Vol. 15
No. 1
MARCH
2026

ISSN: 2289-2109
e-ISSN: 2289-2117

JOURNAL OF ISLAMIC FINANCE

IIUM INSTITUTE OF ISLAMIC BANKING AND FINANCE
IIUM PRESS, INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

https://journals.iium.edu.my/iiibf-journal/index.php/jif

IIUM INSTITUTE OF ISLAMIC BANKING AND FINANCE (IIiBF)

JOURNAL OF ISLAMIC FINANCE

AIM AND SCOPE OF JOURNAL OF ISLAMIC FINANCE

Journal of Islamic Finance (JIF), published biannually (June and December), is a double blind peer- reviewed open-access journal of the IIUM Institute of Islamic Banking and Finance (IIiBF), International Islamic University Malaysia (IIUM). The journal is designed to provide a platform for researchers, academicians and practitioners who are interested in new knowledge and discussing ideas, issues and challenges in the fields of Islamic banking and finance, social finance, accounting, business and economics. The scope of the journal includes, but is not limited to, Islamic banking and finance, social finance, Islamic capital market, Islamic wealth management, issues on Shariah implementation and practices of Islamic banking and finance, zakat, waqf, takaful and comparative analysis of Islamic and conventional financial institutions.

REFEREES' NETWORK

All papers submitted to the Journal of Islamic Finance will be subjected to a rigorous reviewing process through a worldwide network of specialized and competent referees. Each accepted paper should have at least one positive referee's assessment.

SUBMISSION OF MANUSCRIPT

A manuscript should be submitted online to the Journal of Islamic Finance at https://journals.iium.edu.my/iiibf-journal/index.php/jif/login. Further correspondence on the status of the paper can be done through the journal website.

Published by:

IIUM Press
International Islamic University Malaysia
Jalan Gombak, 53100, Kuala Lumpur, Malaysia
Phone: (+603) 6421 4190

Journal of Islamic Finance
ISSN: 2289-2109
E-ISSN: 2289-2117

JOURNAL OF ISLAMIC FINANCE

Volume 15 Issue 1, 2026

Table of Content

JOURNAL OF ISLAMIC FINANCE

Volume 15 Issue 1, 2026

Table of Content

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 1-21
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Bibliometric Analysis of Islamic Social Enterprise: Mapping the Research Landscape

Md Golam Martoza[a*], Romzie Rosman[b]

[a,b] *IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia, Kuala Lumpur, Malaysia*

**Corresponding author: golamartozauia@gmail.com*

Abstract
Islamic social enterprise has a social and environmental role in empowering disadvantaged people through operating for-profit and not-for-profit business models or social mission styles. However, the conceptual framework of Islamic social enterprise would be distinguished from the Islamic philanthropic sector since they are closely related but distinct concepts. To do this, the study aims to review the Islamic social enterprise and explore publication trends from 2014 to 2025. This study uses a bibliometric analysis via Crossref tools using Harzing's publish or perish (PoP) and VOSviewer software. The study reveals significant research trends in the Islamic social enterprise field over the past 12 years. Based on bibliometric analysis, it also enables the author to find out the relevance of co-authorship and citation analysis, i.e., the most influential authors, journals, works, author keywords, and Index in the field. Bibliometric analysis is a more comprehensive approach that broadly contributes to Islamic social enterprise research. The research publications are uploaded into PoP software to produce the comma-separated value (CSV) format, which is more reliable and responsible data. This study relies on research in the existing Islamic social enterprise for a future research agenda. As far as the best of the author's knowledge, this study is the first attempt to provide a bibliometric analysis of Islamic social enterprise research.

Keywords: Islamic Social Enterprise, Bibliometric Analysis, Publish or Perish, Vosviewer

1. Introduction

Islam always encourages Muslims to be entrepreneurs (Andleeb, 2018), and it has been proven by the sayings of the Prophet Muhammad (pbuh) that "an honest and sincere businessman will be placed with the prophets, siddiqin and al-syuhada", (Jami At-Tirmidhi: 1209). Moreover, Islam teaches its followers to take care of the earth, encourages a healthy society, and enhances participation in the development of society, (Faizal et al., 2013). Currently, Muslim entrepreneurs do not encourage business knowledge in terms of their responsibility in the vicegerency concept. They are unaware of Islamic social enterprise literacy and Islamic social responsibility. Hoque et al. (2014) state that many Muslims still pay no or little attention to the Islamic guidelines while developing and managing business enterprises. Although entrepreneurial success is measured not only by personal financial gains but also by doing business in an Islamic way, it becomes one of the greatest acts of 'ibadah (worship), (Raquib & Khan, 2019), which can provide the entrepreneur with rewards in the afterlife. The core motivating factor for Muslim entrepreneurs should be combining religious beliefs, such as social responsibility, with business ideas, (Ramadani et al., 2016). Also, Prophet Muhammad (pbuh) was committed to ensuring the importance of knowledge and encouraged obtaining knowledge and awareness in society. He (pbuh) taught his companions to be successful entrepreneurs and played a significant entrepreneurial role in communities.

In this context, Islamic social enterprise is an Islamic organizational structure model. Under this model, Islamic social enterprise provides a training center that offers Islamic principles and values, and various kinds of training and programs on entrepreneurial skill development, and vocational education for Islamic Social

Article history
Received: 9 December 2025
Accepted: 28 February 2026

Entrepreneurs. Moreover, education and awareness are top priorities in the Islamic social enterprise organization, which encourages participation in the development of society and encourages taking care of a healthy society. Prophet Muhammad (pbuh) encouraged companions to care for their parents, elderly people, and loved to play with children, and was kind to all living souls and to protect the environment, (Faizal et al., 2013). Narrated by Sahl ibn al-Hanzaliyyah, The Prophet SAW came upon an emaciated camel and said:

> "Fear Allah regarding these dumb animals. Ride them when they are in good condition and feed them when they are in good condition."[1]

This study aims to explore the development of research on Islamic social enterprises and to apply a bibliometric method for analyzing scholarly literature published in various international journals. To fulfill this aim, it examines key indicators that shed light on the production and influence of research, such as authors, citations, and journals. Additionally, the study maps and assesses co-authorship networks and the citations of significant terms. The identified research trends can provide valuable guidance for scholars and practitioners in Islamic social enterprise, enabling them to recognize emerging research areas and methodological advancements. Metadata, including research domains, will be processed using VOSviewer and Harzing's Publish or Perish software to address the following research questions:

1. What are the major trends of Islamic Social Enterprise research from 2014 to 2025?
2. What are the authorship and co-authorship performance in Islamic Social Enterprise research from 2014 to 2025?
3. What are the most cited and impactful publications in Islamic Social Enterprise research from 2014 to 2025?
4. Who are the major journals on Islamic Social Enterprise research from 2014 to 2025?
5. What are the future research agendas in the Islamic Social Enterprise field?

2. Literature Review

Human actions and activities are evaluated according to the Maqasid al-Shariah. It is based on the holy Qur'an and al-Sunnah, (Mohammad & Shahwan, 2013). Islamic Social Enterprises (ISEs) can be distinguished from traditional Social Enterprises based on their Maqasid al-Shariah. Aziz and Mohamad (2016) defined ISE as an interest-free, profit-loss-sharing (PLS)-based business that will maintain the principles of brotherhood (Aziz & Mohamad, 2016) and the Islamic financial accountability model, (Kamaruddin & Auzair, 2019). On top of that, ISEs are embedded with Islamic practices in their daily operations and activities, especially in terms of governance and ethics, (Kamaruddin and Auzair, 2018, 2020a). Normally, Islamic-based organizations such as ISEs should have Islamic values such as worship or obedience to Allah and operate based on Islamic teachings or shariah principles, (Muhamed et al., 2018). In a nutshell, ISE may be viewed as an entity driven by both social and business objectives that maintains its practices according to Islamic principles and values, (Kamaruddin and Auzair, 2018).

Later, Mohiuddin (2017) studied ISEs in Bangladesh and claimed that the ISE concept overlaps with traditional non-profit organizations in the sense that both carry out social missions. In addition, this study believes that ISEs must conform to Islamic ethical standards and moral guidelines known as shariah principles and values. The writer explained that Islamic social enterprise focuses on activities that create benefits by enhancing capacity development, blocking harm, and improving the social well-being of society. It can be distinguished from the philanthropic sector as well because it implies some form of inherent revenue generation to achieve the sustainability of outcomes, (Mohiuddin, 2017). Last but not least, Muhamed et al. (2018) focused on defining ISE as an Islamic-based entity that gained funding (in the forms of monetary and non-monetary assets) from Islamic charitable sources (through waqf, sadaqah, hibah, and qard hasan) and channeled them into business activities to contribute to the needy while sustaining in the long-term, (Muhamed et al., 2018).

A study by Kamaruddin and Auzair (2020b) provides an overview of Islamic social enterprise (ISE), which refers to a combination of both social and economic objectives that are embedded with Islamic principles and values in an organization is still considered new and lacks a general definition, (Kamaruddin and Auzair,

[1] Imam Hafiz Abu Dawud Sulaiman bin Ash'ath, Sunan Abu Dawud. Hafiz Abu Tahir Zubair 'Ali Za'i, (Riyadh 11416 K.S.A, Maktaba Dar-us-Salam, 2008), Book 14: #2542.

2020b). Regardless of this fact, one of the crucial issues that needs to be given attention by every organization, including ISEs, is accountability, (Kamaruddin & Auzair, 2019). For instance, as part of the social sector, ISEs face tough challenges in obtaining public trust, (Ebrahim et al., 2014). This is due to a conflict between social and economic objectives that leads to different interests amongst ISE stakeholders. By having both social and economic objectives, SE is different from traditional non-profit organizations that are solely carrying social objectives. Compared to SEs, debates of ISEs are insufficient to reach a shared understanding of ISEs. Hence, the scope and definition of this specific entity have yet to be concluded, (Kamaruddin & Auzair, 2018).

However, Hati and Idris (2014) started a discussion on ISEs by defining it as a non-profit organization that collects Islamic alms such as zakat, waqf, and sadaqah to fulfil SE criteria, including adopting entrepreneurial approaches (Hati and Idris, 2014), taking direct action to earn income, achieving its social mission, and creating a larger multiplier effect, but with limited profit distribution. Further, Muhamed et al. (2018) discussed the ISE concept from the governance perspective, (Muhamed et al., 2018). Table 2.8 shows a detailed definition of Islamic Social Enterprise.

3. Research Methods

Bibliometrics is a quantitative method used to measure various journals from 2014 to 2025 with research themed on Islamic social enterprise. Bibliometrics is mainly used to understand scientific trends, delineate fields, and identify thematic structures. Data collection was carried out through searching for articles indexed by the Google Scholar database, and the search was carried out by typing the keyword "Islamic social enterprise" OR "Islamic social enterprises" OR "Social enterprise and waqf" OR “Islamic Social Finance Ecosystem” OR “integrated Islamic social”, then selecting papers relevant to the research theme of Islamic social enterprise, for journal criteria filtered and processed in software indexed by Google Scholar, only DOI-equipped journals. The data in the form of topics used in Islamic social finance-themed papers were analyzed using Microsoft Excel 2010. The publication developments on the Islamic social finance theme were analyzed using VOSViewer software. The dataset was analyzed through the following software applications: VOSviewer and Harzing’s Publish or Perish (Harzing’s PoP), all of which are tools for conducting bibliometric analysis. This study employed Publish or Perish (PoP) software instead of the Scopus database because PoP retrieves data from Google Scholar, which offers broader coverage of scholarly materials, including indexed and non-indexed journals, conference proceedings, theses, and books. This wider scope ensures a more comprehensive representation of the research field, particularly for emerging or regionally published studies that may not be indexed in Scopus. This study consists of 21 indexed papers and 27 general journal articles, for a total of 48 articles (see Appendix A).

3.1 PoP Software

Harzing’s Publish or Perish, as a software program, was launched by Professor Anne Wil Harzing in 2006 and copyrighted by the Melbourne-based Tarma Research Software Pty Ltd. For this evaluation, the software has been regularly enhanced with new indicators and functions to help academics present their research output and provide evidence of their research impact. (Harzing, 2010, 2016). PoP allows the user to edit the result lists presented in a compact, efficient grid format. It facilitates the identification and removal of duplicate entries by offering dynamic sorting of the set by eight metadata elements, un-checking items, and instant recalculation of the indicators, (Jacsó, 2009). The software provides a wide array of citation metrics, including total citations, h-index, g-index, and others like the annual citation rate. This variety allows researchers to get a nuanced view of their impact. Lastly, users can analyze citation trends over time and identify highly cited papers, (Levidze, 2024).

3.2 VOSviewer Software

VOSviewer is a software tool for constructing and visualizing bibliometric networks. It is renowned for its advanced visualization capabilities, allowing users to create detailed maps that are easy to interpret. It can also process large datasets, making it suitable for extensive bibliometric studies. Lastly, its availability as a free tool makes it accessible to a wide range of users. VOSviewer has a more user-friendly interface and focuses on straightforward visualization of bibliometric networks, making it accessible to a broader audience, though it may lack some of the advanced analytical features (e.g., burst detection, temporal analysis, cluster analysis), (Levidze, 2024).

3.3 PRISMA framework

The current study followed the PRISMA framework for reviewing existing literature. As mentioned in the PRISMA guidelines, the scoping procedure was used to extract the most relevant articles on Islamic social enterprise studies. The PRISMA model of the current study was adapted from Moher et al. (2009), as illustrated in Fig. 2, which consisted of four steps named identification, screening, eligibility, and inclusion. The procedure started with Identification and screening. The identification process of the articles has been conducted through the key search items ("Islamic social enterprise" OR "Islamic social enterprises" OR "Social enterprise and waqf" OR “Islamic Social Finance Ecosystem” OR “integrated Islamic social”) and entrepreneurial intention, which have been used in Google Scholar through Harzing’s Publish or Perish software. Keywords are highlighted at the time of going through the abstracts. The results can be narrowed down by the heading of articles, the name of authors, the year of publication, the category of articles, the location, and a new search can be started within the results. These search strategies identified 733 records in total. Only those articles were considered for the current review study that were published between 2014 and 2025, and the final identification of the articles was performed in October 2025.

We applied specific inclusion and exclusion criteria, limiting our selection to English-language research articles published between 2014 and 2025. During the screening process, duplicate and irrelevant publications were removed, and we initially reviewed titles and abstracts to assess relevance. Full-text articles were then thoroughly evaluated for eligibility, excluding those without full-text access. After completing all stages of the screening process, a total of 48 papers were selected for further analysis (see Appendix A). The data processing involved conducting a bibliometric analysis of these 48 articles to examine key publication characteristics, track annual research trends, identify the most influential studies, and analyze keyword co-occurrence. This also facilitated the identification and development of research themes over time. At this point, the selected articles were categorized to address the research questions, summarize findings, organize the results in tables, and perform detailed analysis (see Fig. 1). In addition, bibliographic mapping was used to reveal emerging patterns, enhancing the precision and depth with which the research questions were addressed.

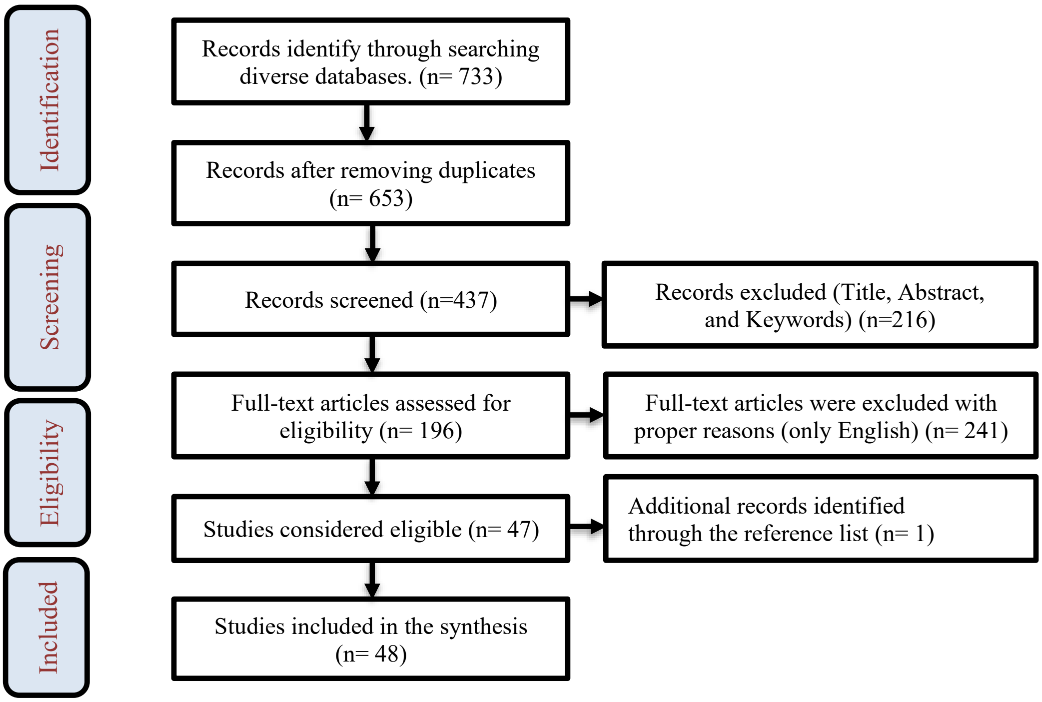


Figure 1: Article selection process. Source: Adapted from Moher et al. (2009)

4. Findings and discussion

The bibliometric analysis was conducted using Microsoft Excel, Harzing's Publish or Perish, and VOSviewer to visualize and map the research network. This section comprises two main subsections: (1) publication trends, including citations, authors, and journals in Islamic Social Enterprise research, and (2) the future research agenda derived from the existing literature on Islamic Social Enterprise.

4.1 General information

Table 1 outlines the key characteristics of the input data used for the analysis. The dataset comprises 48 research articles (see Appendix A) published across 46 different academic sources, indicating that the topic has attracted attention from a wide range of journals rather than being concentrated within a single publication outlet. This dispersion suggests that Islamic social enterprise is an emerging and interdisciplinary field. Among 99 contributing authors, only 11 produced single-authored papers, highlighting a clear trend toward increased collaboration in scholarly work on Islamic social enterprise. This pattern reflects a strong and growing culture of academic collaboration within the field. The dominance of multi-authored works suggests that research on Islamic social enterprise often requires diverse expertise. Furthermore, the wide distribution of articles across 46 sources indicates that the field has not yet consolidated around a core set of specialized journals. Instead, it remains dispersed across platforms addressing Islamic social enterprise research. This fragmentation may signal both the field's novelty and its multidisciplinary appeal.

Table 1: Research Output Metrics on Islamic Social Enterprise Using Harzing's Publish or Perish (PoP)

Harzing's POP Metrics	Result		Harzing's POP Metrics	Result
Publication years	2014-2025		Author/paper	2.20
Papers	48		h-index	14
Citations	785		g-index	24
Cites/year	75.45		hI, norm	10
Cites/paper	13.53		hI, annual	1.02
Cites/author	304.55		hA-index	7
Paper/author	22.60		Papers with ACC>=1,2,5,10,20	33,24,15,7,2

Source: Author's design

4.2 Annual Growth of Islamic Social Enterprise Literature

The number of studies on Islamic social enterprise has increased significantly over the past nine years, with a particularly noticeable surge beginning in 2020 (see Figure 2). This upward trajectory reflects growing academic interest in the field, particularly among reputable international journals indexed in various scholarly databases. The acceleration after 2020 may be linked to several contextual factors, including the growing emphasis on Islamic social enterprise studies. The COVID-19 pandemic period (2020–2022) further intensified scholarly interest in alternative economic models capable of addressing systemic vulnerabilities, potentially contributing to the surge in publications during this timeframe. The data for this study were collected from Google Scholar, covering the period from 2014 to 2025, as summarized in Figure 2. In total, 99 authors contributed to 48 published articles, reinforcing the collaborative nature of research in this field. The rising number of publications alongside broad authorship participation indicates not only growing interest but also expanding scholarly networks.

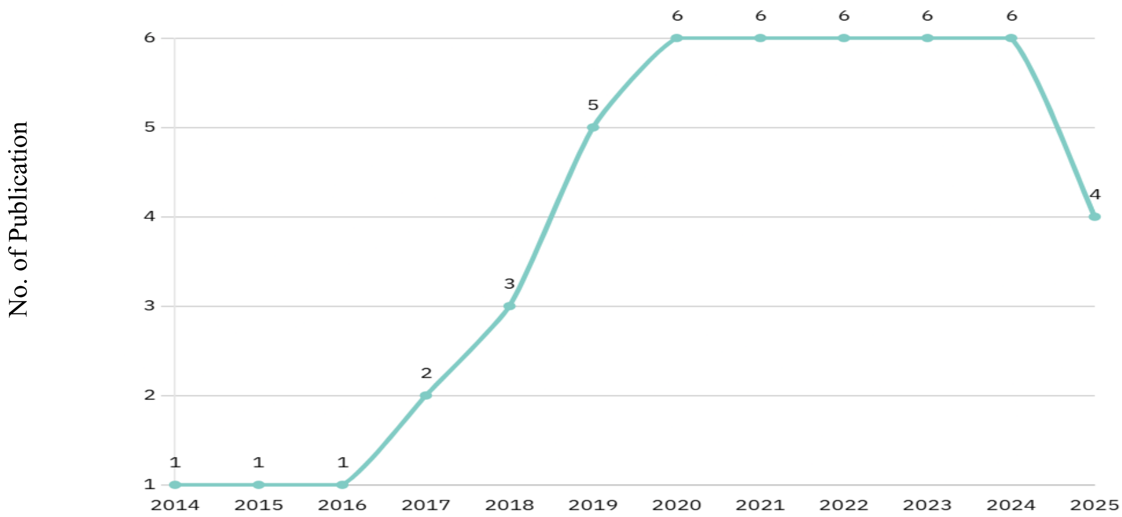


Figure 2: Annual Scientific Production

4.3 Author Performance

According to Table 2, several authors stand out in terms of productivity within the Islamic social enterprise literature. The most prolific contributor is Muhammad Iqmal Hisham Kamaruddin with 9 publications, indicating a sustained and focused engagement with the topic. He represents a significant share of the total 48 articles analyzed, positioning him as one of the key intellectual drivers in the development of this field. Ascarya has 4 publications, many of which focus on optimal cash waqf models for Baitul Maal wa Tamwil (BMT) institutions and the integration of Islamic social and commercial finance at the micro and community levels. His work highlights the close conceptual linkage between Islamic financial systems and Islamic social enterprise models, particularly in promoting sustainable community-based economic empowerment. Through his emphasis on institutional design, governance mechanisms, and integrated financing structures, his contributions reinforce both the theoretical foundation and practical implementation of Islamic economic principles within socially oriented ventures. Sri Rahayu Hijrah Hati ranks next with 3 publications. Her research contributions may reflect youth development and how organizational credibility influences customer support and engagement, further illustrating the multidisciplinary nature of Islamic social enterprise scholarship. The remaining authors listed in Table 2 have produced 2 publications each. Although individually contributing fewer papers, collectively they play an essential role in expanding thematic diversity and methodological approaches within the field. Their contributions demonstrate that Islamic social enterprise research is not dominated exclusively by a small elite group, but rather supported by a broader network of recurring scholars.

Table 2: Top ten most productive authors in ISE research

Authors	Articles	TC	Most Cited Article	Author's Research Scope
Muhammad Iqmal Hisham Kamaruddin	9	177	Kamaruddin & Auzair (2023); Kamaruddin et al. (2022); Kamaruddin et al. (2021); Kamaruddin & Auzair (2020a); Kamaruddin & Auzair (2020b); Kamaruddin & Auzair (2019a); Kamaruddin & Auzair (2019b); Kamaruddin et al. (2018); Kamaruddin & Auzair (2018)	The study examines how financial governance mediates the effects of financial management and Islamic work ethic on ISE accountability and introduces an Islamic accountability model in the Malaysian context.

