancing the Islamic finance research through inspiring future dissertations, journal articles, and empirical studies. The above identified directions of the future confirm the above assertions that the integrated framework is not a fixed destination but rather a moving point whereby ongoing innovation in Islamic finance can be determined. Its expansion and sustainability will be guaranteed by extending its application to various products, promoting interdisciplinary collaboration, furthering the regulatory adoption, and promoting the growth of academic research in the discipline. By doing so, the framework becomes not only an evaluation tool: it transforms into a dynamic system of knowledge and practice, which is constantly perfected by the scholars, regulators, issuing authorities, and investors. Its future is in its ability to be flexible and rigorous so that the products of the Islamic Financial Engineering can be credible, efficient, and centrally based on Sharia principles and at the same time compliant with the international standards of financial governance.

9.9. Limitations of the Study

No matter how rigorous the research project can be, it is limited by some limitations which should be considered so as to put the findings into perspective. This dissertation is not an exception. Although the combined framework of the assessment of Islamic Financial Engineering products has a profound theoretical and practical contribution level, it is limited with view to scope, methodology and applicability to some extent. The awareness of these limitations strengthens the academic validity of the research and offers recommendations to improvement in the future.

Scope-Related Limitations. The framework was to be an all-purpose one in that it can be applied in all the Islamic Financial Engineering products, although detailed testing was done using a case study of Ijara Sukuk. Although this offered useful information, it implies that additional models include Murabaha, Musharaka, and fintech-based emerging products did not undergo the same level of apply evaluation in this dissertation. The future study should thus conduct more empirical tests so that the framework may be found to operate in different lines of products.

Methodological Limitations. This framework implies the use of quantitative instruments: checklists, the use of Likert scale, threshold mechanisms. Although these tools improve transparency and comparability, they are always subject to researcher bias in the form of scoring criteria, weighting, and thresholds. Though the rationale of using the academic reasoning and similarities with international norms is justified, a different choice of methods would produce a slightly different result. This is a manifestation of the larger issue of putting the qualitative Sharia principles into quantifiable standards.

Institutional Limits and Practical. The other weakness is the practical context of the Islamic finance. The introduction of the framework involves the collaboration of the regulators, issuers, Sharia boards, and investors. Such stakeholders might however be opposed to change because they feel that it is complex, costly, or they want to reveal vulnerabilities in product structures. Such institutional resistance could not be completely simulated or even experimented upon in the dissertation, as in its nature, it was academic. Thus, the actual rate of adoption can be less or lumpier than how the framework is supposed to work.

Resource Limitations and Data. Lastly, the study was limited by the availability of data. Islamic financial markets are generally not transparent, whereby there is no avenue to access finer details in the form of contracts, prospectuses and precise track records of performance. This limited the range of conducting the large-scale empirical testing on numerous products and jurisdictions. Although the framework was meant to eliminate the problem of opacity, it would be more validated in case future researchers were able to access wider datasets and implement the framework on various real-life scenarios.

9.10. Closing Remarks

It is with this aim that the dissertation was developed with the hope of providing a solution to one of the most pressing issues in the Islamic finance: lack of structured, transparent and holistic approach towards assessing the Islamic Financial Engineering products. The current practices, that can be observed to be usually piece-meal with the Sharia boards on one hand and the financial analysts on the other, have had a result that cannot be termed as fully convincing or comparable to the rest of the world. It was this gap that this research aimed to fill by creating and testing an integrated dual-pillar framework to make contributions in both theoretical and practical directions towards the field. The dissertation process has shown that Sharia compliance and economic efficiency can be combined in one evaluation process. The contributions took place in four stages that were interrelated:

The evaluation process must be understood as a single, integrated procedure in which Sharia compliance and economic efficiency are not treated as separate exercises but as interdependent components of one assessment logic. To achieve this integration, the framework is developed and articulated across three complementary levels, each addressing a distinct function within the overall evaluation process:

- Conceptual: Organizing the evaluation into viable dimensions, aspects and criteria, developing clarity where none existed before.
- Procedural: operationally framework Introducing tools that operationalize the framework such as checklists, scoring scales, and thresholds.
- Applied: Experimenting with the framework on an actual financial product

with demonstrations of both feasibility and diagnostic power.

- Combined, these contributions in totality form the framework not only as an academic model, but as a practical tool that is to be institutionalized.