Ascarya	4	46	Ascarya et al. (2023), Ascarya et al. (2022); Ascarya & Suharto (2021); Ascarya (2017).	The study examines optimal cash waqf models for BMTs and the integration of Islamic social and commercial finance at the micro and community levels.
Sri Rahayu Hijrah Hati	3	53	Hati (2023); Hati & Idris (2019); Hati (2015)	The study explores how ISEs promote youth development and how organizational credibility influences customer support and engagement.
Md Golam Martoza	2	1	Martoza et al. (2024); Martoza & Rosman (2024)	The study explores the strategies and limited innovation of Islamic social enterprises in Bangladesh and suggests ways to improve their sustainability and impact.
Nurul Aini Muhamed	2	13	Muhamed et al. (2019); Muhamed et al. (2018).	The study explores how ISEs advance maqasid shariah by offering affordable products and developing the Islamic third economic sector.
Saunah Zainon	2	1	Zainon et al. (2023); Zainon et al. (2021).	The study introduces a single-figure indicator for evaluating ISEs and guiding Muslim entrepreneurs in engaging with their management.
Rizqi Anfanni Fahmi	2	30	Fahmi & Zulhamdi (2023); Fahmi (2022)	The study explores how mosque business units in Indonesia generate income and support community welfare using congregant donations.
Siti Nur Aisyah	2	7	Aisyah & Muiz (2022); Aisyah et al. (2022)	The study explores how cash waqf and Mudaraba Waqf accounts promote financial inclusion in Indonesia.

Note: AF= Article Fractionalized; TC= Total Citation
Source: Author's illustration

4.3.1 Co-Authorship
The bibliometric co-authorship analysis was conducted using VOSviewer to visualize patterns of collaboration among scholars in Islamic Social Enterprise (ISE) research. This tool enables the mapping of author networks based on co-publication relationships, where nodes represent authors and links indicate collaborative ties. In the visualization, larger node sizes and brighter colors signify higher publication output and stronger collaborative influence within the network.

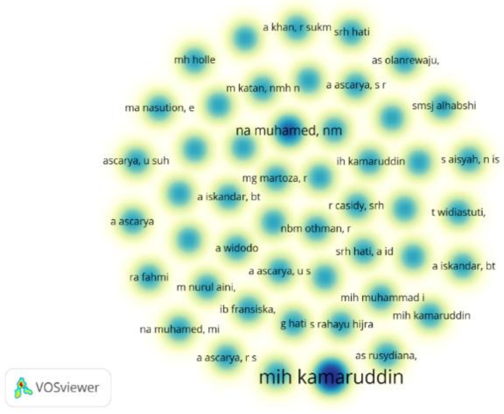


Figure 3: Co-authorship map by selected authors

As illustrated in Figure 3, Muhammad Iqmal Hisham Kamaruddin occupies the most prominent position in the network. His central placement and larger node size reflect not only his high publication count but also his active engagement in collaborative research. A central position in a co-authorship map typically indicates strong connectivity with other scholars, suggesting intellectual leadership and an important role in shaping research directions within the field.

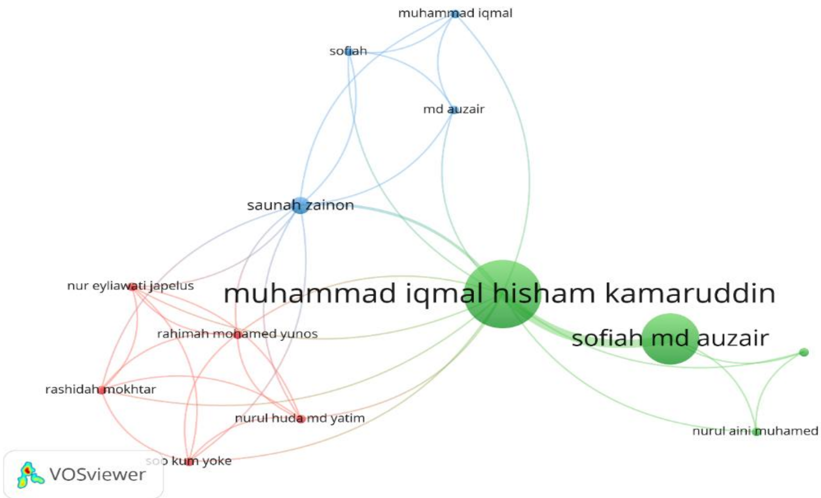


Figure 4: Co-authorship Authors map on Islamic Social Enterprise from VosViewer for 48 papers.

According to Figure 4, the co-authorship analysis of Islamic Social Enterprise (ISE) research reveals three distinct yet interconnected clusters of collaboration, indicating structured patterns of scholarly interaction within the field.

Cluster 1 consists of Nur Eylawati Japelus, Nurul Huda Md Yatim, Rahimah Mohamed Yunos, Rashidah Mokhtar, and Soo Kum Yoke. The proximity of nodes and strong linkages among these authors indicate a tightly connected collaboration network. This suggests sustained co-authorship relationships, possibly stemming from shared institutional affiliations or aligned research themes, such as governance, accountability, and social impact measurement in ISEs. The tight network structure indicates frequent co-authorship and intellectual synergy, reflecting a mature and possibly institutionally anchored research group.

Cluster 2 comprises Mohd Mohid Rahmat, Muhammad Iqmal Hisam, Nurul Aini Muhamed, and Sofiah Md Auzair. The strength of the connecting lines in this cluster indicates robust collaborative ties and recurring joint publications. This group appears to focus on structural and strategic aspects of Islamic social enterprise, potentially integrating financial sustainability with Shariah-compliant operational models. The strength of connections within this cluster indicates consistent joint publications and thematic alignment among its members.

Cluster 3 comprises Md Auzair, Muhammad Iqmal, Saunah Zainon, and Sofiah. Notably, there is overlap between Clusters 2 and 3, particularly through shared authors such as Muhammad Iqmal and Sofiah, who appear to function as bridging nodes. These authors play a pivotal role in facilitating knowledge exchange across clusters, enhancing intellectual integration within the broader ISE research community. The presence of overlapping memberships suggests interdisciplinary engagement and the convergence of related research themes. Such bridging actors are critical in co-authorship networks, as they reduce fragmentation and promote cross-pollination of ideas between distinct groups.

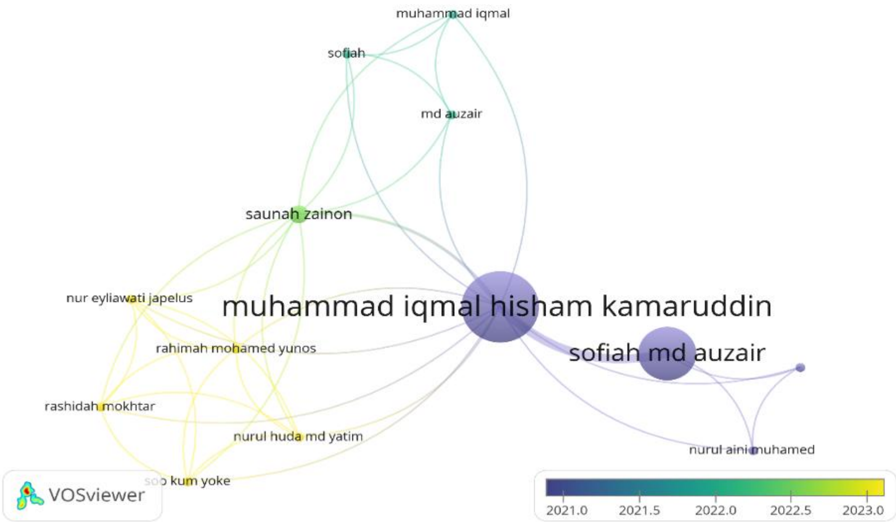


Figure 5: Co-authorship map on Islamic Social Enterprise by year 2021-2023

The co-authorship bibliometric analysis covering the period from 2021 to 2023, as illustrated in Figure 5, provides deeper insight into the temporal development and intensity of collaboration in Islamic Social Enterprises (ISEs) research. The visualization not only maps collaborative linkages among authors but also incorporates a color-coded overlay to indicate publication timelines, enabling an understanding of how research activity has evolved over the three years.

The predominance of yellow nodes representing authors who actively published between 2022 and 2023 signals a notable surge in recent scholarly output. This pattern suggests that ISE research has gained increasing academic attention during this period. The concentration of yellow nodes within key collaborative clusters indicates that established research groups have continued to produce work while potentially expanding their networks. It also reflects the growing relevance of ISEs in addressing socio-economic challenges, sustainable development goals, and ethical entrepreneurship within Islamic economic frameworks.

In contrast, the green nodes denoting authors who were more active between 2021 and 2022 highlight the foundational phase of collaboration within the observed timeframe. These earlier contributions likely laid the conceptual and empirical groundwork for subsequent studies. The transition from green-dominated activity in 2021–2022 to more yellow-coded publications in 2022–2023 demonstrates not only continuity but also momentum, implying that early collaborative efforts have matured into more sustained and productive research partnerships. Overall, the analysis suggests that several authors maintain consistent productivity across both periods, functioning as stabilizing figures within the network. These researchers appear to sustain long-term collaborative ties while adapting to emerging themes in ISE research, such as governance innovation, financial sustainability, impact measurement, digital transformation, and community empowerment models. Their ongoing activity indicates a dynamic research environment rather than isolated publication efforts.

4.4 Citation analysis

Table 3 presents the most frequently cited publications in Islamic Social Enterprise (ISE) research, focusing exclusively on articles that have received more than 20 citations. The findings reveal a clear association between citation performance and journal quality. Most of the highly cited articles were published in journals ranked within Q1, Q2, or Q3 quartiles, indicating that higher journal visibility and rigorous peer-review standards contribute significantly to citation impact. This pattern suggests that publishing in reputable, indexed journals enhances the dissemination and scholarly reach of ISE research. It also reflects the growing acceptance of ISE as a legitimate and impactful research domain within broader fields such as Islamic economics, social entrepreneurship, nonprofit management, and sustainable development. Overall, the citation analysis underscores three important insights. First, impactful ISE research is closely associated with publication in higher-ranked journals. Second, foundational and theoretically rich studies play a central role in driving scholarly influence. Third, the presence of multiple highly cited articles within a relatively young research field signals the maturation and consolidation of Islamic social enterprise studies as a recognized academic discipline.

Table 3. List of top-cited papers

Most Cited Papers	TC	Journal	SJR rank	Purpose
Widiastuti et al. (2022)	89	Heliyon	Q1	To emphasize the significance of integrating Islamic social finance in poor communities.
Hati and Idris (2014)	63	Asia Pacific Journal of Marketing and Logistics	Q2	To develop effective communication strategies through organizational credibility
Kamaruddin et al. (2021)	56	Social Enterprise Journal	Q2	To examine the role of financial governance practices in affecting Islamic social enterprises (ISEs) accountability.
Kamaruddin and Auzair (2020)	54	Journal of Islamic and Middle Eastern Finance and Management	Q2	To develop an Islamic accountability measurement instrument from the “accountability for what” perspective for ISE.
Widodo, A. (2019)	39	Journal of Islamic Monetary Economics and Finance	Q3	To examine the role of social finance, in tandem with commercial finance, to solve the problem of wealth distribution.
Hati, S. R. H., & Idris, A. (2019)	38	Journal of Islamic Marketing	Q3	To examine the role of the leader and organizational credibility in influencing customers’ intention to support Islamic social enterprises.
Mohiuddin (2017)	34	Cogent Business & Management	Q2	To explore how Islamic social enterprise contributes to the third sector economy.
Fahmi, R. A. (2022)	28	Journal of Islamic Economics Lariba		To address the transformation of mosque management through Islamic Social Enterprise.
Kamaruddin, M. I. H., & MdAuzair, S. (2019).	25	The Journal of Muamalat and Islamic Finance Research		To introduce an integrated Islamic financial accountability model specifically for ISE.
Ascarya et al. (2022)	24	Eurasian Economic Review	Q1	To develop the Baitul Maal model from integrated activities.

Source: Author’s own work

4.4.1 Co-citation Analysis

The co-citation analysis of 48 papers on Islamic Social Enterprise (ISE), visualized through the VOSviewer co-citation map, identifies ten distinct author clusters representing collaborative and intellectual linkages within the field, as shown in Figure 6.

Cluster 1, the largest and most interconnected cluster, includes Ari Prasteyo, Muhammad Iqmal Hisham, Sofiah Md Auzair, and Sri Ningsih. This cluster forms the intellectual core of ISE scholarship. The high density of links within this group suggests that their works are widely recognized as foundational references. Their research likely addresses central themes, such as conceptual definitions of Islamic social enterprises, hybrid organizational models, Shariah governance structures, sustainability strategies, and performance evaluation frameworks.

Cluster 2, comprising Md. Fazla Mohiuddin and Nurul Aini Muhamed reflect a strong focus on institutional theory and governance perspectives. The co-citation pattern suggests that their contributions are frequently referenced in studies examining regulatory frameworks, accountability mechanisms, stakeholder management, and institutional legitimacy within Islamic social enterprises. This cluster reinforces the importance of governance and structural alignment with Islamic principles as a recurring theme in ISE research.

Cluster 3, consisting of Mohm Mohid Rahmat and Sri Rahyu Hijrah Hati, emphasizes the ethical and social impact dimensions of Islamic enterprises. Their frequent co-citation indicates scholarly engagement with value-based entrepreneurship, maqasid al-Shariah (objectives of Islamic law), and the measurement of socio-economic outcomes. Overall, the co-citation network reflects a growing yet diversified scholarly landscape, with regional authors forming the intellectual foundation of ISE literature.

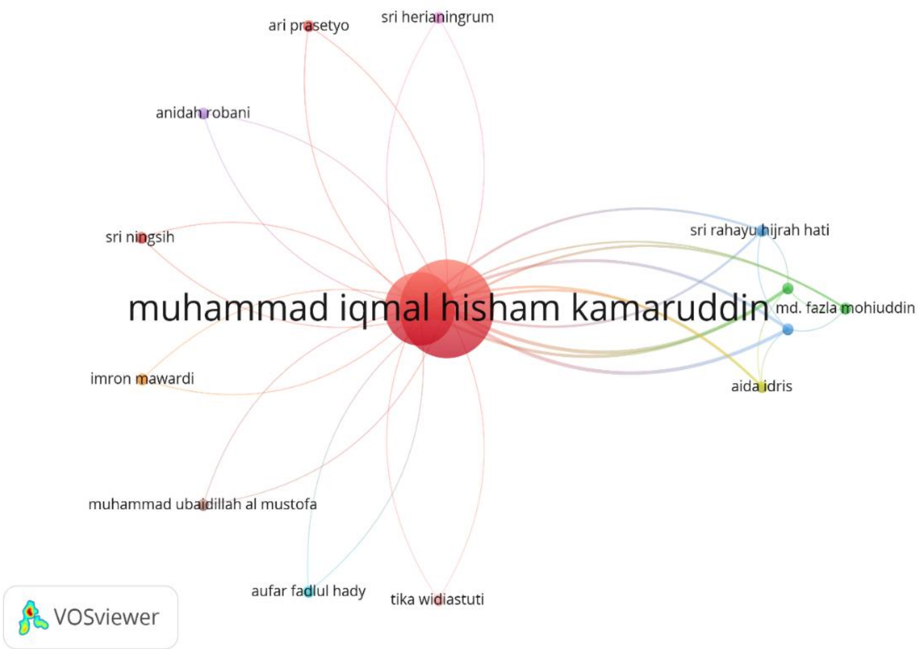


Fig. 6. Co-citation Map of Authors on ISE from VosViewer for 48 papers.

4.5 Journal analysis

This study identified two leading journals that have each published two articles on Islamic Social Enterprise (ISE): the International Journal of Islamic and Middle Eastern Finance and Management and the Management & Accounting Review. The presence of multiple publications within these journals indicates a consistent scholarly interest in the intersection of Islamic finance, governance, and socially oriented enterprise models. Both journals emphasize themes such as Shariah-compliant financial systems, ethical governance, sustainability, and socio-economic development, making them highly relevant outlets for ISE discourse. Beyond these two core journals, several other reputable journals, particularly those ranked in SJR Q1, have also provided platforms for research related to Islamic Social Enterprise (see Table 4).

The distribution of articles across diverse journals also suggests that Islamic Social Enterprise is an interdisciplinary topic. It intersects with areas such as Islamic economics, social innovation, nonprofit management, corporate governance, and ethical finance. This dispersion indicates that while the field is still developing and has not yet consolidated into a single dominant publication outlet, it is progressively gaining traction across multiple academic domains.

Overall, the journal analysis reflects a growing yet still evolving body of literature. The concentration of publications in specialized Islamic finance journals highlights the foundational role of Shariah-based economic principles in shaping ISE research, while the presence in broader management and sustainability journals demonstrates its expanding theoretical and practical relevance.

Table 4: Top ten Journals with publications

Name of Journal	Articles	H_index	TD 2024	TC 2024	SJR 2024	Publisher
International Journal of Islamic and Middle Eastern Finance and Management	2	47	66	801	Q3 0.41	Emerald
Management & Accounting Review	2	8	53	105	Q4 0.16	-
Social Enterprise Journal	1	22	63	417	Q1 0.73	Emerald
Heliyon	1	115	17669	76904	Q1 0.64	Elsevier
Asia Pacific Journal of Marketing and Logistics	1	72	265	2776	Q1 1.18	Emerald
ISRA International Journal of Islamic Finance	1	24	25	214	Q3 0.31	-
Journal of Islamic Marketing	1	63	218	2589	Q2 0.82	Emerald
Eurasian Economic Review	1	27	44	302	Q2 0.48	Springer

TC= Total Citation, TD= Total Documents
Source: Author's own work

5. Towards a research agenda

Based on our descriptive and bibliometric analysis of Islamic Social Enterprise (ISE), this study provides a comprehensive overview of the current state, key research trends, thematic evolution, and intellectual structure of the field. The findings reveal that although scholarly interest in ISE has grown steadily in recent years, the literature remains fragmented and concentrated within specific thematic clusters. The bibliometric mapping further indicates emerging connections between ISE and broader domains. Despite this progress, the field is still in its formative stage. Theoretical development remains limited, empirical studies are geographically concentrated, and methodological approaches are often exploratory rather than explanatory. There is also insufficient integration between conventional social enterprise theories and Islamic economic principles, which restricts the conceptual maturity of ISE as a distinct scholarly domain. In light of these findings, this study identifies critical gaps and proposes several future research directions to advance the field further:

- The integration of ISE research remains essential. Integrating Islamic Social Enterprise (ISE) research with social entrepreneurship, social entrepreneurs, social business, and social finance provides a comprehensive understanding of its ethical and value-driven foundations within Shariah.
- Future studies should explore under-researched areas such as measurement, governance, financial sustainability, and digital transformation, while empirically linking ISE practices to Maqasid al-Shariah, social innovation, and inclusive growth to strengthen the theoretical foundation.
- Most studies on Islamic Social Enterprise (ISE) rely on qualitative case studies or conceptual frameworks. Applying quantitative or mixed-methods, social network analysis, bibliometric techniques, and systematic literature review can offer deeper insights into knowledge development and patterns of scholarly collaboration.

6. Conclusion

This study provides an in-depth bibliometric analysis of the research landscape on Islamic Social Enterprise (ISE) covering the period from 2014 to 2025. The results demonstrate a clear upward trajectory in scholarly interest, reflecting the increasing relevance of ISE within discussions on Islamic economics, social entrepreneurship, sustainability, and ethical finance. A total of 48 publications across 46 academic sources, contributed by 99 authors, indicate that while the field remains relatively small, it is steadily expanding and gaining academic recognition. The co-authorship analysis reveals a strong tendency toward collaborative research, suggesting that ISE is developing through interconnected scholarly networks rather than isolated contributions. Among the authors, Muhammad Iqmal Hisham Kamaruddin emerges as the most influential contributor, reflecting both productivity and centrality within the research network. This pattern of collaboration highlights the importance of research clusters and institutional partnerships in shaping the intellectual structure of the field. In terms of publication outlets, the International Journal of Islamic and Middle Eastern Finance and Management and the Management & Accounting Review have been identified as leading journals publishing ISE-related research. Their prominence suggests that Islamic finance and accounting platforms currently serve as primary avenues for disseminating ISE scholarship. At the same time, the distribution of articles across 46 different sources indicates growing interdisciplinarity, with contributions emerging from journals. The thematic evolution observed through keyword and citation analysis further demonstrates that ISE research is transitioning from foundational conceptual discussions toward more applied topics such as governance mechanisms, impact measurement, waqf-based enterprises, zakat management, and sustainable development integration. Overall, the findings underscore the growing scholarly engagement, diversity of publication platforms, and evolving research networks within Islamic Social Enterprise studies. This expanding body of knowledge reflects increasing recognition of ISE as a viable model that integrates Shariah principles with social value creation and economic sustainability.

References

Aisyah, S. N., & Muiz, A. (2022). Restructuring Islamic social finance ecosystem on standardization of waqf in Indonesia: Platform digitized. *Talaa: Journal of Islamic Finance*, *2*(2), 124-140.

Aisyah, S., Ismail, N., Sulaiman, I. F., Cahyo, E. N., & Sup, D. F. A. (2022). Rethinking the paradigm of Islamic banking: Integrated of commercial and social oriented. *Al-Iktisab: Journal of Islamic Economic Law*, *6*(2), 147-168.

Alhabshi, S. M. B. S. J. (2021). Integrated Islamic Social Finance Approach: The Case for Environment, Social Responsibility, and Governance. In *Handbook of Research on Islamic Social Finance and Economic Recovery After a Global Health Crisis* (pp. 1-15). IGI Global Scientific Publishing.

Alwi, M. F., Rombe, E., Sutomo, M., & Risendy, R. (2025). Islamic Relief Project: Restoring Sustainable Livelihoods Through Islamic Social Enterprise. *Journal of Humanities, Community Service, and Empowerment*, *2*(1), 31-38.

Andleeb, S. (2018). The basis of entrepreneur principles within an Islamic ethical framework. *American-Based Research Journal*, *7*(03).

Ascarya, A., Sukmana, R., Rahmawati, S., & Masrifah, A. R. (2023). Developing cash waqf models for Baitul Maal wat Tamwil as integrated Islamic social and commercial microfinance. *Journal of Islamic Accounting and Business Research*, *14*(5), 699-717.

Ascarya, A., Suharto, U., & Husman, J. A. (2022). Proposed model of integrated Islamic commercial and social finance for Islamic bank in Indonesia. *Eurasian Economic Review*, *12*(1), 115-138.

Ascarya, & Suharto, U. (2021). Integrated Islamic social and commercial finance to achieve SDGs. In *Islamic Wealth and the SDGs: Global Strategies for Socio-economic Impact* (pp. 105-127). Cham: Springer International Publishing.

Ascarya, A. (2017). Baitul Maal Wat Tamwil (BMT): an integrated Islamic social and commercial financial institution in Indonesia. *Baitul Maal Wat Tamwil (BMT): An Integrated Islamic Social and Commercial Financial Institution in Indonesia*.

Astuti, T. B., & Junarti, H. (2025). Optimization of Implementation of the Islamic Social Enterprise in Muhammadiyah Higher Education.

Aziz, M. N., & Mohamad, O. Bin. (2016). Islamic social business to alleviate poverty and social inequality. International Journal of Social Economics, 43(6), 573–592. https://doi.org/10.1108/IJSE-06-2014-

0129

Baharum, Z. (2020). Social finance instruments to support B40 and micro-enterprises: determinants of Islamic financial institution employees' acceptance. *Asian Journal of Accounting Perspectives*.

Ebrahim, A., Battilana, J., & Mair, J. (2014). The Governance of Social Enterprises: Mission Drift and Accountability Challenges in Hybrid Organizations. Research in Organizational Behavior, 34, 81–100. https://doi.org/10.1016/j.riob.2014.09.001

Faizal, P. R. M., Ridhwan, A. A. M., & Kalsom, A. W. (2013). The Entrepreneur's Characteristic from al-Quran and al-Hadith. *International Journal of Trade, Economics and Finance*, *4*(4), 191–196. https://doi.org/10.7763/ijtef.2013.v4.284

Fahmi, R. A., & Zulhamdi, M. (2023). Mosque-Based Islamic Social Enterprise: A New Approach to Mosque Management Transformation. *Jurnal Iqtisaduna*, *9*(2), 162-175.

Fahmi, R. A. (2022). Transformation of mosque management through Islamic social enterprise concept. *Journal of Islamic Economics Lariba*, *8*(1), 157-178.

Fransiska, I. B., Manoarfa, H., Juliana, J., & Asih, V. S. (2025). Social Impact Measurement by Social Return on Investment Based on Islamic Social Enterprise. *Iqtisad: Journal of Islamic Economic and Civilization*, *1*(1), 70-89.

Hati, G. (2023). Empowering Rural Youth Groups through Islamic Social Enterprise (ISE) in Indonesia. *Journal of Social Development Studies*, *4*(1), 29-39.

Hati, S. R. H., & Idris, A. (2019). The role of leader vs organizational credibility in Islamic social enterprise marketing communication. *Journal of Islamic Marketing*, *10*(4), 1128-1150.

Hati, S. R. H. (2015). Customer attitudes and intention to support Islamic social enterprises in Indonesia: The influence of celebrity and credibility. *University of Malaya (Malaysia).*

Hati, S. R. H., & Idris, A. (2014). Antecedents of customers' intention to support Islamic social enterprises in Indonesia: The role of socioeconomic status, religiosity, and organisational credibility. *Asia Pacific Journal of Marketing and Logistics*, 26(5), 707–737. https://doi.org/10.1108/APJML-08-2014-0126

Holle, M. H. (2024). Mosque Islamic Social Enterprises Activities as an Instrument of Inclusion; Evidence from Indonesia. *Al-Iqtishadiyah: Ekonomi Syariah dan Hukum Ekonomi Syariah*, *9*(2), 83-97.

Hoque, N., Ali, M. H., Arefeen, S., Mowla, M. M., & Mamun, A. (2018). Use of crowdfunding for developing social enterprises: An Islamic approach. *International Journal of Business and Management*, *13*(6), 156.

Hoque, N., Mamun, A., & Mohammad Ahshanul Mamun, A. (2014). Dynamics and traits of entrepreneurship: an Islamic approach. *World Journal of Entrepreneurship, Management and Sustainable Development*, *10*(2), 128–142. https://doi.org/10.1108/wjemsd-04-2013-0027

Harzing, A. W. (2010). *The publish or perish book*. Melbourne: Tarma Software Research Pty Limited. available from https://harzing.com/resources/publish-or-perish

Harzing, A. W., & Alakangas, S. (2016). Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison. *Scientometrics*, *106*(2), 787-804.

Iskandar, A., Possumah, B. T., Aqbar, K., & Yunta, A. H. D. (2021). Islamic philanthropy and poverty reduction in Indonesia: The role of integrated Islamic social and commercial finance institutions. *AL-IHKAM: Jurnal Hukum & Pranata Sosial*, *16*(2), 274-301.

Jacsó, P. (2009). Calculating the h-index and other bibliometric and scientometric indicators from Google Scholar with the Publish or Perish software. *Online information review*, *33*(6), 1189-1200.

Kamaruddin, M. I. H., & Auzair, S. M. (2023). The impact of financial management practices on accountability of Islamic social enterprise (ISE). *International Journal of Islamic and Middle Eastern Finance and Management*, *16*(4), 669-686.

Kamaruddin, M. I. H., & MdAuzair, S. (2022). Financial management practices in Malaysian Islamic social enterprises (ISE). *Management and Accounting Review*, *21*(2), 1-25.

Kamaruddin, M. I. H., Auzair, S. M., Rahmat, M. M., & Muhamed, N. A. (2021). The mediating role of financial governance on the relationship between financial management, Islamic work ethic and accountability in Islamic social enterprise (ISE). *Social enterprise journal*, *17*(3), 427-449.

Kamaruddin, M. I. H., & Auzair, S. M. (2020a). Measuring 'Islamic accountability Islamic social enterprise (ISE). *International Journal of Islamic and Middle Eastern Finance and Management*, *13*(2), 303-321.

Kamaruddin, M. I. H., & Auzair, S. M. (2020b). Accountability in Malaysian Islamic social enterprises (ISEs):

stakeholders vs. Management perspectives. *International Journal of Banking and Finance*, *15*(2), 47-64.

Kamaruddin, M. I. H., (2020). *Financial Management, Financial Governance and Accountability in Islamic Social Enterprise (ISE) in Malaysia* (Doctoral Dissertation, Universiti Kebangsaan Malaysia).

Kamaruddin, M. I. H., & Auzair, S. M. (2019a). Conceptualizing Islamic Social Enterprise (ISE) from Islamic Perspective. *International Journal of Management, Accounting & Economics*, *6*(4).

Kamaruddin, M. I. H., & MdAuzair, S. (2019b). Integrated Islamic financial accountability model for Islamic social enterprise (ISE). *The Journal of Muamalat and Islamic Finance Research*, *16*(1), 17-36.

Kamaruddin, M. I. H., Auzair, S. M., & Muhamed, N. A. (2018). Accountability in Islamic social enterprises (ISEs) from the stakeholders' perspective. *International Journal of Engineering & Technology*, *7*(3.35), 253-256.

Kamaruddin, M. I. H., & Auzair, S. M. (2018). Classification of Islamic social enterprises (ISE) in Malaysia based on economic sectors. *Management & Accounting Review*, *17*(2), 17-42.

Katan, M., & Nasrijal, N. M. H. (2020). Islamic Bereavement Care Services Social Enterprise Model. *International Journal of Academic Research in Business and Social Sciences*, *10*(13), 1-10.

Khan, A., Sukmana, R., & Muhammad, A. M. (2024). Islamic social finance ecosystem and the role of crowdfunding: A proposed model. *Available at SSRN 5208060*.

Levidze, M. (2024). Mapping the research landscape: A bibliometric analysis of e-learning during the COVID-19 pandemic. *Heliyon*, *10*(13).

Martoza, M. G., Rosman, R., Alhabshi, S. M., Hossain, M. E., & Marziya, F. (2024). Social and Environmental Protection in Islamic Social Enterprise: A Proposed Model for Sustainability. In *Finance and Law in the Metaverse World: Regulation and Financial Innovation in the Virtual World* (pp. 579-588). Cham: Springer Nature Switzerland.

Martoza, M. G., & Rosman, R. (2024). Issues, Challenges, and Opportunities of Islamic Social Enterprise in Bangladesh: A Proposal for Advancement.

Mohammad, M. O., & Shahwan, S. (2013). The objective of Islamic economics and Islamic banking in light of maqasid al-shariah: A critical review. Middle East Journal of Scientific Research, 13(SPLISSUE), 75–84. https://doi.org/10.5829/idosi.mejsr.2013.13.1885

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Bmj*, *339*.

Mohiuddin, M. F. (2017). Islamic social enterprises in Bangladesh: Conceptual and institutional challenges. *Cogent Business & Management*, *4*(1), 1305674.

Muhamed, N. A., Ramli, N. M., Shukor, S. A., & Nasrudin, N. S. M. (2019). < Special Feature" Malaysian Practice of the Islamic Economy at a Crossroads: Issues and Challenges"> Islamic Social Enterprise Framework: The Case of Malaysia. *イスラーム世界研究*, *12*, 86-106.

Muhamed, N. A., Kamaruddin, M. I. H., & Mohamed Nasrudin, N. S. (2018). Positioning Islamic social enterprise (ISE). *Journal of Emerging Economies & Islamic Research*, *6*(3), 28-38.

Olanrewaju, A. S., Shahbudin, A. S. M., & Zakariyah, H. (2020). A synthesis of the Islamic social finance for sustainable Islamic social enterprise: a four-factor of production frame. *Journal of Critical Reviews*, *7*(19), 9963-9974.

Rahayu Hijrah Hati, S., & Idris, A. (2014). Antecedents of customers' intention to support Islamic social enterprises in Indonesia: The role of socioeconomic status, religiosity, and organizational credibility. *Asia Pacific Journal of Marketing and Logistics*, *26*(5), 707-737.

Ramadani, V., Dana, L. P., Gërguri-Rashiti, S., & Ratten, V. (2016). Entrepreneurship and management in an Islamic context. *Entrepreneurship and Management in an Islamic Context*, *February 2018*, 1–248. https://doi.org/10.1007/978-3-319-39679-8

Ramli, N. M., Kamaruddin, M. I. H., & Muhamed, N. A. (2016). The financial management perspective of Islamic social enterprise. *Critical readings in Islamic social finance*, *2*, 229-254.

Raquib, A., & Khan, I. (2019). Entrepreneurship as an Agent for Social-Ethical Reform: An Islamic Perspective. *ICR Journal*, *10*(1), 47–63.

Rusydiana, A. S., Sukmana, R., & Laila, N. (2023). Integrated Islamic Social Instrument for Sustainable Development: Case of SDG-14. *Accounting and Sustainability*, *2*(1).

Saputra, W. (2025). Mapping the Terrain of Islamic Social Enterprise: A Comprehensive Literature

Review. *Jurnal Teologi Islam*, *1*(2), 316-328.
Suhaida, N., & Ismail, S. F. A. (2021). Social enterprise and Waqf: An alternative sustainable vehicle for Islamic social finance. In *Foundations of a Sustainable Economy* (pp. 288-307). Routledge.
Susamto, A. A., Bisri, M., Masyhadi, A. R., & Susamto, B. (2024). Redefining boundaries: the case for enterprise-structured waqf over corporate waqf. *ISRA international journal of islamic finance*, *16*, 118-135.
Widodo, A. (2019). The role of integrated Islamic commercial and social finance in reducing income inequality in Indonesia. *Journal of Islamic Monetary Economics and Finance*, *5*(2), 263-286.
Widiastuti, T., Ningsih, S., Prasetyo, A., Mawardi, I., Herianingrum, S., Robani, A., ... & Hady, A. F. (2022). Developing an integrated model of Islamic social finance: toward an effective governance framework. *Heliyon*, *8*(9).
Zainon, S., Mokhtar, R., Soo, K. Y., Yunos, R. M., Japelus, N. E., Yatim, N. H. M., & Kamaruddin, M. I. H. (2023). The Development of the Islamic Social Enterprise Management Index (ISEMI). *Business Strategy Review*, *4*(3), 167-180.
Zainon, S., Yoke, S. K., Mohamed Yunos, R., Md Yatim, N. H., Mokhtar, R., & Japelus, N. E. (2021). Conceptualizing Social Enterprise through the Lens of Islamic Perspective.

Appendix A

Findings from the review:

No.	Author and year	Title	Method	Source title	SJR/ Index	Result
1	Alwi, M. F., Rombe, E., Sutomo, M., & Risendy, R. (2025).	Islamic Relief Project: Restoring Sustainable Livelihoods Through Islamic Social Enterprise.	Qualitative descriptive method	Journal of Humanities, Community Service, and Empowerment	No	Islamic Relief's support is not limited to material assistance but also training and mentoring to improve managerial skills and business empowerment.
2	Saputra, W. (2025).	Mapping the Terrain of Islamic Social Enterprise: A Comprehensive Literature Review	A Systematic Literature Review (SLR) methodology	Jurnal Teologi Islam	No	This study presents the inaugural comprehensive and structured synthesis of ISE literature, proposing a conceptual framework of Islamic Social Enterprises
3	Astuti, T. B., & Junarti, H. (2025).	Optimization of Implementation of The Islamic Social Enterprise in Muhammadiyah Higher Education.	A qualitative approach is used, involving case studies and in-depth interviews	Ekonomi Islam	No	Muhammadiyah universities have initiated ISE activities but face challenges, including limited awareness, resource shortages, and a weak integration of ISE principles into their strategies.
4	Fransiska, I. B., Manoarfa, H., Juliana, J., & Asih, V. S. (2025).	Social Impact Measurement by Social Return on Investment Based on Islamic Social Enterprise	Qualitative descriptive study using a measuring instrument	Iqtisad: Journal of Islamic Economic and Civilization	No	The Catenzo shoe company succeeded in creating a social impact or benefit for the partner shoe craftsmen.
5	Martoza, M. G., Rosman, R., Alhabshi, S. M., Hossain, M. E., & Marziya, F. (2024).	Social and Environmental Protection in Islamic Social Enterprise: A Proposed Model for Sustainability	Multiple-case study approach based on descriptive and exploratory research	In Finance and Law in the Metaverse World. Springer, Cham.	No	The humanitarian strategy among the organizations is essentially the same. In terms of product innovation for poverty alleviation, three organizations have similar perspectives that are limited to financing only and have a lack of innovation and sustainability.
6	Holle, M. H. (2024)	Mosque Islamic Social Enterprises Activities as an Instrument of Inclusion; Evidence from Indonesia	Qualitative	Al-Iqtishadiyah: Ekonomi Syariah dan Hukum Ekonomi Syariah	No	In Indonesia, two mosques are Islamic social enterprises that serve as financial inclusion instruments aimed at alleviating poverty for underprivileged people and become models for other mosques.
7	Susamto, A. A., Bisri, M., Masyhadi, A.	Redefining Boundaries: The Case for Enterprise-Structured Waqf Over	Qualitative	ISRA International Journal of	Yes	This paper is the first to highlight the overextension in the definition of the term corporate waqf, propose a

	R., & Susamto, B. (2024).	Corporate Waqf		Islamic Finance		return to its original meaning, and advocate for the use of an alternative term, namely, enterprise-structured waqf.
8	Martoza, M. G., & Rosman (2024)	Issues, Challenges and Opportunities of Islamic Social Enterprise in Bangladesh: A Proposal for Advancement	Qualitative	3rd International Conference on Islamic Economics 2024 (3rd ICONIE 2024)	No	Provided some proposals that may further the advancement and inclusiveness of Islamic social enterprise organizations in Bangladesh.
9	Khan, A., Sukmana, R., & Mahmood, A. (2024).	Islamic Social Finance Ecosystem and The Role of Crowdfunding: A Proposed Model	Qualitative library research approach to develop the spectrum of Islamic social finance Ecosystem	Hamdard Islamicus	Yes	A crowdfunding platform is developed based on the Islamic social finance spectrum so that the identified issues can be tackled.
10	Fahmi, R. A., & Zulhamdi, M. (2023).	Mosque-Based Islamic Social Enterprise: A New Approach to Mosque Management Transformation	Mixed Method Approach	Jurnal Iqtisaduna	No	At least 61 mosques in Indonesia had business units, with the most common type of business found being the rental of mosque assets, where the donations from congregants were the largest source of funds used as capital for business units.
11	Kamaruddin, M. I. H., & Auzair, S. M. (2023).	The impact of financial management practices on accountability of Islamic social enterprise (ISE)	Quantitative	International Journal of Islamic and Middle Eastern Finance and Management	Yes	ISEs' accountability is enhanced through good financial management practices, which are driven specifically by internal control practices.
12	Ascarya, A., Sukmana, R., Rahmawati, S., & Masrifah, A. R. (2023).	Developing cash waqf models for Baitul Maal wat Tamwil as an integrated Islamic social and commercial microfinance	Delphi and analytic network process methods	Journal of Islamic Accounting and Business Research	Yes	The best cash waqf model for BMT is "BMT as Nazir (waqf manager) and also as cash waqf receiver Lembaga Keuangan Syariah Penerima Wakaf Uang (LKSPWU)", followed by "BMT Association as representative Nazir of several certified BMTs".
13	Zainon, S., Mokhtar, R., Soo, K. Y., Yunos, R. M., Japelus, N. E., Yatim, N. H. M., & Kamaruddin, M. I. H. (2023).	The Development of The Islamic Social Enterprise Management Index (ISEMI)	1) general descriptive analysis, 2) validity and reliability analysis, and 3) data analysis	Corporate & Business Strategy Review	Yes	The study offers a practical single-figure summary indicator to measure and evaluate ISEs and has the potential as a guideline for Muslim entrepreneurs to build favorable relationships with ISE management.
14	Hati, G. (2023).	Empowering Rural Youth Groups through Islamic Social Enterprise (ISE) in Indonesia	Descriptive qualitative study. Online interviews involved eight ISE program participants.	Journal of Social Development Studies	No	ISE supported intellectual, psychological, spiritual, and social skill development. The results also suggest comprehensive support from the government, private sectors, and local communities to ensure the youth groups.
16	Rusydiana, A. S., Sukmana, R., & Laila, N. (2023).	Integrated Islamic Social Instrument for Sustainable Development: Case of SDG-14	Quantitative	Accounting and Sustainability	No	This research also presents an appropriate blue Sukuk waqf model framework.

17	Kamaruddin, M. I. H., Auzair, S. M., & Zainon, S. (2022).	Financial Management Practices in Malaysian Islamic Social Enterprises (ISE)	A survey method was used, and 102 financial officers in Malaysian ISEs responded.	Management & Accounting Review	Yes	This study will benefit ISEs' management, authority, and regulator for monitoring and governing purposes.
18	Widiastuti, T., Ningsih, S., Prasetyo, A., Mawardi, I., Herianingrum, S., Robani, A., ... & Hady, A. F. (2022).	Developing an integrated model of Islamic social finance: toward an effective governance framework	Qualitative and quantitative approach using grounded theory and the Average Weighted Index (AWI)	Heliyon	Yes	This study emphasizes the significance of integrating Islamic social finance in accelerating the well-being of the poor community.
19	Fahmi, R. A. (2022).	Transformation of mosque management through the Islamic social enterprise concept	This study uses a literature study approach	Journal of Islamic Economics Lariba	No	The mosque business unit contributes to the mosque's income and the economic welfare of the community.
20	Aisyah, S. N., & Muiz, A. (2022).	Restructuring the Islamic Social Finance Ecosystem on the Standardization of Waqf in Indonesia: Platform Digitized	Qualitative descriptive data analysis	Talaa: Journal of Islamic Finance	No	The growing number of Cash Waqf will ultimately improve financial inclusion in Indonesia as one of the government's goals.
21	Aisyah, Siti, Nurizal Ismail, Ibrahim Fahad Sulaiman, Eko Nur Cahyo, and Devid Frastiawan Amir Sup (2022)	Rethinking the paradigm of Islamic banking: Integration of commercial and socially oriented	Qualitative-descriptive literature	Al-Iktisab: Journal of Islamic Economic Law	No	Several applied integrated models in IBFs, such as Social Islamic Bank Limited (SIBL), have offered Mudaraba Waqf Cash Deposit Account (MWCDA).
22	Ascarya, A., Suharto, U., & Husman, J. A. (2022).	Proposed model of integrated Islamic commercial and social finance for Islamic bank in Indonesia	Delphi and Analytic Network Process (ANP) methods	Eurasian Economic Review	Yes	The best model is Separate the Baitul Maal model with integrated activities.
23	Kamaruddin, M. I. H., Auzair, S. M., Rahmat, M. M., & Muhamed, N. A. (2021).	The mediating role of financial governance on the relationship between financial management, Islamic work ethic, and accountability in Islamic social enterprise (ISE)	Questionnaires were administered to financial officers of Malaysian ISEs, and data were analyzed using Smart-PLS	Social Enterprise Journal	Yes	Financial governance has a mediating role on both the relationships between financial management and Islamic work ethic, with the accountability of the ISEs.
24	Zainon, S., Yoke, S. K., Mohamed Yunos, R., Md Yatim, N. H., Mokhtar, R., & Japelus, N. E. (2021).	Conceptualizing Social Enterprise through the Lens of Islamic Perspective.	Qualitative method	E-Proceeding 8th International Conference on Public Policy and Social Science (ICOPS)	No	The study proposes that the index to consider the virtues of fairness, al-falah, justice and balance, welfare and social security, charity, jihad, khalifah with amar maaruf, and nahi munkar.

25	Iskandar, A., Possumah, B. T., Aqbar, K., & Yunta, A. H. D. (2021).	Islamic philanthropy and poverty reduction in Indonesia: The role of integrated Islamic social and commercial finance institutions	Quantitative Method	AL-IHKAM: Jurnal Hukum & Pranata Sosial	Yes	Islamic philanthropy reduces poverty both in the short and long run, particularly in the integration of Islamic social and commercial finance in a single model.
26	Ascarya, & Suharto, U. (2021).	Integrated Islamic social and commercial finance to achieve SDGs. In Islamic Wealth and the SDGs: Global Strategies for Socio-economic Impact	Qualitative Method	Islamic Wealth and the SDGs: Global Strategies for Socio-economic Impact	No	This study aims to bridge the gap in integrating Islamic commercial and social finance within the structural, legal, and regulatory framework of Islamic Financial Institutions.
27	Suhaida, N., & Ismail, S. F. A. (2021).	Social enterprise and Waqf: An alternative sustainable vehicle for Islamic social finance	Qualitative Method	In Foundations of a Sustainable Economy	No	The analysis shed light on their sustainable business model, including their governance, transparency, and social impact.
28	Alhabshi, S. M. B. S. J. (2021).	Integrated Islamic Social Finance Approach: The Case for Environment, Social Responsibility, and Governance	Quantitative Method	Handbook of Research on Islamic Social Finance and Economic Recovery After a Global Health Crisis	No	Islamic social finance approach to the COVID-19 pandemic, a more integrated, inclusive, and sustainable reporting.
29	Kamaruddin & Auzair (2020)	Measuring 'Islamic accountability' in Islamic social enterprise (ISE)	Quantitative Method	Journal of Islamic and Middle Eastern Finance and Management	Yes	This study successfully developed an Islamic accountability measurement instrument from the "accountability for what" perspective for ISE.
30	Kamaruddin, M. I. H., & MdAuzair, S. (2020).	Accountability in Malaysian Islamic social enterprises (ISEs): stakeholders vs. Management perspectives	Quantitative Method	International Journal of Banking and Finance	Yes	Other ISEs could also use the accountability measurement proposed in this study as indicators to evaluate their accountability practices.
31	Katan, M., & Nasrijal, N. M. H. (2020).	Islamic Bereavement Care Services Social Enterprise Model.	Qualitative method	International Journal of Academic Research in Business and Social Sciences	No	This study links Islamic BCS and commercialism through the social business model.
32	Olanrewaju, A. S., Shahbudin, A. S. M., & Zakariyah, H. (2020).	A synthesis of the Islamic social finance for sustainable Islamic social enterprise: a four-factor production frame	Qualitative method	Journal of Critical Reviews	Yes	This paper proposes a model, the Four Factors of Production (FFP) structure, to upscale the practices of Islamic Social Enterprises.
33	Kamaruddin, M. I. H. (2020).	Financial Management, Financial Governance, and Accountability in Islamic Social Enterprise (ISE) In Malaysia	Quantitative Method	Universiti Kebangsaan Malaysia	Yes	This study provides insights into the financial management, financial governance and accountability in ISEs.
34	Baharum, Z. (2020).	Social finance instruments to support B40 and micro-enterprises: determinants of Islamic financial institution employees' acceptance	Quantitative Method	Asian Journal of Accounting Perspectives	No	The acceptance level of SFIs among IFI employees has a significant and robust relationship with the level of knowledge that employees possess.
35	Muhamed, N. A., Ramli, N. M., Shukor, S. A., & Nasrudin, N. S. M. (2019)	Special Feature" Malaysian Practice of the Islamic Economy at a Crossroads: Issues and Challenges"> Islamic Social Enterprise	Qualitative descriptive data analysis	イスラーム世界研究	No	ISEs are consistently focusing on promoting the foundation of maqasid shariah. On one hand, these ISEs provide and supply products at an affordable price to the needy in order to reduce the community's

		Framework: The Case of Malaysia				burden.
36	Kamaruddin, M. I. H., & Auzair, S. M. (2019).	Conceptualizing Islamic Social Enterprise (ISE) from Islamic Perspective.	Qualitative method	International Journal of Management, Accounting & Economics	No	This study attempts to conceptualize the definition of ISE by discussing its objectives specifically from an Islamic perspective.
37	Kamaruddin, M. I. H., & MdAuzair, S. (2019).	Integrated Islamic financial accountability model for Islamic social enterprise (ISE).	Qualitative method	The Journal of Muamalat and Islamic Finance Research	No	This study introduces an integrated Islamic financial accountability model specifically for ISE, one of the emerging institution types under the non-profit sector.
38	Widodo, A. (2019).	The role of integrated Islamic commercial and social finance in reducing income inequality in Indonesia	Quantitative Method	Journal of Islamic Monetary Economics and Finance	Yes	Islamic commercial finance is proven statistically incapable of tackling inequality, while the social finance (zakah) is performing very well in this matter across all specifications.
39	Hati, S. R. H., & Idris, A. (2019).	The role of leader vs organizational credibility in Islamic social enterprise marketing communication	Quantitative Method	Journal of Islamic Marketing	Yes	Organizational credibility and organizational branding have much greater influence than leaders' personal credibility on customers' intention to support Islamic social enterprises.
40	Kamaruddin, M. I. H., MdAuzair, S., & Muhamed, N. A. (2018).	Accountability in Islamic social enterprises (ISEs) from the stakeholders' perspective	Quantitative Method	International Journal of Engineering & Technology	No	Accountability for input, output, and procedure has significantly contributed to accountability in ISEs in Malaysia.
41	Kamaruddin, M. I. H., & MdAuzair, S. (2018).	Classification of Islamic social enterprises (ISE) in Malaysia based on economic sectors	Qualitative method	Management & Accounting Review	Yes	This study concludes that ISEs in Malaysia can be classified based on all three economic sectors identified.
42	Muhamed, N. A., Kamaruddin, M. I. H., & Mohamed Nasrudin, N. S. (2018).	Positioning Islamic social enterprise (ISE)	Qualitative Method	Journal of Emerging Economies & Islamic Research	No	The distinctive yet flexible definition of ISE expands the new and relevant area of the Islamic third economic sector using Islamic charitable contracts.
43	Hoque, N., Ali, M. H., Arefeen, S., Mowla, M. M., & Mamun, A. (2018).	Use of crowdfunding for developing social enterprises: An Islamic approach	Qualitative Method	International Journal of Business and Management	Yes	Conventional crowdfunding models cannot be applicable exactly in Islamic societies due to philosophical grounds.
44	Mohiuddin, M. F. (2017).	Islamic social enterprises in Bangladesh: Conceptual and institutional challenges	Qualitative Method	Cogent Business & Management	Yes	The Government of Bangladesh should provide a separate legal and regulatory environment for Islamic social enterprise for it to grow in size and scale.
45	Ascarya, A. (2017).	Baitul Maal Wat Tamwil (BMT): an integrated Islamic social and commercial financial institution in Indonesia.	Qualitative method	Baitul Maal Wat Tamwil (BMT)	No	This integration of Islamic social and commercial finance can be implemented not only at the micro level as discussed above, but it can also be implemented at the community level.
46	Ramli, N. M., Kamaruddin, M. I. H., & Muhamed, N. A. (2016).	The financial management perspective of Islamic social enterprise	A review of professional documents and a comprehensive literature review	Critical readings in Islamic social finance	No	Islamic principles and views relating to financial management that iSE has to take into consideration.