The relevance of the framework in a broad way has also been highlighted in the dissertation. Regulators obtain quantifiable standards on how to improve supervision; issuers obtain a blueprint on how to structure credible and transparent products; investors obtain a decision-making toolkit based on which to make evidence-based decisions; and scholars obtain a methodology that can be used to anchor empirical research. To put it briefly, the framework is addressing all the key constituencies of Islamic finance hence making it a common point of reference as the growth proceeds. The dissertation of this topic does not imply the end of the topic. On the contrary, it is the beginning of new paths of research and practice. The framework has to be implemented during a variety of products to be tested in various jurisdictions and rounded out with feedback. Most importantly, the structure should be dynamic; flexible to emerging instruments and accommodating to the dynamics of Sharia discourse and must survive the pressures of financial globalization.

Fundamentally, the value of this dissertation is that it shows that the scientifically-rigid evaluation of the Islamic Financial Engineering products is possible without hurting the authenticity of Sharia. The integration of juristic prudence and financial discipline by the structure offers the avenue through which the higher goals of Islamic finance can be achieved through success in the international markets. The production that is offered here is thus not the conclusion but the preparation of a new agenda in the future. Assuming this and more advanced and institutionalized, the integrated framework can turn Islamic financial evaluation into a global standard of credibility, transparency, and efficiency as opposed to a scattered exercise.

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CURRICULUM VITAE

IBRAHIM ZUHAIR SAWALHA

Email:

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Professional Summary

Finance- and economics-oriented researcher and senior industry professional with over twenty-four years of experience spanning financial evaluation, economic analysis, financial engineering concepts, strategic management, and organizational risk assessment. Currently enrolled in the PhD program at Istanbul Sabahattin Zaim University, focusing on the development of integrated assessment frameworks that combine economic evaluation methods, financial engineering principles, and compliance-based analytical tools.

Possesses extensive professional expertise as a Regional Director overseeing complex engineering and construction programs across Saudi Arabia. Experienced in strategic planning, in **project management, construction operations, and organizational leadership** across complex engineering and infrastructure projects in Saudi Arabia.

Academic Qualifications

PhD Program

Islamic Economics and Finance

Istanbul Sabahattin Zaim University (IZU), Turkey

Focus Areas: Financial engineering, economic evaluation frameworks, compliance assessment models, mixed-methods research design, strategic and risk-based analysis of financial products.

Master of Business Administration (MBA)

University of Leicester, United Kingdom — 2017

Concentration: Strategic Management, Organizational Leadership, Project-Based Decision Making, Financial Evaluation.

Bachelor of Science (BSc)

Jordan University of Science and Technology (JUST) — 2002

Field: Engineering (Construction / Project Engineering)

Professional Experience

Regional Director / Projects Director

Zamil Projects (ZODCON), Saudi Arabia

2011 – Present

- Overseeing large-scale engineering and construction projects for major clients, including public entities and energy sector stakeholders.
- Leading multi-disciplinary teams across planning, engineering, procurement, finance, and site operations.
- Managing strategic project portfolios, feasibility assessments, financial planning, economic evaluations, and project-level risk frameworks.
- Implementing corporate governance systems, internal process controls, and decision-making structures aligned with organizational strategy.
- Developing integrated risk monitoring systems for project delays, financial exposures, supply-chain constraints, and contractual deviations.

- Engaged in business development, market analysis, tendering strategies, and long-term regional expansion planning.

Research Interests

- Financial Engineering
- Economic Evaluation (Micro & Macro)
- Investment & Financial Performance Analysis
- Strategic Management & Decision Models
- Organizational Risk Behavior and Early Warning Patterns
- Compliance and Regulatory Assessment
- Mixed-Methods Research Methodology
- Project, Operational, and Enterprise Risk Analysis

Publications & Academic Work

Approved

- A Mixed-Methods Methodology for Constructing Integrated Evaluation Frameworks in Finance and Economics — Waiting to Publish.

Journal of Scientific Development for Studies and Research (JSD)

Under Review / In Progress

- Organizational Risk Patterns and Early Warning Indicators — Forthcoming article (unpublished).

Technical & Professional Skills

- Financial and Economic Analysis
- Quantitative Modeling & Evaluation Tools
- Qualitative Research and Framework Development
- Financial Engineering Concepts

- Strategic Planning & Organizational Structuring
- Risk Identification, Assessment & Mitigation
- Project and Construction Management
- Policy Development and Compliance Systems
- Scenario Analysis & Decision Support Techniques

Languages

- **Arabic:** Native
- **English:** Excellent (Professional Writing & Academic Research)

Professional Strengths

- Strong analytical capability in both quantitative and qualitative contexts.
- Multi-sector experience connecting industry practice with academic research.
- Skilled in developing structured evaluation systems and risk-based methodologies.
- Able to work across diverse fields including finance, economics, engineering, and governance.