47	Hati, S. R. H. (2015).	Customer attitudes and intention to support Islamic social enterprises in Indonesia: The influence of celebrity and credibility.	Quantitative Method	University of Malaya	Yes	The impact of social entrepreneur celebrity, personal credibility, and organizational credibility on customer attitudes and intention to support social enterprises.
48	Rahayu Hijrah Hati, S., & Idris, A. (2014).	Antecedents of customers' intention to support Islamic social enterprises in Indonesia: The role of socioeconomic status, religiosity, and organizational credibility.	Quantitative Method	Asia Pacific Journal of Marketing and Logistics	Yes	Organizations should develop effective communication strategies through advertising to highlight organizational credibility

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 22-34
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Comparative Analysis on The Cost of Default Calculation Between Islamic and Conventional Home Financing

Witrofoledy Saladin [a*], Marhanum Che Mohd Salleh [b], Ahmad Khaliq [c]

[a,b,c]*Kulliyyah of Economic and Management Sciences, International Islamic University Malaysia, Kuala Lumpur, Malaysia*

**Corresponding author: witra62@gmail.com*

Abstract

The sustainability of the Malaysian Islamic banking industry after a few decades of its inception can be seen via proactive initiatives taken by the players, along with a close monitoring system by the Malaysian financial authority. However, one aspect of Islamic banking that has been neglected and received less concern is the calculation of the amount to be claimed in the event of default or the cost of default. This paper aims to conduct a comparative analysis of default cost calculations between Islamic and conventional financing in Malaysia. To achieve the objective, this study employs a qualitative research method by analysing related court cases, policy documents issued by Bank Negara Malaysia, and resolutions from the Shariah Advisory Council (SAC) of Bank Negara Malaysia. Based on document analysis, the findings reveal that there is a difference in default cost calculation methods between Islamic and conventional home financing. The amount claimed by Islamic banks in the event of default is considerably higher than conventional banks due to the basis point of total financing calculation, which is based on the types of contracts adopted. This paper discussed the aspect of default cost calculation between the Islamic and conventional banking industry, which has been rarely touched or written about in the last 40 years.

Keywords: Comparative Analysis, Conventional Banking, Default Cost Calculation, Islamic Banking, Home Financing.

1. Introduction

The Malaysian financial industry is strictly regulated by the Central Bank of Malaysia (BNM) which was established in January 1959. BNM was established under the Central Bank of Malaysia Act 1958 which was later repealed by the Central Bank Act 2009. The principal objective of the BNM is to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy. Since the Malaysian population consists of various races and religions, its banking system is run under a dual system which is conventional and Islamic.

Conventional banking has been practised since the existence of British merchant communities in Penang and Singapore in the 19th century which was known as the Straits Settlement (Association Of Banks In Malaysia, n.d.). Due to the strategic location of Penang as a trading port, it has become a springboard for a bank. The first conventional universal bank was established by the British known as the Hong Kong and Shanghai Banking Corporation (HSBC) founded in Hong Kong in 1865 (headquartered in London), followed by Chartered Bank (now Standard Chartered) in 1875. The total assets of commercial banks in Malaysia have reached RM1.78 trillion in 2023 (Siddharta, 2024).

Compared to conventional banking, Malaysian Islamic banking is relatively new where it was started in 1983 with the establishment of Bank Islam Malaysia Berhad (BIMB). BIMB was given a 10-year monopoly on Islamic banking services as Bank Negara Malaysia (BNM) only allowed conventional banks to set up their Islamic banking windows in 1993. These Islamic banking windows were later converted to become Islamic subsidiaries of conventional banks. Currently, there are 16 Islamic banks in Malaysia of which 11 are local Islamic banks and the remainder 5 are Foreign Islamic banks (Bank Negara Malaysia, 2024). In 2023, Malaysia

Article history
Received: 18 August 2025
Accepted: 2 March 2026

has acquired the largest Islamic banking assets in Asia and the third largest globally, after Iran and Saudi Arabia (Domat, 2024).

The Malaysian Islamic Banking industry has progressed tremendously until now where its assets have reached approximately RM1.22 trillion in the year 2024 (BNM, 2025). The growth of Islamic banking in Malaysia among others is supported by high financial inclusion among the Malaysians as well as clear direction and guidance from the regulator. Various initiatives and proactive actions are taken by the industry players to further boost this industry for future sustainability while at the same time ensuring *Shariah* compliancy. It includes avoiding from practising the contract that may attract *Shariah* issues and enhancing products and services that bring benefits to the society at large.

Hence, every aspect of the Islamic banking is underlined by the *Shariah* principles, and the aim of the business is towards achieving the objectives of the *Shariah (Maqasid al-Shariah)*. Compared to Islamic banking, the objective of conventional banking is to maximize profit for the company, and it is based on human-made law. Technically, both of these businesses are offering the same products and services to customers, but principally, they are operating under different tenets, spirits, and objectives. This research, therefore, is conducted to compare the practice of Islamic and conventional banking in terms of default cost calculation by referring to secondary data such as court cases, guidelines of BNM, as well as resolutions of the Shariah Advisory Council (SAC) of BNM. This research is structured as follows: The next section begins with literature review, followed by methodology and data analysis. This research is concluded with findings and conclusion.

2. Literature Review

Default In Islamic Banking

Default is a credit risk that banks are exposed to, be it Islamic or conventional. Default happens when the customers are unable or unwilling to meet their payment obligation when the payment is due (Kamaruzaman & Hassan, 2023); (Hassan et al., 2021). Generally, defaulters can be classified into three categories, solvent defaulters, insolvent defaulters, and habitual defaulters (Hassan et al., 2017).

Hassan et al., (2021) were of the view that default in Islamic banking differs from default in conventional banking as the nature of Islamic banking products differs from conventional banking products. While default in conventional banking arises out of the debtor and creditor relationship, the relationship between Islamic banking and the defaulters varies according to the contract they entered. The relationship could be that of seller and buyer if the contract entered was a sale contract such as *Bay' al-Bithaman Ajil* (BBA), *Salam, Inah, Istisna'* and *Tawarruq*, lessee and lessor if the contract is a lease-base contract such as *Ijarah*, as partners for equity-based contracts such as *Mudharabah* and *Musyarakah* and as agent and principal for service-based contracts such *Kafalah* and *wakalah*.

Bank Negara Malaysia's Guidelines on Classification and Impairment Provisions for Loans/Financing (2015) stipulate that accounts will be classified as impaired or non-performing financing or loans if the monthly instalments are unpaid for three months or more. When accounts are classified as impaired. The banks can either attempt to rehabilitate the accounts or proceed with legal action against the customers, guarantors (if any), and any security pledged to the banks (Kamaruzaman & Hassan, 2023). Rehabilitation by way of rescheduling the payments or restructuring the remaining balance of the facility can only be done if the customers are contactable and are willing to negotiate with the banks to either reschedule or restructure their accounts (Bank Negara Malaysia, 2015).

Rescheduling simply means that the monthly payments are varied from the original payment terms. It could be done by allowing the customers to make a lower payment for a certain period and the payments will be gradually increased as the payment capacity of the customers improves. The main terms of the financing, such as the selling price and duration remain unchanged. Restructuring, on the other hand, involved the creation of a new facility to replace the existing facility. A new aqad with a new buying and selling price will have to be entered between the customers and the Islamic banks and the proceeds of the new facility will be utilized to settle the existing facility. If attempts to rehabilitate the account fail, banks will terminate the facility and initiate legal action against the customer and the security that they have (Bank Negara Malaysia, 2015).

Kamaruzaman and Hassan (2023) were of the view that it is the duty and responsibility of the customers to approach the banks to discuss and find a proper solution, should they have financial difficulties in paying the monthly instalments, while the banks have the responsibility to mitigate the default and recover their money. This is in line with the findings of Abdul Muneem et al. (2020).

Should rescheduling or restructuring not be possible, banks will normally terminate or recall the facilities given to customers and initiate legal action against the customers who have defaulted in their payments to recover their money as provided by the legal documents executed by both banks and customers when entering the contract. In Malaysia, all civil suits on banking, Islamic or conventional will be adjudicated at the civil court (Markom et al., 2011). Thus, the decisions of the court are always based on the contract signed between the customers and the banks. The court does not apply *Shariah* consideration in making its decision.

The practice of Islamic banks in initiating recovery action against the customers who defaulted on their instalments has been criticised by customers and consumer associations as the amount claimed by Islamic banks is significantly higher than that of conventional banks (Md Dahlan et al., 2017).

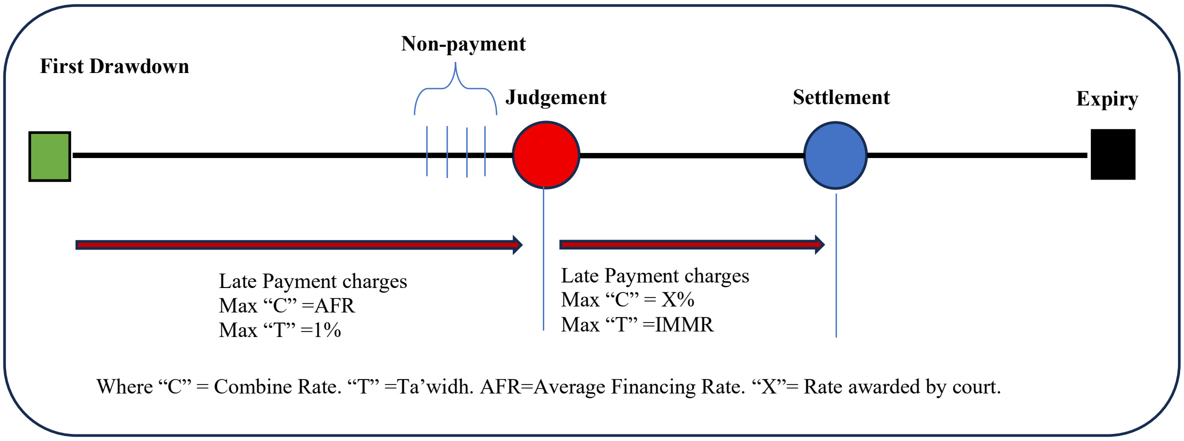
Late Payment Penalty

Unlike conventional banks which impose late payment interest on customers who default in their instalments, Islamic banks were not allowed to do so as it was considered *riba'* and non *shariah* compliance (Yaakub et al., 2014). This may create a moral hazard as customers may choose to delay the payment for Islamic financing for the preference of conventional loans (Bank Negara Malaysia, 2012). Islamic scholars have different views on incorporating the penalty clause known as *Syart Jazaie* in financing documents. To the Shafie school of thought and a section of jurists from the Hanafi school of thought "*Syart jazaie*" is not permissible because it is against the fundamental ruling that "condition" and "sale" cannot be put in one contract relying on a narration in which the Prophet (PBUH) was reported to have prohibited a sale that is circumscribed with a condition. However, jurists from the Hambali and Maliki schools of thought have permitted *Syart Jazaie* while the Majority of the jurists from the Hanafi school of thought allowed it based on juristic preference (*istihsan*) (Aishath Muneeza et al., 2019).

In Malaysia, the imposition of penalties by Islamic banks started in 1998 after the BNM Shariah Advisory Council at their 4th meeting on 4th February 1998 resolved that Islamic banks may impose compensation charges on defaulters. BNM further refined the guideline in December 2012 where the late payment charges may be imposed either as compensation (*ta'widh*) based on the actual cost incurred or penalty (*Gharamah*). BNM with the approval of the SAC has also allowed Islamic banks to impose penalties on the principal outstanding at Islamic interbank money market rate (IIMM) after judgment has been obtained until the judgment sum is fully settled (BNM, 2012). On top of the late payment charges, there are Islamic banks that impose a default rate on their customers (Abdul Rahim & Buang, 2021). The default rate is the higher profit rate that customers have to pay if they default on their payments.

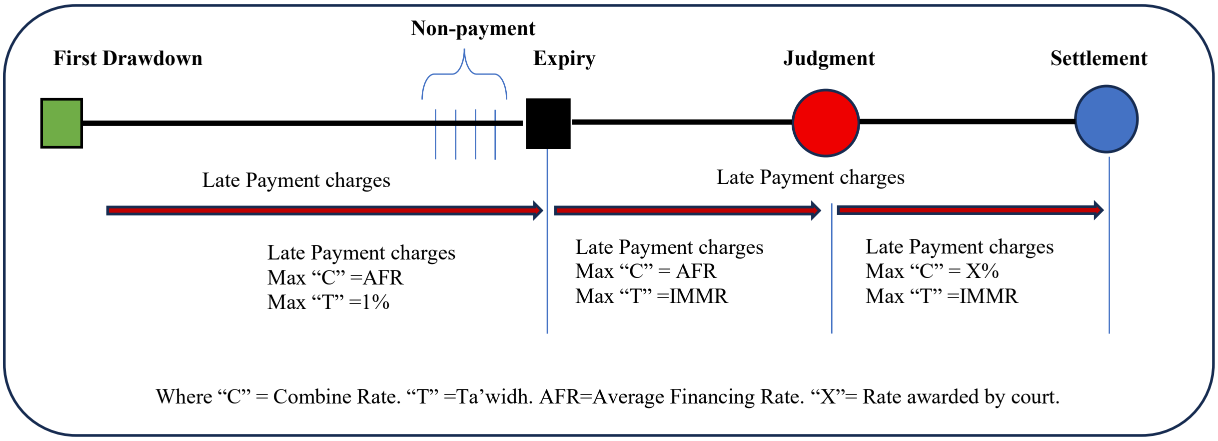
For legal action cases, the penalty on late payment charges can only be charged up until the date judgment is obtained as per the diagrams below. After the judgment has been obtained, a penalty at the rate prescribed by the court would apply to the judgment sum. Diagram 1 and 2 shows the calculation of late payment for judgment cases before and after maturity of financing. The penalty interest charged by conventional banks is in the range of between 2% to 5% of the outstanding balance and the penalty interest is compounded and added to the balance of the loan (Ezani Yaakub et al., 2014). However, with effect from 1 January 2012, conventional banks are only allowed to charge a penalty of not more than 1% of the amount in arrears (on a daily rest basis) which excludes credit card and hire purchase loans and they are not allowed to add the penalty charges to the outstanding amount in arrears for the calculation of interest due (Bank Negara Malaysia, 2012).

Diagram 1: Imposition of late payment penalty before maturity



Source: BNM guideline on late payment charges for Islamic Financial Institutions (2013)

Diagram 2: Imposition of late payment penalty after maturity



Source: BNM guideline on late payment charges for Islamic Financial Institutions (2013)

3. Methodology

This research adopts a qualitative approach to achieve its objective, and secondary data will be the main source for this research. It includes BNM policy papers and guidelines, related court cases of both Islamic and conventional home financing as well as the resolution of the SAC of BNM which were obtained from Bank Negara Malaysia's website, and other reliable internet sources.

Among the policy papers and guidelines of BNM referred to are guidelines on the imposition of fees on financial products (2012), guidelines on Ibra'/Rebate for Sale-Based Financing (2013), guidelines on Late Payment Charges for Islamic Financial Institutions (2013), guidelines on Classification and Impairment Provisions for Loans/Financing (2015), and Credit Risk Policy (2023). Reference is also made to the Bank Negara Shariah Advisory Council Resolution which was also issued by Bank Negara Malaysia. There are ten (10) court cases related to default cases of Islamic home financing and ten (10) conventional housing loans selected which will be discussed in the next section.

Findings: Comparative Analysis of Default Cases among Islamic and Conventional Home Financing

This section highlights findings from document analysis of court cases of default, both by Islamic and Conventional customers as reported by the Malaysian Law Journal. Table 1 lists default cases of financing granted by Islamic banks since 1994 and Table 2 reports lists of cases of loans by conventional banks in Malaysia from as early as 1990. It is observed that from 1994 up until 2010, most of the Islamic financing cases were based on the Bay Bithaman Ajil contract as it was the preferred concept used then. Cases involving Tawarruq came after 2012. This is parallel to the Malaysian Islamic banking industry practices for each substantive period. Even though these two contracts are different, yet the basis of these contracts are sale contract, and the method used to determine the claimed amount was similar that is the balance of the selling price. Among the earliest reported cases were Bank Islam Malaysia Berhad v Adnan bin Omar (1994) and Affin Bank Berhad v Zulkifli Bin Abdullah (2003). A similar method of default cost calculation was adopted for the rest of the cases which are based on Ijarah, Istisna', and Bay' Inah contracts. These practices continued until the recent case of MBSB Bank Bhd V Hiew Yee Sin & Anor (2025) where the contract of financing is Tawarruq.

As observed in Table 2, all the conventional housing loans were offered based on loan contracts. Among the cases reviewed are Citibank Na V Ibrahim Bin Othman (1990), Perwira Affin Bank Berhad V Tan Tien Ser (1994), Phileoallied Bank Berhad V Bhupinder Singh & Anor (1995), and RHB Bank Bhd V Zalifah Bte Juan & Anor (2006). Based on the reported cases, the amount claimed by the conventional banks consists of the principal balance outstanding and interest accrued at the point of termination. There is no selling price imposed in conventional housing loans compared to the Islamic home financing as they adopted loan contracts, and the banks only claimed the interest due to them at the point of default.

Based on a comparative analysis of the default cases under study, it is found that the Islamic banks claimed a higher cost of default compared to their conventional counterparts. This is due to the types of contracts as well as the rate imposed on the respective contracts (ceiling rate used by the Islamic banks and effective rate used by the conventional banks). It can be concluded that the method used by both banks to determine the cost of default is different and unfortunately, the financial effect is worse on the Islamic banks' customers where the banks charged the maximum rate (ceiling) to determine the default cost instead of using an effective rate. It is worrying that this practice remains the same until recent years even though the contract of home financing has evolved. Reported court cases such as Bank Islam Malaysia Berhad v Adnan Omar [1994] 3 CLJ 735; [1994] 3 AMR 44; [1994] 4 BLJ 372, Affin Bank Berhad v Zulkifli Abdullah [2006] 3 MLJ 67, Bank Islam Malaysia Bhd v Azhar Osman & Other Cases [2010] 5 CLJ 54 [2010] 1 LNS 251. and MBSB Bank Bhd V Hiew Yee Sin & Anor (2025) have indicated that the amount claimed by Islamic banks is significantly higher than that of conventional banks.

Last but not least, in the case of Bank Muamalat Malaysia Berhad and Others v Redha Resources Sdn Bhd and Others, Bank Muamalat Malaysia Berhad (Bank Muamalat), Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat) and Pembangunan Malaysia Berhad (Bank Pembangunan) granted a syndicated financing of RM125.8 million to Redha Resources Sdn Berhad (Redha) in August 2007 to undertake a concession known as *''Cadangan Membina, Mengendali Dan Memindahmilik Secara Perkongsian Sektor Awam Dan Swasta Untuk Pembangunan Kediaman Pelajar Dan Pusat Pelajar Kolej Universiti Islam Selangor bertarikh 07.03.2006'.* The concession involves the carrying out of, amongst others, the design, building, and completion of student accommodation and student centre of Kolej Universiti Islam Selangor (the Project) by Redha. The facilities granted were an Istisna' facility of RM87.4 million by Bank Muamalat and Bank Rakyat and a Bai Al-Inah facility of RM38.4 million by Bank Pembangunan. The selling prices of the two facilities were RM214.1 million and RM148.69 million respectively. Redha defaulted in the payment of the facilities and Bank Muamalat as the facility agent terminated the facility in January 2014, claiming a sum of RM326,669,571.59, which is the balance of the selling price of the two facilities.

Table 1: List of Islamic bank's legal action cases extracted from Malaysia's Law Journal

No.	Case Name	Year	Contract	Purchase price	Selling price	Default After	Amount Claimed
1.	Bank Islam Malaysia Berhad v Adnan bin Omar	1994	BBA	265,000	583,000	8 years	583,000
2.	Affin Bank Berhad v Zulkifli Bin Abdullah	2003	BBA	394,172	992,363	1.5 years	958,998
3.	Bank Muamalat Malysia Berhad V Kong Sun Enterprise Sdn Bhd.	2006	Ijarah	22,000,000	38,540,747		36,200,000
4.	Malayan Banking Bhd v Marilyn Ho Siok Lin	2006	BBA	500,000	995,205.64.	3 years	928,589.12
5.	Malayan Banking Berhad v Yakop Oje	2007	BBA	80,094	184,094	3 years	167,797
6.	Bank Muamalat Malaysia Berhad and others v Redha Resources Sdn Bhd and others	2015	Istisna'	87,400,000	214,100,000	7 years	326,667,000
			Inah	38,400,000	148,690,		
7.	AmBank Islamic Berhad v Seacera Group Berhad	2020	Tawarruq	1,260,000	1,269,360	3 years	1,877,526
			Tawarruq	5,000,000	6,800,000		6,141,410
			Tawarruq	4,820,300	4,889,252		4,889,842
8.	Bank Islam Malaysia Bhd v Azhar bin Osman	2009	BBA	177,960	451,895.04	NA	391,634.66
9.	Bank Islam Malaysia Berhad V Lim Kok Hoe and Koh Hsia Ping	2009	BBA	145,800.00	450,954.00.	7 years	370,425.05
10	Bank Islam Malaysia Berhad v Lim Soo Kok	2020	Tawarruq	6,039,030.42	NA	6 years	11,190,144.25
11	MBSB Bank Bhd V Hiew Yee Sin & Anor	2025	Tawarruq	816,941.70.	3,214,848.00	4 Years	2,967,659.23

Source: Authors' Findings

Table 2: List of conventional legal action cases taken from Malaysia Law Journal

No.	Conventional Housing Loan Default Cases	Year	Contract	Loan Amount	Default after	Amount Claimed
1.	Citibank Na v Ibrahim Bin Othman	1990	Loan	224,000	2 years	239,659
2.	Perwira Affin Bank Berhad v Tan Tien Ser	1994	Loan	205,000	NA	250,754
3.	Phileoallied Bank Berhad v Bhupinder Singh & Anor	1995	Loan	359,000	2 years	376,190
4.	RHB Bank Bhd v Zalifah Bte Juan & Anor	2006	Loan	90,000	3 years	90,477
5.	Alliance Bank Malaysia Berhad v Lim Vincent [2010] MLJU 1385	2010	Loan	357,700.00	7 years	444,298.72
6.	CIMB Bank Berhad V. Sivadevi Sivalingam	2019	Loan	185,320.00.	15 years	549,245.60
7.	Malayan Banking Berhad (3813-K) v Rosiah Binti Ahmad	2021	Loan	1,000,000.00	8 Years	383,290.08
8.	CIMB Bank Bhd V Yap Wee Leong	2021	Loan	2,040,000.00	1 year	2,023,571.41
9.	Bank Pertanian Malaysia Berhad V Abdul Razak Bin Ali	2020	Loan	600,000 00	13 years	795,189-89
10.	Standard Chartered Bank Malaysia Bhd V Joyce Hayati Tan	2024	Loan	2,205,000.00	6 years	2,131,558.15

Source: Authors' Findings

Findings: Simulation on Differences of Default Cost Calculation Method between Islamic and Conventional Home Financing

This research conducts a simulation analysis to dig into the calculation parts of the Islamic and conventional financing taking Affin Bank v Zulkifli bin Abdullah court case as an example. Table 3 below presents a table of simulations on the total amount of claims by an Islamic Bank. In Affin Bank Berhad v Zulkifli bin Abdullah, Zulkifli was granted a staff house financing of RM346,000 under the Islamic concept of Bai Bithaman Ajil for 18 years payable via 216 monthly instalments of RM2,161.33 with a selling price of RM466,847.25. When he resigned, the balance of RM394,172.06 was restructured with a new selling price of RM992,363.40 payable over 25 years via 60 monthly payments of RM2,500.00 and 240 monthly payments of RM3,509.84. When he defaulted in 2003 after making payments amounting to RM33,454.19 of the restructured facility, Affin sued him for RM958,997.21.

Table 3: Simulation on the amount of claimed by Affin Islamic Bank

No	Date	Details	Credit (RM)	Debit (RM)	Balance of Selling Price (RM)
0	01/12/1999	Disbursement		394,172.06	394,172.06
	01/12/1999	Profit @ 9.0%		598,191.94	992,364.00
1	31/01/2000	Payment	2,500.00		989,864.00
2	29/02/2000	Payment	2,500.00		987,364.00
3	31/03/2000	Payment	2,500.00		984,864.00
4	30/04/2000	Payment	2,500.00		982,364.00
5	31/05/2000	Payment	2,500.00		979,864.00
6	30/06/2000	Payment	2,500.00		977,364.00
7	31/07/2000	Payment	2,500.00		974,864.00
8	31/08/2000	Payment	2,500.00		972,364.00
9	30/09/2000	Payment	2,500.00		969,864.00
10	31/10/2000	Payment	2,500.00		967,364.00
11	30/11/2000	Payment	2,500.00		964,864.00
12	31/12/2000	Payment	2,500.00		962,364.00
13	31/01/2001	Payment	2,500.00		959,864.00
14	28/02/2001	Payment	954.19		958,909.81
			33,454.19		

Table 4 presents the simulation of the same case, and the total claimed amount by conventional bank in case of default. As we can see in the tables, in the case of Affin Bank Berhad v Zulkifli Bin Abdullah, if the facility were given under the conventional loan, the amount claimed would be approximately RM405,709.19 which is much less than the amount claimed by Affin Bank Berhad of RM958,997.94.

Table 4: Simulation On the Amount Claimed By Conventional Banks

			Int @			
No	**Date**		**9.00%**	**Debit**	**Credit**	**Balance**
1	01/12/1999	Disbursement	394,172.06			394,172.06
2	01/12/1999	31/12/1999		2,956.29		397,128.35
3	01/01/2000	31/01/2000		2,978.46	2500	397,606.81
4	01/02/2000	29/02/2000		2,982.05	2500	398,088.86
5	01/03/2000	31/03/2000		2,985.67	2500	398,574.53
6	01/04/2000	30/04/2000		2,989.31	2500	399,063.84
7	01/05/2000	31/05/2000		2,992.98	2500	399,556.82

8	01/06/2000	30/06/2000		2,996.68	2500	400,053.49
9	01/07/2000	31/07/2000		3,000.40	2500	400,553.90
10	01/08/2000	31/08/2000		3,004.15	2500	401,058.05
11	01/09/2000	30/09/2000		3,007.94	2500	401,565.99
12	01/10/2000	31/10/2000		3,011.74	2500	402,077.73
13	01/11/2000	30/11/2000		3,015.58	2500	402,593.31
14	01/12/2000	31/12/2000		3,019.45	2500	403,112.76
15	01/01/2001	31/01/2001		3,023.35	2500	403,636.11
16	01/02/2001	28/02/2001		3,027.27	954.19	405,709.19
				44,991.32	33,454.19	

Source: Authors' Findings

From the comparative analyses done above, we can see that Islamic banks calculated the profit for the duration of the financing upfront to become the selling price of the facility and derived the cost of default by deducting the total amount paid by the customers, (Financing amount (RM394,172.06) + Profit for the duration of the facility (RM598,191.94) – total payment made by customers (RM33,454.19). Conventional banking takes the principal amount (RM394,172.06) and calculates the total interest monthly (RM44,991.32) into the customer's account less whatever payments that have been made by the customer (RM33,454.19).

Findings: Comparative Analysis of Default Cost Calculation for Tawarruq-based Home Financing and Conventional Housing Loan

The Malaysian Islamic Banking industry currently relies heavily on Tawarruq contract to structure almost all Islamic banking products. Tawarruq is a sale-based contract which involves four parties at the same time (bank, customer, commodity trader 1, commodity 2). It was introduced in the market to mitigate the issue of Bay Inah which happened in the BBA contract. As of today, Tawarruq is considered the best by Islamic banking practitioners given that there is no other alternative in place. A study conducted by Ibrahim and Sapian (2020) found that around 63 per cent of Islamic banks adopted Tawarruq for their home financing facility in 2020. Regulators, Islamic scholars, and practitioners are currently struggling to explore new contracts or the existing Islamic contract that may become the alternative to the Tawarruq that may bring benefits and fairness to all parties. The culture of Tawarruq-centred has attracted at least four possible risks which are reputation, credit, legal, and compliance risks (Kahf and Habbani, 2016). While all parties are trying to figure out the best alternative to the Tawarruq, the other side of the Islamic banking practices which is the treatment of default cost calculation is found to be neglected and deemed not comply to the Shariah which promotes fairness to all parties. One of the legal maxims has stated that 'The Fundamental Requirement in All Contract is Justice'. It is therefore the responsibility of the Islamic banking practitioners to ensure that the method to calculate the cost of default brings fairness to the customers who are in difficult situations.

In sales-based financing, a floating or variable rate of financing is adopted where the selling price is determined by the Ceiling Profit Rate and monthly instalment is calculated based on the effective profit rate (variable rate). In case of default, the treatment is similar to the other sale-based products as laid out in Bank Negara Credit policy guidelines which state that the Islamic banks may choose to rehabilitate the facility by either rescheduling the payments for the remaining balance or restructuring the outstanding balance to a new facility or initiate recovery action against the customer and any security pledged. The Islamic banks may also impose a Penalty (Ta'widh) and compensation (Gharamah) on the default account.

Table 5 illustrates the difference between the amount claimed by Islamic banks under the variable rate feature of Tawarruq-based home financing and conventional housing loan, if a customer was granted a house financing facility of RM644,704.00 and at an interest/profit rate at that point (variable rate) is 3.95% for 35 years. The monthly instalment would be RM2,835.28 regardless of whether the financing is conventional or Islamic. However, Islamic banks would have a selling price calculated at a rate higher than the prevailing rate and in this instance, the contracted ceiling profit rate is 10.25% per annum. The selling price for Islamic financing would be RM2,379,728.40. If the customer defaults the monthly instalment on the 117 months and the banks were to terminate the facility and initiate recovery action on the 120th month, the comparison of the cost of default between the Islamic and conventional banks would be as shown in Table 5 below: -

Table 5: Comparison of the cost of Default Cost Calculation between Islamic and Conventional Financing

		Islamic	**Conventional**
Loan/Financing Amount	:	RM644,704.00	RM644,704.00
Interest/Profit Rate (variable rate)	:	3.95%	3.95%
Cap/ contracted Rate		10.25%	NA
Duration	:	35 years	35 years
Selling Price	:	(Instalment at cap rate x no of months) (5,666.02 X 420) RM2,379,728.40	NA
Monthly instalment = P (r(1+r)^n)/((1+r)^n-1)	:	(644,704.00 x 0.0043978) 2,835.28	(644,704.00 x 0.0043978) 2,835.28
No Instalment paid Total instalment paid. 1st default	: : :	116 RM328,892.48 117th Instalment	116 RM328,892.48 117th Instalment
Facility terminated/ legal action initiated.	:	120th month	120th month
Amount claim.	:	(Balance of selling price). RM2,050,835.92	(Outstanding Principal + Accrued Interest) RM551,616.75

Source: Authors' Findings

The amount claimed by Islamic banks is more than triple than that of conventional banks and this will be the amount reflected in the Credit Tip-Off Service (CTOS) report.

The maximum amount that an Islamic bank may collect from its customers is the balance of the selling price. However, in the event of early settlement before the expiry of the facility, Islamic banks will grant a rebate *(ibra')* equivalent to the future profit, making the settlement amount at par with that of conventional banks. Rebate (*ibra*' will also be given if the customers were to settle the financing after legal action has been initiated (Alfatakh, 2020).

Ibra' is defined as a waiver that Islamic banks may give to their customers upon early settlement of their facility. It was given at the sole discretion of the Islamic banks as there was no provision in the contract for Islamic banks to give *Ibra'* to their customers (Bank Negara Malaysia, 2013). The practice of giving *Ibra'* among Islamic banks differs as there were banks that include the *Ibra'* clause in their letter of offer and legal documents while others don't. Some Islamic banks did not include the *Ibra'* clause in their financial agreement for fear that it would raise the issue of *gharar* (uncertainty) in the selling price. However, the absence of the provision also raises disputes between the Islamic banks and customers as evidenced by the case of Bank Islam Malaysia Berhad v Adnan bin Omar [1994] 3 CLJ 735 / [1994] 221 MLJU (Bank Negara Malaysia, 2010). To harmonize the practice of Islamic banks and provide greater transparency and clarity, BNM's SAC had at their 13th meeting on 10/4/2000, resolved that Islamic financial institutions may incorporate a clause undertaking to provide *Ibra*' to customers who make early settlements in their legal documents. Islamic financial institutions are expected to honour the said undertaking. However, the guidelines only illustrate that ibra' or rebate will be given upon settlement of the facility (Bank Negara Malaysia, 2013).

4. Discussions

The method of deriving the cost of default for Islamic banking has remained unchanged since Islamic banking was introduced in Malaysia over 40 years ago despite the development in other areas of Islamic banking. Imposing penalties on late payment charges and judgment sums was considered non-shariah compliance before Bank Negara Malaysia's Shariah Advisory Council allowed Islamic banks to impose penalties on late payment charges in 1998. Variable rate BBA was introduced in 2003 to mitigate interest rate movement risk faced by Islamic banks from fixed-rate BBA. These changes were made so that Islamic banks could compete with conventional banks.

The mechanisms introduced by Bank Negara Malaysia, such as the introduction of the variable rate and the imposition of penalty and Gharamah on late payment charges and judgment sum seem to be in favour of the Islamic banks as they resulted in the amount to be claimed in the event of default to be higher than before their introduction. Although the requirement to include the banks' undertaking to give *Ibra'* or a rebate in the legal documents was aimed at protecting the customers, it does not seem to have any impact on the method of deriving the amount to be claimed in the event of default. Apart from *ibra'* or rebate on the full settlement before the expiry date of the facility, there are no specific directions on when the *ibra'* on the difference between the contracted rate and effective rate is to be reflected in the customer's account. Instead, the guidelines mentioned that *ibra'* or rebate is still at the discretion of the Islamic banks.

The practice of claiming the balance of the selling price has been criticized by customers and the Malaysian Islamic Consumer Association (PPIM) which claimed that the Islamic banks are oppressive in treating their customers who defaulted on their payments and not in line with Islamic teaching (Persatuan Pengguna Islam Malaysia, 2020). PPIM highlighted two cases of an Islamic bank that claimed a sum of RM175,000.00 for financing which only RM36,000.00 has been disbursed and another case where RM36,000.00 was disbursed but a claim of RM240,000.00 was made on customers. In contrast, Conventional banks only claim the outstanding amount disbursed plus accrued interest, if any. This is evidenced by the amount claimed by a conventional bank for RM64,000.00 for the amount disbursed of RM46,000.00 for the same project which was abandoned and uncompleted (PPIM, 2014).

According to Md Dahlan et al., (2017), in a study conducted in 2015, purchasers Ahmad Bin Mat Husin and Ana Marliana Binti Sarian (purchasers), bought an apartment for RM98,000.00 from the developer, Simpulan Chemerlang Sdn Bhd. The purchaser was granted financing of RM88,000.00 by BIMB. The housing development project was abandoned after the completion of stage two (the commencement of the work below ground level including piling, pile caps, and footing) and BIMB disbursed a sum of RM26,700.00 for the said stage. The monthly payment has been started since the first disbursement. Realising the project had been abandoned, the purchasers stopped making payments to BIMB resulting in BIMB initiating legal action against the purchasers for the balance of the selling price of RM239,945.72.

The amount claimed by Islamic banking in the event of default is significantly higher than that of conventional banks. The higher cost of default is due to the different methods of deriving the amount to be claimed in the event of default by the two banking systems. While conventional banks simply take the balance of outstanding principal and accrued interest, Islamic banks add one more element to the formula, the future profit for the remaining unexpired period of the financing. Thus, the longer the unexpired period, the bigger the gap in the cost of default between Islamic banks and conventional banks.

Ironically, the practice of claiming the balance of the selling price by Islamic banks is in line with the Bank Negara Malaysia policy document, Guidelines on *Ibra'* (rebate) for sale-based financing issued on 1st November 2011 and updated on 31 January 2013 which says:

> *"In a sale-based financing contract, a customer is required to settle the **selling price (comprising the principal sum and profit margin)**, regardless as to whether the contract is on a deferred or spot basis. For deferred payment financing, principally an Islamic Banking Institution has the right to claim from the customer the outstanding selling price that will also include the deferred profit portion even in early settlement*" (BNM, 2013, p.1).

Although the method of calculating the cost of default as practised by Islamic banks does not contravene any resolution of Bank Negara SAC, it is prudent for all stakeholders such as Islamic bankers, Bank Negara Malaysia, and the Shariah committee to look into this issue to come out with an alternative method of calculating default cost to uphold the spirit of Maqasid Shariah (protection of property) and at the same time remain competitive in the banking industry.

Bank Negara Malaysia is highly encouraged to revisit its guidelines on the method of calculating the amount to be claimed in the event of default to at least include the rebate on the difference between the contracted rate to be given and reflected in the customer's account monthly when customers pay their instalment and that ibra' on the difference would be given and reflected in the customer's account when the facility is terminated. This will reduce the cost of default significantly as the longer the customer has been paying the higher the rebate given and the lower the default cost. Bank Negara should also require Islamic banks to state the method of calculating the amount to be claimed in the event of default in their security documents, so that the customers are aware of the consequences should they default on their monthly commitment. As it is, the practice of calculating the cost of default has remained unchanged even after Bank Negara Malaysia issued the guidelines for Ibra/rebate on sale-based products in 2013.

Limitations of this study.

This research deals only with the calculation of default for sale-based home financing products in Malaysia. Further research should be conducted on products and the calculation of the cost of default on products using other contracts, such as profit and loss sharing and leasing contracts. A study may also be conducted to compare the method of calculating the cost of default between Malaysia and other countries.

References

Abdul Muneem, Mohd Razif, N., & Ali, A. (2020). Issues On Restructuring Of A Financing Facility In Malaysian Islamic Banks. *Journal of Shariah*, 105-126.

Abdul Rahim, M., & Buang, A. (2021). Issues On Restructuring Of A Financing Facility In Malaysian Islamic Banks. *The Journal of Muamalat and Islamic Finance Research*, 111-126.

Aishath Muneeza, Zainudin , N., Ali , R., & Ibrahim, S. (2019). Application Of Ta'widh And Gharamah In Islamic Banking In Malaysia. *The Journal of Muamalat and Islamic Finance Research, 16*(1), 1-16.

Alfatakh, A. (2020, June 19). *Discussions on Islamic Banking*. Islamic Bankers Resource Centre. https://islamicbankers.me/

Association Of Banks In Malaysia. (n.d.). *Association Of Banks In Malaysia*. Association Of Banks In Malaysia. https://www.abm.org.my/archives/history-of-the-banking-industry-in-malaysia/

Bank Negara Malaysia. (2010, October). *Shariah Resolutions In Islamic Finance Second Edition*. Retrieved 11 19, 2024, from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bnm.gov.my/documents/20124/66548/shariah_resolutions_2nd_edition.pdf

Bank Negara Malaysia. (2012, 06 01). *Islamic Bankers*. Retrieved 11 17, 2024, from Islamic Bankers. https://islamicbankers.me/wp-content/uploads/2013/12/20120601-guidelines-on-the-imposition-of-fees-and-charges-on-financial-products-and-services.pdf

Bank Negara Malaysia. (2013, January 31). *Guidelines on Ibra' (Rebate) for Sale-Based Financing*. Retrieved 11 19, 2024, from Bank Negara Malaysia. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bnm.gov.my/documents/20124/938039/20111101_B_PL_0030.pdf/84fda53c-1f02-68a7-6193-4c687bd217c7?t=1592211232240

Bank Negara Malaysia. (2013, January 31). *Newly published: Guidelines on Ibra' (Rebate) for Sale-Based Financing*. Bank Negara Malaysia. https://www.bnm.gov.my/documents/20124/761700/20110111_DFI_PL_0008.pdf

Bank Negara Malaysia. (2015, April 6). *Classification and Impairment Provisions for Loans/Financing*. https://www.bnm.gov.my/documents/20124/761709/Classification_Impairment_Provisions_for_LoansFinancing_20150406.pdf

Bank Negara Malaysia. (2023, July 31). *Credit Risk*. Retrieved 11 19, 2024, from https://www.bnm.gov.my. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bnm.gov.my/documents/20124/938039/pd_Credit_Risk_2023.pdf

Bank Negara Malaysia. (2024, October 26). *Bank Negara Malaysia*. bnm.gov.my. https://www.bnm.gov.my/islamic-banking-takaful

Domat, C. (2024, August 1). *2024 Global Finance Magazine*. Retrieved 11 17, 2024, from Global finance. https://gfmag.com/banking/islamic-finance-just-muslim-majority-nations/

Ezani Yaakub, Mohd Dani Muhamad, Asmak Husin, & Solahuddin Shahruddin. (2014). A Revisit to the Practice of Late Payment Charges by Islamic Banks in Malaysia. *Jurnal Pengurusan*, 185-190.

Hassan, A., Haron, M., Mohamed, M., & Mana, B. (2017). Classification of defaulters in the payment of debt in Islamic banking practices. *Al-Shajarah: Journal of The International Institute of Islamic Thought and Civilization (ISTAC)*, 85-103. https://doi.org/https://doi.org/10.31436/shajarah.v0i0.610

Hassan, M., Muneeza, A. M., & Mustapha, Z. (2021). Mechanisms to Handle Default Cases in Islamic Banking: The Malaysian Approach. *International Journal of Economics and Politics 2(1): 97-115, 2021*, 97-115. https://doi.org/DOI:10.29252/jep.2.1.97

Islamic Financial Services Act,. (2013, June 30). *Laws of Malaysia*. Bank Negara Malaysia. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bnm.gov.my/documents/20124///8102422b-e6dd-d149-8db0-e3637e89ed5c

Kamaruzaman, N., & Hassan, R. (2023). Responsibilities Of Customers And Islamic Banks To Manage And Recover Non-Performing Financing. *International Journal of Islamic Economics and Finance Research.*, 91-102.

Markom, R., Ali Pitchay, S., Zainol, Z., Abdul Rahim, A., & Abdul Rahim Merican, R. (2011). Adjudication of Islamic banking and finance cases in the civil courts of Malaysia. *European Journal of Law and Economics*, 1-36.

Md Dahlan, N., & Syed Abdul Kader Aljunid, S. (2017). Shariah And Legal Issues In Housing Buying In Malaysia: The Legality Of Bay'Bithaman-Al-Ajil ('BBA') In The Light Of Abandoned Housing Projects.

Md Dahlan, N., Shuib, M., & Mohd Noor, F. (2017). Issues in Bay' Bithaman Al-Ajil Islamic Home Finance ('BBA') in Abandoned Housing Projects In Malaysia: An Examination of 'Gharar'. *Journal of Law, Policy and Globalization, 57*, 122-132.

Mohamad Lusfi Yaakob, N. A. (2018). Non-Delivery of Houses Purchase Under Al-Bai Bithaman Ajil Contract . *National Academy of Managerial Staff of Culture and Arts Herald*.

Mohamad, A., & Trakic, A. (2013). Application and Development of Ibra' in Islamic Banking. *The Law Review*.

Nur Hidayah Kamaruzaman, & Rusni Hassan. (2023). Responsibilities Of Customers And Islamic Banks To Manage And Recover Non-Performing Financing. *International Journal of Islamic Economics and Finance Research.*, 91-102.

Persatuan Pengguna Islam Malaysia. (2020). *PPIM.TV*. Retrieved 11 19, 2024, from persatuan pengguna islam malaysia. https://www.youtube.com/watch?v=yRYsx6YkFk0&ab_channel=TVPPIM

Siddharta, A. (2024, 11 6). *Value of total assets of commercial banks in Malaysia from 2014 to 2023*. Retrieved 11 18, 2024, from Statista. https://www.statista.com/statistics/1420918/malaysia-commercial-banks-total-assets/

Siddharta, A. (2024, 11 6). *Value of total assets of Islamic banks in Malaysia from 2014 to 2023*. Retrieved 11 18, 2024, from Statista. https://www.statista.com/statistics/1420924/malaysia-islamic-banks-total-assets/#:~:text=In%202023%2C%20the%20value%20of%20total%20assets,country%20has%20been%20steadily%20increasing%20every%20year.

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 35-52
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Rationale for Islamic Banking Windows and Issues Impeding Their Effectiveness: Insights from Bangladesh

Mezbah Uddin Ahmed[a*], Md. Mahabbat Hossain[b]

[a] *Centre of Excellence for Applied Shariah in Economics and Finance, INCEIF University, Kuala Lumpur, Malaysia*
[b] *Bangladesh Institute of Bank Management, Dhaka, Bangladesh*

**Corresponding author: mezbah.u.ahmed@gmail.com*

Abstract

This study evaluates the rationale for introducing Islamic Banking Windows (IBWs) in Bangladesh, particularly in light of governance failures, high levels of non-performing investments, and the reputational damage suffered by several full-fledged Islamic banks. It also examines the sources of scepticism surrounding IBWs and provides practical recommendations to enhance their credibility and institutional strength. The study adopts a qualitative methodology, combining content analysis, semi-structured interviews, and focus group discussions (FGDs). This triangulated approach strengthens the findings by cross-validating evidence from multiple sources. The findings suggest that, although IBWs often face scepticism, they play a critical role in providing credible Islamic banking alternatives, especially during periods when full-fledged Islamic banks are in crisis. The study further identifies key operational and regulatory challenges affecting IBWs that must be addressed to ensure their effective functioning and support the orderly development of the Islamic banking sector. It systematically analyses the rationale, regulatory landscape, and operational dynamics of IBWs in Bangladesh. Drawing on the perspectives of those directly involved in IBWs, the study captures real-world practices and constraints, formulates recommendations grounded in practical realities, and brings practical insights to the Islamic finance literature. The findings and recommendations are relevant not only to Bangladesh but also to other jurisdictions where Islamic banking is emerging and conventional banks are considering establishing IBWs.

Keywords: Islamic banking, Islamic banking windows, Shariah governance, regulations.

1. Introduction

While interest-based borrowing and lending form the foundation of conventional banking, Islamic banking must strictly avoid interest and operate in accordance with the ethical and contractual principles derived from Shariah. Despite the fundamental differences between these two systems, Islamic banking operations are now commonly embedded within conventional banks worldwide. This trend began in the early stages of Islamic banking when Western banks started accepting interbank deposits from Islamic banks and offering tailored investment products for high-net-worth clients from the Middle East. As these banks became more familiar with the principles of Islamic finance, they introduced Islamic banking windows (IBWs) as dedicated units providing Shariah-compliant financial services (Azmi, n.d.; Khan & Bhatti, 2008). Today, IBWs operate not only within Western banks but also across local conventional banks in many Muslim-majority countries. According to the London Stock Exchange Group (2025), 325 conventional banks in 66 countries currently operate IBWs.

In Bangladesh, the Islamic banking landscape comprises ten full-fledged Islamic banks (five of which are in the process of merger) and thirty conventional banks operating IBWs (with a local regulatory distinction based on central bank approval: eight as 'branches', thirteen as 'windows', and nine as both). As of September 2025, IBWs accounted for 13.89% of total Islamic banking deposits and 8.13% of total Islamic banking

Article history
Received: 3 July 2025
Accepted: 23 February 2026

investments (Bangladesh Bank, 2025). Despite the growing presence, IBWs continue to face scepticism regarding their Shariah compliance. Critics highlight their operational dependence on conventional host banks, the potential commingling of Islamic and conventional funds, and weaknesses in Shariah governance. Consequently, Bangladesh Bank has at times considered discontinuing IBWs altogether (ISRA, 2023), most recently through provisions included in the draft Islamic Bank Company Act 2024.

Meanwhile, Bangladesh's banking sector is experiencing a severe crisis marked by governance failures, fraudulent transactions, high levels of non-performing investments, liquidity shortages, and an erosion of depositor confidence. These vulnerabilities are particularly pronounced among several full-fledged Islamic banks (White Paper Committee, 2024). Nobel Laureate Dr. Muhammad Yunus, serving as the Chief Adviser (equivalent to Prime Minister) of Bangladesh, starkly described the situation: 'Banks... suddenly you see, is not a bank... it is a robbery outfit.' Similarly, the Governor of Bangladesh Bank, Dr. Ahsan H. Mansur, remarked that 'oligarchs took over the whole banking system, not to control those banks only, but to control and rob, taking the money out of the country' (Al Jazeera English, 2025). In response to the acute distress, particularly among five full-fledged Islamic banks that collectively hold BDT 1.47 trillion in non-performing investments (approximately 77% of their outstanding investments), the central bank has initiated a plan to merge them into a single consolidated entity (Ahmed, 2025).

Against this critical backdrop, this study revisits the rationale for IBWs in Bangladesh. It contributes to both the literature and practice of Islamic finance by expanding the limited academic discourse on IBWs, particularly in a jurisdiction where Islamic banking has achieved systemic importance yet is confronting institutional stress. Drawing on evidence from a content analysis of laws and regulations applicable to Islamic banking, as well as semi-structured interviews and focus group discussions (FGDs) with industry practitioners and Shariah professionals, the study offers policy-relevant insights for conventional banks considering the establishment of IBWs, and for regulators and standard-setting bodies seeking to design effective governance and supervisory frameworks. The findings also carry broader implications for emerging markets where Islamic banking is either nascent or holds a modest market share, highlighting the critical institutional and governance conditions necessary to position IBWs as a credible vehicle for scaling up Islamic banking. Although the research focuses on Islamic banking, the findings and recommendations may also be applied to the insurance sector and other conventional financial institutions that offer Islamic financial services.

2. Literature Review

2.1 Conceptual and Regulatory Foundations of IBWs

According to the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB), an IBW refers to a component of a conventional bank that functions as a self-contained unit dedicated to Shariah-compliant financial intermediation. Although not a separate legal entity, an IBW operates as a 'bank within a bank', maintaining distinct operational, accounting, and Shariah governance structures. Globally, IBWs take several structural forms: (a) dedicated Islamic branches, (b) dedicated desks within conventional branches, and (c) digital-only platforms (AAOIFI, 2021; IFSB, 2018). Regulatory approaches to granting approval for IBWs vary across jurisdictions, although most require formal authorisation and compliance with specific Shariah governance requirements (Mejía et al., 2014).

2.2 Rationale and Strategic Significance of IBWs

The emergence of IBWs represents a pragmatic evolution from the initial model of establishing full-fledged Islamic banks. While full-fledged Islamic banks remain ideal from theoretical, operational, and governance perspectives, many jurisdictions lack the customer base, institutional capacity, and technical expertise to sustain them, particularly in markets where Islamic finance is still in its formative stage (Muhammad, 2025; Umar, 2025). The IBW model is particularly suitable in jurisdictions where Muslims are a minority and where a comprehensive legal framework for Islamic banking is still being developed (Song & Oosthuizen, 2014; Yaquby, 2025). As such, IBWs play a crucial role in enhancing financial inclusion, expanding market access, and facilitating the gradual development of Islamic financial services (Sobhani et al., 2016; Song & Oosthuizen, 2014). For conventional banks, IBWs also offer a capital-efficient and relatively low-risk pathway to enter the Islamic banking segment by leveraging existing infrastructure, human resources, and technological platforms (Sobhani et al., 2016; Ariff, 2017; Muhammad, 2025).

2.3 Operational Advantages and Market Performance

Empirical studies highlight several operational advantages of IBWs. By leveraging the infrastructure, risk management systems, and institutional experience of their host banks, IBWs can achieve economies of scale and cost efficiencies, enabling them to deliver competitive products at lower marginal costs (Ratnasari et al., 2021). Access to the host bank's funding base enhances liquidity management, particularly in markets with limited Islamic money market instruments (Song & Oosthuizen, 2014). Furthermore, IBWs promote market competition, stimulate product innovation, and create employment opportunities for Shariah-qualified professionals (Sobhani et al., 2016). Their emergence has also encouraged regulators to formalise Islamic banking guidelines and strengthen Shariah governance frameworks (Ariff, 2017). Comparative evidence suggests that IBWs often perform on par with (or even outperform) full-fledged Islamic banks (Chenguel et al., 2020; Hasan & Risfandy, 2021; Abimanyu & Tamimi, 2024; Joseph & Richard, 2025).

2.4 Shariah Compliance Concerns and Governance Challenges

Despite the positive attributes, IBWs face persistent scepticism regarding Shariah compliance, fund commingling, limited autonomy, and a narrow product range (Muhammad, 2025; Alamgir et al., 2025). Questions are present about whether IBWs genuinely embody the ethical spirit of Islamic finance or merely serve as profit-driven 'interest-free' divisions of conventional institutions (Mambodallu, 2018). Sobhani et al. (2016) and Ariff (2017) argue that many conventional banks lack the intrinsic motivation to pursue the socio-economic objectives of Islamic finance, while Bhambra (2007) questions whether genuine Shariah compliance is achievable within interest-based institutions. Umar (2025) notes that although some customers perceive IBWs as less credible than full-fledged Islamic banks, growing financial literacy and transparency have shifted attention toward product-level Shariah compliance rather than institutional identity. Abimanyu and Tamimi (2024) similarly find that customers increasingly view IBWs and Islamic banks as functionally interchangeable, prioritising service quality, returns, and ethical assurance over ownership structure.

Nevertheless, structural and governance vulnerabilities persist. The commingling of Islamic and conventional funds remains a significant compliance risk, as inadequate segregation can compromise Shariah integrity (Ariff, 2017; Song & Oosthuizen, 2014). In many cases, Islamic finance operations occupy a peripheral position within conventional banks, where board members and senior management lack sufficient expertise in Islamic finance, thereby weakening governance and oversight (Song & Oosthuizen, 2014; Alamgir et al., 2025). Operationally, IBWs may also facilitate regulatory arbitrage if insufficiently monitored, as weak Shariah governance can enable the misuse of Islamic deposits—for example, by funding conventional activities or meeting conventional banks' statutory reserve requirements (Umar, 2025). Such practices risk eroding public trust and complicating prudential supervision, particularly during periods of financial distress when reconciling Shariah compliance with systemic stability becomes increasingly challenging (Song & Oosthuizen, 2014).

2.5 Regulatory Reforms and Strengthening of Governance Frameworks

In response to the weaknesses, global regulatory initiatives have sought to strengthen Shariah governance and the operational independence of IBWs. AAOIFI's Financial Accounting Standard (FAS) 40: Financial Reporting for Islamic Windows and its Governance Standard (GS) 23: Application of Shari'ah Governance Principles to Islamic Finance Windows represent important milestones. Similarly, the IFSB has issued standards addressing supervisory and governance requirements for IBWs.

In October 2020, the Central Bank of the UAE introduced a comprehensive regulatory standard for IBWs, while Bank Negara Malaysia (BNM) issued its Policy Document titled *Islamic Banking Window* in 2024, replacing the earlier 1993 guidelines. These frameworks conceptualise an IBW as a 'bank within a bank', emphasising operational independence, clear accountability, and robust compliance mechanisms. Although implementation requires substantial investment in human capital, technology, and compliance systems, such initiatives aim to enhance institutional credibility and market confidence. As Grant Thornton UAE (2025) observes, effective governance for an IBW is as critical as that of a full-fledged Islamic bank.

2.6 Strategic Evolution and the Spin-Off Debate

Overall, IBWs embody a pragmatic balance between inclusivity, governance, and strategic intent. They offer scalable, cost-efficient mechanisms for expanding Islamic finance, provided that robust oversight, genuine commitment to Shariah compliance, and alignment with the host bank's strategy are maintained (Muhammad, 2025; Umar, 2025). However, the global debate over whether IBWs should evolve into full-fledged Islamic banks remains ongoing. While earlier policies in countries such as Qatar and Indonesia mandated spin-offs to accelerate Islamic banking growth, recent evidence suggests that forced conversions may fragment capital and weaken institutional resilience (Dja'akum et. al, 2024). Consequently, regulators generally favour a gradual, market-driven approach. Market performance also shapes outcomes, as successful IBWs often evolve into subsidiaries, whereas weaker ones consolidate or exit the market (Umar, 2025). Malaysia provides a notable example, where major institutions such as Maybank Islamic and CIMB Islamic initially operated as IBWs before transforming into Islamic subsidiaries (Ariff, 2017).

3. Research Methodology

The research adopts a qualitative approach, integrating content analysis, semi-structured interviews, and FGDs to critically examine the rationale, regulatory landscape, and operational dynamics associated with IBWs in Bangladesh. The triangulation of these methods enables cross-verification of information from multiple sources and enhances the depth and reliability of the findings. A comprehensive understanding of the rationale and issues surrounding the introduction of IBWs in Bangladesh provides the foundation for policy-level and practical recommendations to strengthen the regulatory, operational, and governance dimensions of IBWs.

The content analysis involves an in-depth review of the laws and regulations governing Islamic banking in Bangladesh to understand the prevailing legal and regulatory framework. Additionally, AAOIFI and IFSB standards are examined to assess the globally accepted norms for IBWs. The development of IBWs in Bangladesh and stakeholder perspectives are further explored through an analysis of reports published by Bangladesh Bank, annual reports of banks operating IBWs, academic articles, and newspaper reports. Given the limited number of academic studies on Islamic banking and IBWs in Bangladesh, newspaper articles serve as an important supplementary source for understanding recent market developments.

To identify the rationale for IBWs, their launch processes, and the issues contributing to stakeholder concerns (including those related to strategic planning, operational preparedness, regulatory requirements, and Shariah compliance), the study conducted 22 semi-structured interviews with stakeholders directly involved in the Islamic banking sector. The interviewees included three heads of IBWs in foreign commercial banks, five heads of IBWs in local private commercial banks, seven officers from IBWs, two project managers and consultants involved in launching IBWs, three members of Shariah Supervisory Committees (SSCs) at IBWs and full-fledged Islamic banks, and two officials from Bangladesh Bank.

Furthermore, five FGDs involving more than 100 professionals actively engaged in the Islamic banking sector were conducted to validate the identified process flow for launching IBWs, along with the associated issues and recommendations. This validation was instrumental in obtaining a comprehensive understanding of both strategic and operational perspectives.

4. Findings and Discussion

This section first presents the rationale for IBWs in the context of Bangladesh, beginning with a discussion of the arguments against the alternatives available to conventional banks for offering Islamic banking services. It then explores the motivations for these banks to implement IBWs, as well as the relevance of IBWs for the development of the Islamic banking sector. Subsequently, the process of launching IBWs is outlined, providing a foundation for identifying the operational and regulatory issues associated with their establishment and operation.

4.1 Islamic Banking Entry Pathways for Conventional Banks and Their Constraints in Bangladesh

There are three options for a conventional bank to launch Islamic banking operations: to convert the bank into a full-fledged Islamic bank, as undertaken by four banks in Bangladesh; to establish an Islamic banking subsidiary; or to set up IBWs. The research identifies the constraints for each of these options within the context of Bangladesh. These constraints are summarised in Table 1 and discussed in detail afterwards.

Table 1: Constraints in Launching Islamic Banking Operations by a Conventional Bank in Bangladesh

Option	**Major Constraints**
Conversion to a full-fledged Islamic bank	• Multiple layers of approval (board, shareholders, central bank, and court) • Amendment of all existing customer contracts • Withdrawal from Shariah non-compliant assets amidst limited availability of attractive Shariah-compliant alternatives • Significant restructuring costs, including changes to IT systems, documentation, operations, and human resources transformation • Cultural resistance and inconsistent internal commitment • Risk of legacy issues persisting after conversion
Establishing an Islamic banking subsidiary	• Regulatory uncertainty and the absence of a clear policy framework, including the repeal and subsequent reintroduction of legal provisions • Potential regulatory imposition of complete physical and operational separation • Costly structure if a leveraged operational model is not allowed • Concerns regarding the introduction of additional banks in an already crowded banking market
Establishing IBWs	• Perceived lack of genuine commitment to Shariah compliance • Operation within an interest-based banking environment, with a potential risk of fund commingling between conventional and Islamic operations • Dependence on the infrastructure and support functions of the conventional host bank • Persistent scepticism regarding managerial intent and the robustness of Sharia governance structures

Source: Authors' own

4.1.1 Conversion to a Full-Fledged Islamic Bank

Converting a conventional bank into a full-fledged Islamic bank is a significant undertaking. This process requires approvals from the board of directors, shareholders, and Bangladesh Bank, as well as amendments to the MoA, which need court approval. Additionally, consent from existing customers is required, as their contracts must be amended to comply with Shariah principles. Investments in Shariah non-compliant assets must be withdrawn and reallocated to Shariah-compliant assets, which poses a significant challenge in Bangladesh due to the limited availability of attractive Shariah-compliant investment options. Furthermore, changes to operational processes, documentation, and IT systems, along with a cultural shift in human resources and the development of necessary competencies, are critical yet challenging components of the conversion process.

Meeting these requirements demands substantial investment and effort, which well-performing conventional banks often consider commercially unjustifiable. For example, in Bangladesh, a conventional bank, despite receiving preliminary consent from Bangladesh Bank to convert to an Islamic bank, chose not to proceed because the conversion would require relinquishing high-yield conventional treasury securities without access to comparable Shariah-compliant alternatives. Moreover, the experiences of converted banks in Bangladesh suggest that legacy issues from conventional banking practices may persist long after conversion, with instances of weak Shariah governance and significant bad investments raising questions about the underlying motivations for conversion.

Unless controlling shareholders are firmly committed to conversion, whether due to religious conviction, regulatory pressure, or incentives, it is unlikely that a well-performing conventional bank would pursue full conversion. Furthermore, not all board members, senior management, or employees may share the same level of commitment to the conversion, which could undermine the effective implementation of the process.

Nonetheless, a strong commercial rationale for full conversion may exist, as the market gaps created by the severe setbacks experienced by several full-fledged Islamic banks could be seen as a strategic opportunity, allowing a converting bank to capture displaced customers and expand its market share.

4.1.2 Establishing an Islamic Bank Subsidiary

No bank in Bangladesh has established an Islamic banking subsidiary, despite it being explicitly permitted for a certain period. There are several industry concerns regarding the feasibility of establishing subsidiaries. Owing to the lack of clear policy direction on Islamic banking, uncertainties persist regarding how facilitative or restrictive Bangladesh Bank would be in granting subsidiary licences. There are concerns that Bangladesh Bank may not permit a leveraged model for such subsidiaries. If a requirement for complete physical and operational separation between the conventional parent bank and the Islamic subsidiary were imposed, it would result in excessive costs for smaller subsidiaries, potentially rendering them commercially unviable.

There is also perceived inconsistency and a lack of regulatory predictability. For example, Section 26 of the Banking Companies Act 1991 allowed conventional banks to establish Islamic banking subsidiaries, but this provision was repealed in 2023 without any publicly available justification. Although the draft Islamic Bank Companies Act 2024 has reintroduced this option, it does not provide clarity regarding the operational models to which such subsidiaries would be subject. Critics further argue that creating new Islamic banking subsidiaries could exacerbate the issue of too many banks in Bangladesh—currently, there are 61 scheduled banks, which is considerable given the size of the market—and there is ongoing pressure to reduce this number.

4.1.3 Establishing IBWs

The arguments against IBWs primarily centre on concerns regarding managerial intent and the depth of Shariah compliance. Critics contend that conventional banks establish IBWs primarily for commercial gain rather than out of a genuine commitment to Shariah principles. They argue that if a bank's commitment were truly to Shariah compliance, it would either have sought a full-fledged Islamic banking licence from the outset or converted the entire entity into an Islamic bank. The dual model has thus been characterised as 'serving two masters', reflecting the perceived tension between profit maximisation and Shariah adherence within a conventional banking framework.

Concerns about Shariah compliance are further intensified by the operational realities of IBWs, including the potential commingling of funds and reliance on conventional host-bank infrastructure, systems, and personnel within an interest-based environment. Although economically rational, this dependence on shared infrastructure reinforces skepticism regarding the robustness of segregation between Islamic and conventional operations. At the same time, implementing a strict 'bank within a bank' segregation model without allowing operational leverage may not be commercially viable.

Although boards often express interest in expanding Islamic banking activities, the underlying motivation could be portfolio diversification rather than substantive Shariah transformation. This dynamic translates into operational challenges at the management level. In some cases, it is alleged that management views 'business as primary and compliance with Shariah as secondary'. Commercial targets may influence product design, even if this weakens Shariah positioning, as reflected in remarks such as 'more business, less Shariah'.

Even where boards are cooperative and supportive, management teams, generally drawn from conventional banking backgrounds, may not prioritise Islamic banking matters, contributing to what has been described as a 'delay culture' in approving or implementing Islamic banking initiatives. One reason for this is that Islamic banking objectives are not always embedded in staff key performance indicators (KPIs). In some banks, Islamic banking units continue to be assessed using conventional performance metrics, and underperforming staff are not reassigned with the same decisiveness observed in conventional divisions. Moreover, some conventional banking executives reportedly perceive Islamic banking as a 'threat' rather than as an integrated component of the same institution.

Nonetheless, where the underlying motivation is genuinely religious or value-driven, boards reportedly provide more consistent strategic support and place greater emphasis on strengthening Shariah governance.

4.2 Strategic and Sectoral Justifications for IBWs in Bangladesh

Several compelling arguments in support of IBWs have been identified. These can be examined from two distinct perspectives: the motivations driving conventional banks to establish IBWs and the essential role of IBWs in the development of the Islamic banking sector. These perspectives are summarised in Table 2 and elaborated upon thereafter.

Table 2: Justifications for IBWs in Bangladesh

Perspectives	Economic and Strategic Drivers
Motivations for conventional banks to establish IBWs	• IBWs allow conventional banks to diversify their product offerings and enhance their competitive positioning in the growing Islamic finance market. • Prevents the migration of high-value, Shariah-compliant customers to full-fledged Islamic banks and other conventional banks with IBWs. • Provides access to the expanding Islamic financial services and asset market. • IBWs often show a stronger operating profit-to-assets ratio. • Conventional banks may channel funds into IBWs (but not vice versa), offering a broader funding base. • Islamic banking's lower Statutory Liquidity Ratio (SLR) requirement (5.5%) compared to conventional banking (13%) improves liquidity management flexibility. • Compared to establishing subsidiaries, IBWs require no additional regulatory seed capital beyond the initial setup costs.
Need for IBWs for the development of Islamic banking	• IBWs provide a credible alternative during governance, liquidity, and reputational crises affecting full-fledged Islamic banks. • Smaller-scale IBW operations offer greater flexibility for product innovation and potentially stronger Shariah oversight. • IBWs recruit Islamic finance professionals and train conventional banking staff, strengthening sector-wide human capital development. • Leveraging conventional bank infrastructure (branches and digital platforms) enhances Islamic banking visibility and outreach. • IBWs can invest in sukuk and support liquidity-constrained Islamic banks, contributing to systemic stability. • IBWs serve as a pragmatic transitional model that may eventually lead to full-fledged Islamic banking conversion.

Source: Authors' own

4.2.1 Motivations for Conventional Banks to Establish IBWs

The primary motivation for conventional banks to establish IBWs is commercial gain. This objective is not unique to conventional banks, as full-fledged Islamic banks generally pursue similar commercial objectives, with perhaps only a few prioritising ideological considerations.

The gains sought through IBWs stem from enhanced competitiveness, improved customer retention, and expanded business opportunities. By introducing Islamic banking services, a conventional bank can strengthen its competitive position, diversify its product mix, and capitalise on the growing demand for Islamic financial services. This strategy helps banks retain existing customers while attracting new ones. For example, some conventional banks establish IBWs to prevent high-value customers from migrating to other Islamic banks. Furthermore, the strong interconnectedness of Islamic finance components enables conventional banks to gain broader access to Islamic finance through IBWs. For instance, IBWs can invest in BGIS, an opportunity not always directly available to conventional banking operations.

In addition to expanded business opportunities, IBWs benefit from lower funding costs and enhanced liquidity due to broader access to deposits. Conventional banks are permitted to place funds in Islamic banking accounts, whereas the reverse is not permitted under Shariah. Moreover, Islamic banking operations in Bangladesh are subject to a lower SLR requirement compared to conventional banking, resulting in greater liquidity and higher-yield investment opportunities. The SLR for Islamic banking is 5.5%, compared to 13% for conventional banking. Entry barriers are also relatively low, as—apart from initial setup costs—there is no seed capital requirement for establishing IBWs. In many cases, by leveraging the host bank's infrastructure for various functions, IBWs generate a proportionally higher share of operating profit than their share in the host bank's total assets.

4.2.2 Need for IBWs for the Development of Islamic Banking

As several full-fledged Islamic banks in Bangladesh grapple with a significant reputational crisis, it has become increasingly necessary for reputable conventional banks to offer Islamic banking services. Several conventional banks are perceived as stronger in governance and service quality. This confidence has been reflected in the deposit behaviour of Islamic banking customers, many of whom have transferred their deposits to IBWs or even to conventional banks.

As shown in Figures 1 and 2, the share of IBWs in total Islamic banking deposits increased from 5.63% (BDT 67.07 billion) in December 2013 to 13.89% (BDT 653.14 billion) in September 2025, while their share in total Islamic banking investments rose from 5.37% (BDT 55.21 billion) to 8.13% (BDT 421.05 billion). The upward trajectory is particularly noticeable from December 2021. This trend underscores the growing market acceptance of IBWs and their importance as a viable alternative for customers seeking Islamic banking solutions amid a crisis affecting several full-fledged Islamic banks. It also suggests that customers place greater emphasis on a bank's stability and governance strength than on the structural distinction between a full-fledged Islamic bank and an IBW operation.

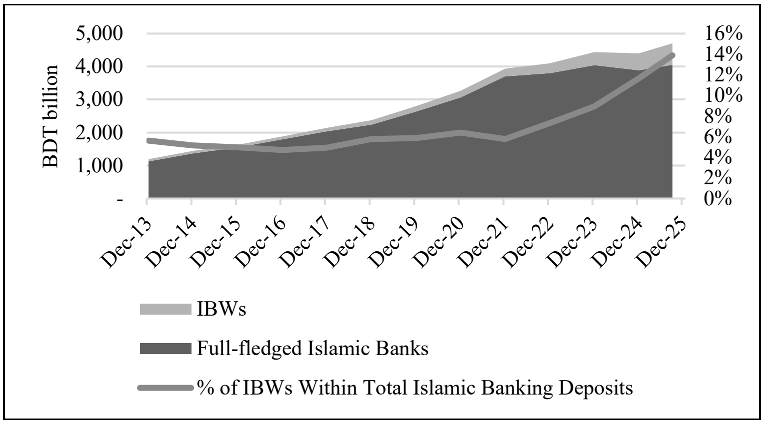


Figure 1: Share of IBWs Within Islamic Banking Deposits
Source: Authors' own, based on Bangladesh Bank's quarterly reports on Islamic banking

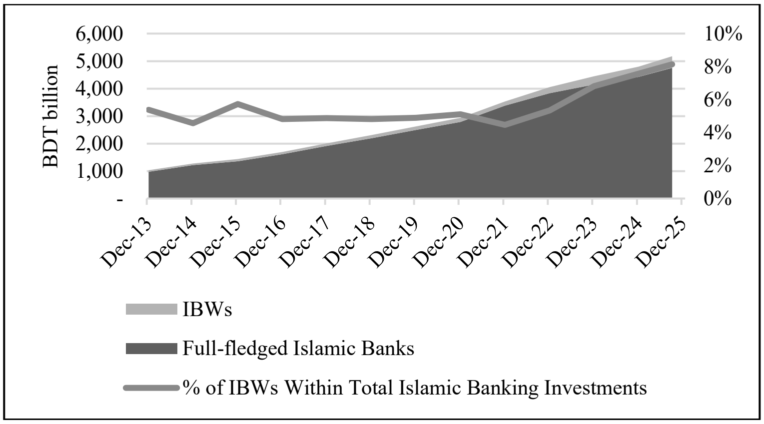


Figure 2: Share of IBWs Within Islamic Banking Investments
Source: Authors' own, based on Bangladesh Bank's quarterly reports on Islamic banking

Moreover, being relatively new and smaller in scale, IBWs can implement changes more efficiently. This agility allows them to introduce innovative products more quickly than many full-fledged Islamic banks. Their smaller scale further facilitates stronger control over Shariah compliance and governance. In contrast, full-fledged Islamic banks often face challenges in these areas due to their size and legacy constraints. At the same time, while some full-fledged Islamic banks struggle to maintain stability, reputable conventional banks continue to invest in innovation, technology, and customer experience. These advancements naturally flow through to their IBWs, enabling Islamic banking customers to benefit from the same institutional improvements.

Additionally, conventional banks operating IBWs contribute to the development of the Islamic banking talent pool by prioritising the recruitment of individuals with Islamic banking backgrounds and providing training to existing conventional banking staff. Some banks extend such training beyond core Islamic banking personnel to staff in supporting functions. Collectively, these efforts strengthen human capital within the Islamic banking sector, which is critical in addressing prevailing knowledge and awareness gaps in Islamic finance. Furthermore, the growing number of conventional banks offering IBWs enhances Islamic banking's visibility through their websites, branches, advertising, and staff engagement. This not only benefits individual institutions but also contributes to the broader promotion of the Islamic banking sector, ultimately also supporting full-fledged Islamic banks.

The excess liquidity maintained by IBWs also creates opportunities for conventional banks to support full-fledged Islamic banks facing liquidity shortfalls and to invest in Shariah-compliant securities such as BGIS and corporate sukuk, thereby contributing to the stability and advancement of Islamic finance. This has become particularly significant in recent years, as several full-fledged Islamic banks have experienced substantial liquidity pressures. Figure 3 shows that in September 2025, excess liquidity in IBWs reached BDT 82.67 billion, accounting for 52.84% of total excess liquidity in the Islamic banking sector, compared to BDT 10.24 billion, or 7.81%, in December 2015.

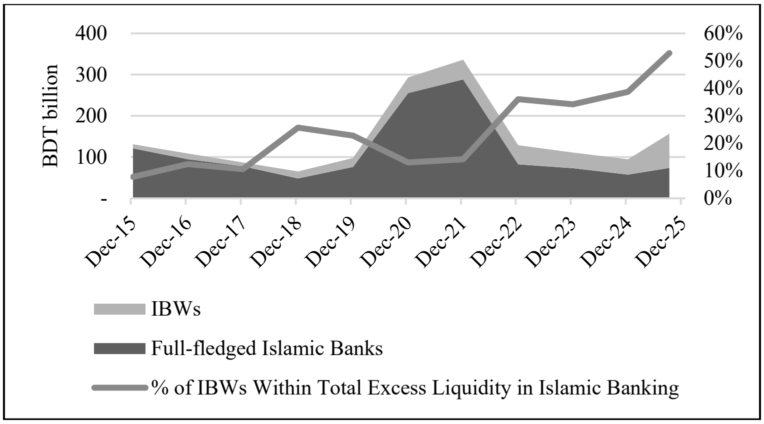


Figure 3: Excess Liquidity in the Islamic Banking Sector
Source: Authors' own, based on Bangladesh Bank's quarterly reports on Islamic banking

4.3 Process Flow of Launching IBWs

Upon evaluating the arguments, establishing IBWs appears to be the most pragmatic approach for conventional banks in Bangladesh to initiate Islamic banking operations and gradually expand their Islamic banking portfolios, potentially paving the way for eventual conversion into full-fledged Islamic banks. However, stakeholder concerns, particularly regarding Shariah compliance, must be adequately addressed.

A conventional bank may establish IBWs by opening a new branch dedicated exclusively to Islamic banking, converting an existing conventional branch to offer only Islamic services, or providing Islamic banking services through dedicated desks within selected conventional branches. In all cases, banks must obtain separate approval from Bangladesh Bank to commence Islamic banking operations. However, there are currently no regulations in Bangladesh that prescribe a comprehensive set of requirements for launching and operating IBWs. As a result, approval requirements, processing timelines, and operational practices may vary considerably from one bank to another. This variability often depends on the officials involved in the approval process and their interactions with the applicant banks.

Bangladesh Bank grants two types of permissions for IBWs: 'branches' and 'windows'. Neither category is explicitly defined in the Bank Company Act, 1991. Meanwhile, the *Guidelines for Conducting Islamic Banking* issued by Bangladesh Bank in 2009 refer to the branch-based Islamic banking system but do not mention the window-based system. The decision to allow the window-based system appears to be an internal policy matter of Bangladesh Bank. Bangladesh Bank has not officially indicated a preference for either model. However, insights from interviews and FGDs suggest that Bangladesh Bank is generally more reluctant to approve new Islamic branches for foreign commercial banks. Consequently, obtaining approval for a 'window' or converting existing conventional branches into Islamic banking operations appears to be a practical option for these banks. Table 3 lists the banks currently operating IBWs in Bangladesh.

Table 3: Banks Operating IBWs in Bangladesh

No.	**Name of Banks**	**Type of IBW Operation**	**Year of Establishment**		**No. of Islamic Brach/Window**	
			Bank	**IBW**	**Branch**	**Window**
1	AB Bank	Branch + Window	1982	2006	1	8
2	City Bank	Branch + Window	1983	2003	1	60
3	United Commercial Bank	Branch + Window	1983	2020	1	100
4	National Credit and Commerce Bank	Branch + Window	1993	2022	2	32
5	The Premier Bank	Branch + Window	1999	2003	2	25
6	ONE Bank	Branch + Window	1999	2020	2	14
7	Mercantile Bank	Branch + Window	1999	2020	2	45
8	NRB Bank	Branch + Window	2013	2021	1	28
9	Pubali Bank	Branch + Window	1983	2010	8	22
10	Prime Bank	Branch	1995	1995	5	-
11	Dhaka Bank	Branch	1995	2003	2	-
12	Southeast Bank	Branch	1995	2003	5	-
13	Jamuna Bank	Branch	2001	2003	2	-
14	Bank Alfalah	Branch	2005	2005	1	-
15	Bangladesh Commerce Bank	Branch	1998	2022	2	-
16	Bengal Commercial Bank	Branch	2021	2022	3	-
17	IFIC Bank	Branch	1983	2024	1	-
18	Standard Chartered Bank	Window	1948	2004	-	1
19	Trust Bank	Window	1999	2008	-	30
20	Bank Asia	Window	1999	2008	-	5
21	Sonali Bank	Window	1972	2010	-	58
22	Agrani Bank	Window	1972	2010	-	60
23	Meghna Bank	Window	2013	2020	-	10
24	Mutual Trust Bank	Window	1999	2020	-	15
25	Midland Bank	Window	2013	2020	-	1
26	NRBC Bank	Window	2013	2020	-	373
27	SBAC Bank	Window	2013	2021	-	10
28	Padma Bank	Window	2019	2023	-	5
29	Rupali Bank	Window	1972	2023	-	2
30	Eastern Bank	Window	1992	2024	-	20
	Total				**41**	**924**

Source: Authors' own, based on Bangladesh Bank (2025) and websites of the banks

The research identifies the following process flow for launching IBWs, which remains the same regardless of whether Bangladesh Bank grants ‘branch’ or ‘window’ permission:

1st. Assessing the Feasibility: Following the board's expression of interest, management prepares a proposal to establish Islamic banking operations within the bank. The proposal includes a feasibility study focusing on customer demand, existing Islamic banking operations of other banks, potential volumes for mobilising Islamic deposits and investments, and a breakeven analysis. Responsibility for drafting the proposal and conducting the preliminary groundwork is assigned to a bank executive, or a consultant may be appointed to assist with these tasks.

2nd. Management Committee (MC or MANCOM) Review and Board Approval: The findings of the feasibility study are presented to the Management Committee (MC) for review. The committee deliberates on the findings and provides recommendations to the board. Subsequently, the feasibility study, along with the MC's recommendations, is submitted to the board for formal approval. Upon approval, the board passes a resolution in favour of launching Islamic banking operations within the bank.

3rd. Application for Preliminary Consent from Bangladesh Bank: The bank submits an application to the Islamic Banking Regulation and Policy Department (IBRPD) of Bangladesh Bank to establish Islamic banking branches or windows. The application is accompanied by the board resolution approving the establishment of Islamic banking operations. The Licensing Unit within the IBRPD conducts the assessment primarily in accordance with the *Guidelines for Conducting Islamic Banking*, which outline the conditions for obtaining approval to conduct Islamic banking activities. The assessment may also consider BRPD Circular Letter No. 30, dated 8 July 2024, regarding online Islamic banking services through conventional branches and sub-branches, and IBRPD Circular No. 1, dated 28 September 2025, on the formation, appointment, removal, and responsibilities of SSC members in banks offering Islamic banking services.

During the assessment, the bank's financial strength is evaluated, considering its capital base (net capital free from actual and potential losses), the adequacy of its capital structure, historical earnings capacity, liquidity position, compliance with prudential regulations, credit discipline, quality of customer service, and the needs and convenience of the population in the proposed service areas. Additionally, the bank must have achieved a CAMELS rating of 1 or 2 in the most recent on-site inspection conducted by Bangladesh Bank, with no significant adverse findings.

Following the assessment, Bangladesh Bank issues a letter granting preliminary consent. This letter specifies the compliance requirements and requires the bank to submit a new application with updated supporting documents once those requirements are met. The specific requirements may vary depending on the officials involved in the approval process and their interactions with the applicant. Generally, these requirements include, at a minimum, an operational manual for Islamic banking; a list of proposed products and services; Product Programme Guidelines (PPGs); a fund management policy; a profit distribution mechanism for depositors; confirmation of the establishment of an Islamic Banking Division (IBD), including its organisational structure and staffing status; details of human resource development initiatives; qualifications and Islamic banking experience of senior executives; the status of the SSC; a commitment to prepare separate financial statements for Islamic banking operations; and the feasibility report.

4th. Islamic Banking Project Initiation: The bank initiates the Islamic banking project and appoints an executive or consultant to lead it. This individual may or may not be the same person who conducted the initial feasibility study. The appointed lead prepares the supporting documents required by Bangladesh Bank for final approval. Contract documents and forms for all proposed deposit and investment products, as well as the services the bank intends to offer, are also drafted at this stage. It is important to note that product design in Islamic banking is widely recognised as more complex than in conventional banking, requiring stronger innovation capacity and deeper technical expertise.

The IBD is established at the head office for local banks and at the country office for foreign banks as part of the project. Bangladesh Bank requires that the head of the IBD be a senior executive reporting directly to the Chief Executive Officer (CEO) and that the IBD be adequately staffed. Personnel may be recruited from the market to ensure the requisite staffing and expertise. The establishment and structuring of the IBD are consistent under both the ‘branch’ and ‘window’ systems.

5th. Establishment of SSC: The bank establishes the SSC and formulates its governing by-laws. SSC members are selected according to the criteria set out in the *Guidelines for Conducting Islamic Banking* and IBRPD Circular No. 1. Bangladesh Bank may or may not intervene in the selection process. Before the drafted documents are submitted to Bangladesh Bank, the SSC conducts Shariah vetting of them, either independently or through a designated subcommittee. The SSC or its subcommittee may hold several meetings during this vetting process.

6th. Acquisition of Islamic Banking Software: Acquiring suitable software for Islamic banking operations is a critical phase of the project. To procure the software, the bank issues a Request for Proposal (RFP) outlining its requirements and subsequently selects an appropriate vendor from the tenders received. The processes of acquisition, installation, and integration with the conventional core banking system (CBS) can be time-consuming and may present various technical and operational challenges. Some management teams prefer adopting an Islamic banking module within the existing CBS, leveraging established vendor relationships, cost savings, and easier integration. Others, however, favour implementing a separate Islamic CBS to ensure proper segregation between conventional and Islamic operations and to strengthen Shariah compliance controls.

7th. Human Resource Development: As part of the Islamic banking project, the bank implements a two-stage human resource development strategy: pre-launch and post-launch. This process involves training existing staff and, where necessary, recruiting new personnel. There are no uniform practices regarding staffing levels; however, establishing dedicated Islamic banking branches typically requires more personnel than operating service windows. Some banks assign dedicated staff to each Islamic banking branch or window, while others adopt a more integrated staffing model. Bangladesh Bank generally prefers the appointment of dedicated personnel for Islamic banking operations.

8th. Application for Final Consent from Bangladesh Bank: The bank submits an application to the IBRPD seeking final approval. In addition to meeting Bangladesh Bank's requirements, the application specifies the number of Islamic banking branches or windows the bank intends to operate. A designated team within Bangladesh Bank assesses the application and supporting documents. They also collect relevant information, such as CAMELS ratings, adverse observations, and instances of non-compliance from various departments within Bangladesh Bank. The central bank may also require the bank to give a presentation on its preparedness to launch Islamic banking operations. All information is evaluated before recommendations are made for final approval.

The IBRPD subsequently prepares a note to obtain approval from higher authorities, culminating at the Governor's office. Final consent is granted based on the Governor's approval. The consent letter outlines specific conditions the bank must comply with, including a deadline for commencing Islamic banking operations. These conditions typically include ensuring proper segregation of Islamic banking funds and opening a separate account with Bangladesh Bank for Islamic banking operations.

Generally, Bangladesh Bank approves a limited number of branches or windows to offer Islamic banking services. However, some banks extend such services across all their branches rather than restricting them to approved branches. In addition, certain banks establish Islamic banking service desks within non-approved branches. In such cases, transactions are processed through the bank's CBS and reported via the designated approved branches or windows. Although BRPD Circular Letter No. 30 sought to standardise this practice, supervision in this area varies. Nonetheless, it is widely understood that Bangladesh Bank does not support the provision of all types of Islamic banking services, particularly investment activities, through non-approved branches or windows.

9th. Physical Setup: The bank prepares its branches or windows in accordance with the conditions stipulated in Bangladesh Bank's consent letter. The standard specifications for establishing a branch, whether conventional or Islamic, are generally similar; however, the requirements for windows operating within an existing branch are typically less extensive. The physical setup usually includes structural and interior arrangements, personnel deployment, and preparation of the vault room. Although fund segregation requirements are present, there is no regulatory requirement for a separate vault for Islamic banking, even though such practices exist in the market. Similarly, there is no requirement for separate entry and exit points, although some institutions prefer this arrangement, and such examples can be observed in practice.

10th. Account with Bangladesh Bank: The bank opens an 'Al-Wadiah Current Account' with Bangladesh Bank to maintain its Cash Reserve Ratio (CRR) and to conduct settlements with the central bank.

11th. Launch of Islamic Banking: As there is no seed capital requirement for IBWs, Islamic banking operations typically commence with deposit mobilisation, after which depositor funds are utilised to finance activities. Deposit collection begins immediately upon launch, and investment operations generally start within a few days. Although there is no prohibition on allocating seed capital for Islamic banking operations, no bank has done so to date. Nevertheless, Islamic deposits remain subject to SLR and CRR requirements. Any initial costs borne by the conventional banking division are either treated as expenses in the conventional bank's accounts or recorded as an interest-free advance to the Islamic banking operations.

The bank is required to submit a report to Bangladesh Bank within 15 days of the launch, notifying the central bank of the commencement of Islamic banking operations and related matters. Bangladesh Bank may conduct a special on-site inspection to ensure compliance with stipulated conditions, re-evaluating submitted information and reviewing real-time operational data for verification.

Figure 4 presents the indicative timeline for completing the steps involved in launching IBWs.

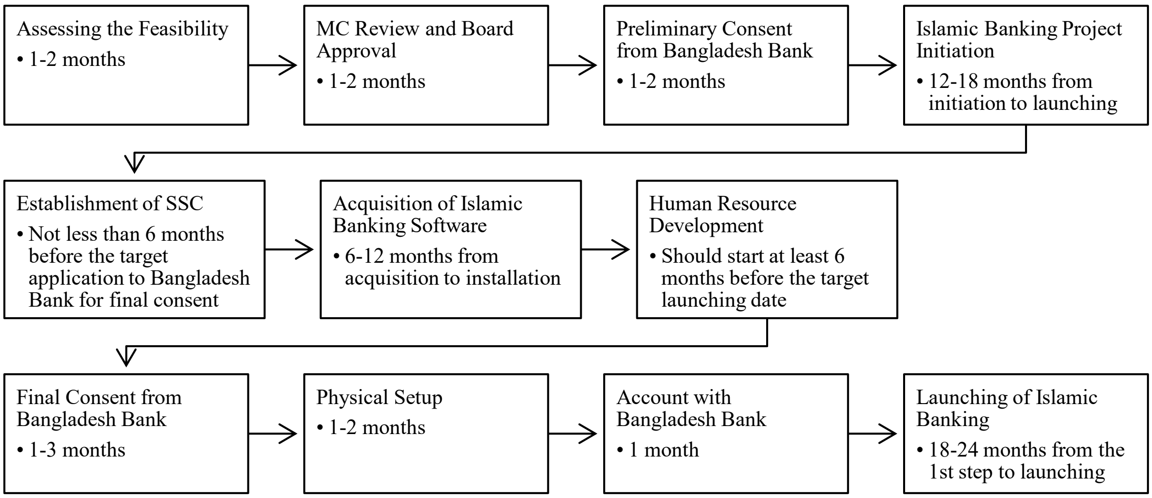


Figure 4: Tentative Timeline to Launch IBWs
Source: Authors' own

While scheduled banks are required to obtain approval from the IBRPD, finance companies must seek approval from the Department of Financial Institutions and Markets (DFIM) of Bangladesh Bank. The regulations issued by the DFIM closely align with those established by the IBRPD, and the process for establishing IBWs by finance companies is broadly consistent with that applicable to banks.

5. Issues and Recommendations

This section synthesises the key issues and recommendations to optimise the potential of IBWs in advancing Islamic banking in Bangladesh.

5.1 Lack of Policy Direction

There is currently no clear policy direction in Bangladesh regarding IBWs or Islamic banking in general, resulting in inconsistent decisions and varying requirements imposed on institutions. Moreover, the absence of specific guidelines governing the establishment and operation of IBWs has led to divergent practices and confusion among market participants. The lack of a standardised approval process and clearly defined timelines further contribute to accountability concerns, particularly regarding delays in approvals and potential bias in decision-making.

To address these challenges and support the orderly development of the Islamic banking sector, it is essential to articulate a clear vision and strategic framework for Islamic banking. Regulatory and supervisory frameworks should be comprehensive and consistent, drawing, where appropriate, on relevant AAOIFI and IFSB standards. The introduction of a standardised approval process with defined timelines at each stage would also enhance transparency and accountability.

5.2 Flawed Approach in Drafting Documents

Ensuring comprehensiveness, internal consistency, and Shariah compliance is critical when drafting Islamic banking documentation, including PPGs, contracts, and operational manuals. For example, PPGs must comprehensively address all commercial aspects of the products, such as structure, terms and conditions, and accounting treatment, while ensuring Shariah compliance. However, weak drafting practices persist, often characterised by a copy-and-paste approach from conventional banking products or other Islamic banks. These source documents may themselves contain deficiencies due to prior replication or insufficient Shariah validation.

Bank management—particularly those without prior experience with an SSC—often assumes that any weaknesses in draft documents will be identified and corrected by the SSC. In practice, this assumption has proven ineffective, leading to documentation with substantive flaws. The effectiveness of the SSC will be significantly enhanced if the documents submitted for review are of higher quality. To improve drafting standards for Islamic banking documentation, it is recommended that the process illustrated in Figure 5 be adopted.

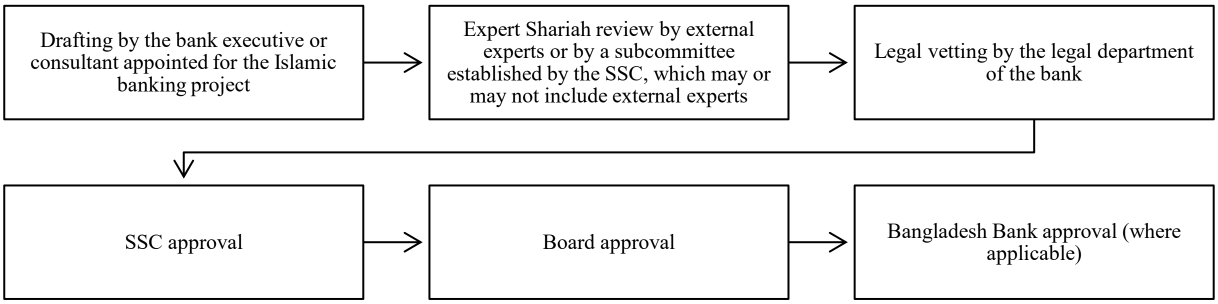


Figure 5: Recommended Approaches to Drafting Islamic Banking Documents
Source: Authors' own

5.3 Weaknesses in the Formation of the SSC

Despite the high expectations placed on the SSC, several deficiencies have been observed in its constitution and level of engagement during the launch of IBWs. Some of these gaps have been addressed through IBRPD Circular No. 1. However, limited awareness and exposure to Islamic banking operations, along with the participation of senior management and board members in meetings, continue to constrain SSC’s effective performance.

Examples of weak practices include the late formation of the SSC during the Islamic banking project and instances where management pressures the SSC to approve documents within an unreasonably short timeframe, even when those documents have not been adequately reviewed. There have also been instances where board members or the chief executive sought inclusion in the SSC, thereby compromising its independence. Additionally, some banks appoint highly prominent but excessively busy Shariah scholars without recognising that they may lack the necessary time commitment to participate effectively in SSC meetings.

To prevent rushed approvals, the SSC's formation and active involvement should be planned from the early stages of the Islamic banking project. It is advisable to establish the SSC at least six months prior to the intended application for final consent from Bangladesh Bank. Only qualified Shariah experts should be appointed as SSC members, and the participation of the bank’s board and senior management should be limited and allowed only on a need basis. Given the relatively limited scale of IBWs and to enhance meeting effectiveness, it is recommended that the total number of SSC members does not exceed five.

Comprehensive by-laws should be formulated for the SSC, clearly defining its supervisory role, membership criteria, scope of work, and meeting and reporting procedures. The SSC's scope of work should include reviewing all Islamic banking documentation, promotional materials, financial and operational reports, profit calculation mechanisms, policies on fees, charges, and charity fund management, and conducting pre- and post-implementation reviews of the Islamic banking CBS.

The frequency of SSC meetings should correspond to the scale of IBW operations; however, frequent meetings are recommended during the pre-launch phase. This could reach 10 meetings, depending on the quality of the documents submitted for review. After launch, at least one meeting every two months is advisable. Each SSC meeting generally lasts no more than 2 hours.

5.4 Lack of Strategic Planning in Deposit Collection and Investments

Islamic banking deposits are primarily structured under the *mudarabah* contract, whereby returns depend on the actual performance of the underlying investment activities. When deposits significantly exceed investments, the returns generated may fall short of depositors' expectations. As IBWs are not permitted to place surplus funds in conventional banks due to Shariah restrictions, their primary alternative is to place excess liquidity in another bank's Islamic banking account, which typically yields a lower return than direct investments. To meet depositor expectations and mitigate displaced commercial risk in such circumstances, IBWs may provide a *hibah* (gift), which can strain profitability and raise Shariah-related concerns if practiced regularly.

To minimise the risk of persistent surplus liquidity, management should adopt a well-defined strategy that identifies target customer segments, develops Islamic banking products tailored to their needs, and mobilises deposits in alignment with investment opportunities. Management should also consider introducing innovative products. For example, syndicated financing is a viable avenue for IBWs in Bangladesh to make large-scale investments. At the same time, some bank management teams express concerns about 'cannibalism' (i.e., the migration of existing conventional banking customers to the IBWs of the same bank) and therefore prefer to onboard only new customers into Islamic banking.

5.5 Neglect of Shariah Compliance in Selecting the CBS

The CBS adopted for IBWs must ensure proper segregation between conventional and Islamic banking funds. The system must be capable of recognising and distinguishing the unique features of Islamic financial contracts, terminology, transactions, and processes, as well as facilitating the calculation of profits and their accounting treatment in accordance with Shariah requirements. However, although several CBS providers operate in Bangladesh, not all ensure the necessary controls to safeguard Shariah compliance for Islamic banking. Many leave Shariah-related matters solely to the banks, limiting their role to meeting client requirements without providing an independent or second opinion on Shariah compliance. Moreover, the scope of work for SSCs often does not explicitly include reviewing the Shariah compliance aspects of the CBS.

It is therefore recommended that any CBS adopted for IBWs be thoroughly vetted by the SSC and subjected to an internal Shariah audit review to ensure that all relevant Shariah compliance requirements are adequately addressed.

5.6 Insufficient Efforts in Capacity Development

Although some IBWs have undertaken commendable capacity development initiatives, this is not the prevailing standard. Consequently, various operational and perceptual issues are observed in IBWs operations.

In designing capacity development programmes, the staff of a conventional bank operating IBWs may be categorised into four groups: (i) those directly involved in Islamic banking operations, (ii) those engaged in shared or support functions, (iii) senior management and members of the board of directors, and (iv) other staff. The first group needs to possess a comprehensive understanding of Islamic banking products and services, as any deficiency in this regard poses a significant risk to Shariah compliance. The second and third groups also require a sound understanding of these products and services to oversee and address Shariah compliance matters effectively. The remaining group should maintain a basic level of awareness to avoid misrepresentation or misunderstanding of Islamic banking activities.

Accordingly, proper planning for capacity development is crucial prior to the launch of IBWs. This may be implemented in phases. For example, a minimum of 50 hours of training could be provided to the first group, 20 to the second and third groups, and 10 to the remaining staff. As there is often reluctance among senior management and board members to attend training sessions, their training may be delivered through leadership or executive programmes. In addition, it is advisable to encourage members of the first group to pursue specialised qualifications in Islamic banking and finance from reputable national and international institutions. Following the launch of IBWs, annual training and awareness programmes should be instituted to ensure that all groups remain informed and up to date on developments in both local and global Islamic finance markets.

5.7 Stagnant Growth in IBW Operations

Despite commercial gain being the primary motivation for conventional banks to establish IBWs, the share of Islamic banking deposits, investments, and assets relative to total bank operations remains small. For example, in December 2023, these averaged 3.93%, 3.35%, and 3.50%, respectively (Hossain et al., 2024). This provides grounds for the argument that some conventional banks establish IBWs primarily to benefit from regulatory or liquidity arbitrage, without a genuine commitment to advancing Islamic banking. It also limits the potential for IBWs to evolve into full-fledged Islamic banks.

A relatively small Islamic banking portfolio may also reduce management's incentive to invest adequately in Shariah governance, internal controls, and capacity development. For instance, some banks reportedly convene SSC meetings only to the minimum extent required by regulation and largely as a formality. Several banks are also said to lack dedicated personnel, including adequate resources for Shariah secretariat and Shariah audit functions within IBWs. In some cases, staff designated for IBWs, including the head, are reported to simultaneously manage conventional banking portfolios.

It is recommended that Bangladesh Bank require banks operating IBWs to adopt an 'Islamic first' strategy, promoting the gradual expansion of IBWs within conventional banks and preparing them for eventual conversion into full-fledged Islamic banks once a defined threshold is reached within a specified timeframe. To strengthen institutional commitment, Bangladesh Bank may also consider requiring banks operating IBWs to allocate a dedicated fund or a portion of their equity to the IBW, consistent with the concept of an IBW as 'a bank within a bank'. To date, no bank has maintained separate capital under either approach.

For banks not intending to pursue full conversion, market stakeholders suggest maintaining an Islamic banking portfolio of 10%–25% of total operations to ensure the effective functioning of IBWs. Such a threshold would enable banks to leverage opportunities in the Islamic finance market without undermining the stability and continuity of their conventional banking activities.

6. Conclusion

While there are valid grounds for scepticism regarding IBWs, some demonstrate sound governance and deliver exemplary customer service. Reports indicate relatively higher profitability and excess liquidity among IBWs, underscoring their important role in sustaining public confidence in Islamic banking. Their extensive physical presence and workforce engaged in promoting Islamic banking services are also noteworthy. Accordingly, at a time when several full-fledged Islamic banks are facing challenges, the role of IBWs as viable alternatives has become critical for the stability and advancement of the Islamic banking sector in Bangladesh. The emergence of IBWs with such prominence appears to be a relatively unique phenomenon globally. Nevertheless, areas for improvement must be acknowledged, and appropriate corrective measures implemented. Most importantly, robust Shariah governance and adequate internal controls must be ensured.

Given concerns about SSC members' time constraints, potential gaps in their operational expertise, and the need to avoid conflicts of interest, engaging dedicated professionals in the IBW launch process, alongside strengthening public disclosures, could enhance the overall quality and integrity of the process. Given the market's positive perception of compliance with AAOIFI standards, it is advisable to design products, policies, and operational practices in line with them. IBWs currently in operation may also review their existing products and services to ensure conformity with AAOIFI requirements.

Amid prevailing scepticism, ensuring Shariah compliance alone is insufficient; it is equally important to establish credible assurance mechanisms to provide stakeholders with confidence in such compliance. In this regard, a proactive stance by banks is essential. The voluntary adoption of external Shariah audits and Shariah ratings by competent bodies may significantly enhance transparency and assurance, even though such measures are not currently mandated by the central bank. Banks may also leverage awareness campaigns, websites, annual reports, and financial statements to strengthen stakeholder assurance. Furthermore, Bangladesh Bank should introduce comprehensive yet pragmatic regulations for IBWs to ensure their effective contribution to the systematic development of the Islamic banking sector in Bangladesh.

Acknowledgement
The researchers sincerely thank all the interviewees and FGD participants for their valuable insights.

References

AAOIFI. (2021) *AAOIFI Financial Accounting Standard 40: Financial reporting for Islamic finance windows.* Manama, Accounting and Auditing Organization for Islamic Financial Institutions.

Abimanyu A & At Tamimi RA (2024). Should Islamic window be converted into a full-fledge Islamic bank? A case study in Indonesia. *Etikonomi*, 23(1), 183–200. https://doi.org/10.15408/etk.v23i1.35082.

Ahmed, MU. (2025) *Bangladesh's bet on Islamic banks merger: A turning point or a temporary fix?* The Business Standard, 22 September 2025.

Alamgir M, Hossain MM, Ahmed MU, Arefin ME. (2025) Islamic banking operations in Bangladesh 2024. In *Banking Review Series–2025*, Issue No. 02. Dhaka, Bangladesh Institute of Bank Management (BIBM).

Al Jazeera English. (2025) New era or false dawn? Rebuilding Bangladesh's democracy after Sheikh Hasina [Television documentary]. *101 East*. Retrieved from https://www.aljazeera.com/program/101east

Ariff M. (2017) Islamic banking in Malaysia: The changing landscape. *Institutions and Economies*, 9(2):1–13.

Azmi S. (n.d.) Development of Islamic windows of conventional banks: Global trends. Retrieved from https://islamicmarkets.com/publications/development-of-islamic-windows-of-conventional-banks

Bangladesh Bank. (2025) *Quarterly report on Islamic banking in Bangladesh: July–September 2025.* Dhaka, Bangladesh Bank.

Bhambra H. (2007) Supervisory implications of Islamic finance in the current regulatory environment. In Archer S, Karim R (Eds), *Islamic finance: The regulatory challenge.* Singapore, John Wiley & Sons (Asia) Pte Ltd; pp 198–212.

Chenguel MB, Derbali A, Jouiro M. (2020) Installing Islamic banking windows in conventional banks: Effects on performance. *International Journal of Financial Engineering*, 6(4):1950033.

Dja'akum, C. S., Huda, N., Ryandono, M. N. H., Mujibatun, S., & Mursyidi, A. F. (2024). Spin-Off as a Strategy to Accelerate Islamic Banking Growth in Indonesia: Assessing the Readiness of Sharia Business Units. *Economica: Jurnal Ekonomi Islam*, *15*(2), 207-222.

Grant Thornton. (n.d.). *Regulatory alert: Strengthening Shariah governance in Islamic windows.* Retrieved from https://www.grantthornton.ae/insights/articles2/regulatory-alert-strengthening-shariah-governance-in-islamic-windows/

Hasan A, Risfandy T. (2021) Islamic banks' stability: Full-fledged vs. Islamic windows. *Journal of Accounting and Investment*, 22(1):192–205.

Hossain M, Ahmed M, Rahman M, Abdul Hannan M, Khadem M, Akter T. (2024) *IBFC Islamic Banking and Finance Report Bangladesh (IiBFRBD) 2024.* Dhaka, IBFC Thrive With Shari'ah.

IFSB. (2018) *IFSB-22: Revised standard on disclosures to promote transparency and market discipline for institutions offering Islamic financial services (banking segment).* Kuala Lumpur, Islamic Financial Services Board.

ISRA. (2023) Development of the Islamic financial system. In *Islamic financial system: principles & operations.* 3rd edition. Kuala Lumpur, International Shari'ah Research Academy for Islamic Finance (ISRA) Research Management Centre; p 95.

Joseph ES, Richard EM. (2025) Lending behavior and credit risk of Tanzanian banks and their influencing factors: Impact of Islamic banking window. *Journal of Islamic Accounting and Business Research.* Emerald Publishing.

Khan M, Bhatti M. (2008) Islamic banking and finance: On its way to globalization. *Managerial Finance*, 34(10):708–725.

LSEG. (2025) Sector: Islamic banking – Islamic finance development indicator. London, London Stock Exchange Group (LSEG).

Mambodallu A. (2018) Growth-related challenges facing Islamic banking windows in Kenyan conventional banks. Master's thesis. KCA University, Nairobi, Kenya.

Mejía AL, Aljabrin S, Awad R, Norat M, Song I. (2014) *Regulation and supervision of Islamic banks.* IMF Working Paper No. 14/219. Washington, DC, International Monetary Fund.

Muhammad M. (2025) Islamic banking models (full-fledged, subsidiary, and window): Shariah and regulatory implications. Conference presentation. 20th International Shari'ah Scholars Forum (ISSF 2025); Tashkent, Uzbekistan.

Ratnasari N, Hati S, Chalid D. (2021) Full-fledged vs. Islamic bank windows: Which one do Muslim customers know better and prefer more? *Iqtishadia: Jurnal Kajian Ekonomi dan Bisnis Islam*, 14(2):301–311.

Sobhani F, Murtaz M, Omar N. (2016) Critical analysis of the role, challenges and Shariah compliance of Islamic windows by conventional banks in Bangladesh. *International Journal of Economics and Management*, 10(S2):391–407.

Song I, Oosthuizen C. (2014) *Islamic banking regulation and supervision: Survey results and challenges.* Washington, DC, International Monetary Fund.

Umar BA. (2025) Islamic banking models (full-fledged, subsidiary, and window): Shariah and regulatory implications. Conference presentation. 20th International Shari'ah Scholars Forum (ISSF 2025); Tashkent, Uzbekistan.

White Paper Committee. (2024) *White Paper on State of the Bangladesh Economy: Dissection of a Development Narrative.* Dhaka, Government of Bangladesh.

Yaquby MNS. (2025) Islamic banking models (full-fledged, subsidiary, and window): Shariah and regulatory implications. Conference presentation. 20th International Shari'ah Scholars Forum (ISSF 2025); Tashkent, Uzbekistan.

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 53-68
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

The Economic Impact of Global Volatility from COVID-19 and the Russia-Ukraine War on Largest Muslim Population Countries: A Difference-in-Difference Approach

Ibrahim Massaquoi[a], Ajibu Jonas[b]

[a,b] Faculty of Business and Economics, Indonesian International Islamic University.

**Corresponding author: ibrahim.massaquoi@uiii.ac.id*

Abstract

This study examines the economic impact of global volatility from COVID-19 and the Russia-Ukraine war on the biggest Muslim population is a proxy linked to prevalence of Islamic finance systems, redistribution mechanisms (such as zakat), labour market composition, and institutional characteristics common across these economies. The treated units consist of Indonesia, Pakistan, Bangladesh, Nigeria, and Egypt, while Norway, Denmark, Finland, Sweden, and Switzerland serve as control units. Data from 2015 to 2018 for before COVID-19 and the Russia-Ukraine war and 2019 to 2022 for during (after) are analysed, focusing on variables such as real GDP, investment, consumption, trade, and Muslim population. Results indicate that the treated units experienced a significant decrease in macro-economic indicators relative to control units following periods of global economic volatility. However, inclusion of covariates such as investment, consumption, trade, and the Muslim population partially explains the observed effects. The study underscores the susceptibility of countries with large Muslim populations (given their economic, social, and demographic structures) to external economic shocks and emphasises the importance of targeted policy interventions to promote economic resilience. Recommendations include enhancing economic diversification, strengthening social safety nets, promoting trade and investment, and fostering education and innovation. Limitations regarding data reliability, generalisability, causality, and policy implications are also acknowledged.

Keywords: Economic impact; global volatility; Muslim countries

1. Introduction

Globalisation has reshaped the world, fostering intricate interconnections across economic, social, and political spheres. This transformative process has turned nations into deeply intertwined entities, where the prosperity of one nation is intricately linked to others. Within this globalised framework, increased trade, capital flows, and technological exchange have become the norm, driving economic growth but also exposing countries to vulnerabilities, particularly those with significant Muslim populations (Ghouse et al., 2022).

Recent studies conducted in various Muslim-majority nations, including Indonesia, Pakistan, Bangladesh, Nigeria, and Egypt, shed light on complex economic dynamics within the context of globalisation. Nasution et al. (2022) conducted a comprehensive study elucidating the intricate web of economic linkages connecting Muslim-majority countries to global markets. Their findings underscore the susceptibility of these nations to external shocks, emphasising the necessity for a focused examination of the economic structures that make them particularly vulnerable. Qital and Rusydiana (2022) investigated the impact of the global credit crunch on Muslim countries and observed that the associated economic downturn was partly responsible for the Arab Spring. Moreover, Khan et al. (2020) explored the complex relationships between oil prices and the economies

Article history
Received: 28 August 2025
Accepted: 3 March 2026

of numerous Muslim-majority nations, revealing the significant impact of global oil price fluctuations on these economies.

The historical context further deepens our understanding of this vulnerability. The late 20th and early 21st centuries witnessed profound financial crises that reverberated across the global economy, affecting Muslim-majority countries as well. The Asian Financial Crisis of 1997 and the Global Financial Crisis of 2008 demonstrated how the economic fortunes of these nations are intricately tied to the whims of the global market. Kawai and Sheng (2012) dug into these crises, tracing their ripple effects and emphasising the interconnectedness that renders Muslim-majority countries susceptible to the volatile dynamics of the global economic landscape.

Geopolitical events have also significantly impacted the economic trajectories of Muslim-majority nations, particularly in regions like the Middle East and North Africa, marked by historical and contemporary conflicts. A study by Josua and Edel (2015) shed light on the lasting economic ramifications of conflicts in these regions, underlining the need for a comprehensive understanding of economic resilience and vulnerability, especially in the aftermath of geopolitical upheavals.

Understanding the economic impacts on the largest Muslim-population nations is of immense practical significance. Policymakers, both domestically and globally, must be informed by empirical evidence to make decisions that can mitigate adverse effects and leverage potential opportunities. The interconnectedness and vulnerability of these economies demand a nuanced examination drawing on empirical evidence and theoretical frameworks to elucidate the complex dynamics at play.

The study empirically examines the economic impact of global volatility caused by COVID-19 and the Russia-Ukraine conflict on the five most populous Muslim countries in the world. The study explicitly focusses on countries with the largest Muslim populations: Indonesia, Pakistan, Bangladesh, Nigeria, and Egypt. India, despite being the second or third country with the highest number of Muslims, is not included due to limited Islamic practice there. While most of the COVID-19 DID (Difference-in-Difference) studies compare income groups, regions or policy responses, very few examined demographically defined macro-groups. Also, none of the studies combine COVID-19 and the Russia-Ukraine war within a unified DID framework focusing on the largest Muslim-population countries. This is due to COVID-19 was primarily a demand and mobility shock while the Russia–Ukraine war introduced supply-side and commodity price shocks. Together, both capture global volatility regime shift.

2. Literature Review

2.1 Stylised facts

This paper focuses on the effects of global volatility on the top five countries with the largest Muslim populations. The discussion of the economic growth patterns in the Muslim world spans the years 1991-1995, 1996-2000, 2002-2006, 2007-2011, 2015-2018, and 2019-2022. The period from 1991 to 1995 preceded the Asian financial crisis, which occurred throughout Asia, a region with a significant Muslim population. The Asian financial crisis occurred from 1996 until 2000. The years from 2002 to 2006 represent the timeframe preceding the global financial crisis, while the years from 2007 to 2012 correspond to the global financial crisis, which resulted in significant global economic volatility. The time span from 2015 to 2018 preceded the occurrence of both the COVID-19 pandemic and the Russia-Ukraine conflict. Subsequently, from 2019 to 2022, there was a period of global economic volatility due to the impact of the COVID-19 pandemic and the Russia-Ukraine conflict. Central Asia is the region in Asia with the highest percentage of Muslims; more than 90% of its people follow the Islamic faith. Second is Western Asia with a majority of over 70% and Southeast Asia with a majority of over 40%. North Africa has the highest percentage in Africa, of over 90%, followed by West Africa with a percentage of over 50%. All the remaining regions are not predominantly Muslim.

Table 1: Real GDP Growth of Muslim Dominated and Non-Muslim Dominated Regions

Region	1991-1995	1996-2000	2002-2006	2007-2012	2015-2018	2019-2022
Northern Africa	2.662	4.288	5.258	2.916	4.19	2.3325
West Africa	0.844	3.532	7.328	6.49	2.4025	2.6975
Eastern Africa	1.828	3.67	4.918	7.684	5.66	4.0975
Central Africa	-2.218	3.128	7.732	5.904	0.5925	1.21
Southern Africa	2.594	2.898	4.466	2.672	1.23	0.335
Central Asia	-8.573	3.122	8.456	7.39	3.9225	3.1075
Western Asia	4.106	4.814	5.98	4.482	3.1925	2.8175
Southern Asia	4.466	5.188	6.686	6.03	6.4375	3.4175
South-Eastern Asia	7.388	2.738	5.874	5.492	5.0575	2.58
East Asia	4.762	3.992	5.706	5.85	4.94	3.4075
North America	2.52	4.292	2.888	0.788	2.47	1.937
Latin America & Caribbean	3.272	3.052	3.62	3.524	0.09	0.855
Europe	1.3425	2.155	1.6792	3.0645	2.8815	-1.0085

Source: World Bank's World Development Indicators

Prior to the Asian financial crisis, regions with a majority Muslim population, such as Western Asia and Southern Asia, typically had strong GDP growth rates of 7.3% and 4.1%, respectively, in comparison to non-Muslim regions like Europe, Latin America, and the Caribbean. Nevertheless, Central Asia had a decline in economic growth during this period, suggesting the presence of economic challenges that were not directly caused by the upcoming crisis. The duration of the Asian financial crisis was brief, and the Asian economies swiftly recovered and had a resurgence in growth. The region of North Africa, which is predominantly Muslim, also experienced significant economic growth of 2.6%.

From 2002 to 2006, regions with a Muslim majority, such as Northern Africa, Central Asia, Western Asia, and even Southern Asia, consistently showed robust GDP growth rates of over 5%, albeit with relatively small fluctuations. The pattern was the same for non-Muslim majority regions except for Europe and North America, which fell below 3%. From 2007 to 2012, the global financial crisis led to the Arab Spring; Northern Africa underwent a substantial fall in economic growth and endured political upheaval. The crisis that started in Northern America also led to their economic downturn. Northern America experienced less than 1% growth, second to Southern Africa and Northern Africa.

Prior to the global economic crisis (2015-2018), regions with a Muslim majority were witnessing strong economic growth. Northern Africa experienced an average real gross domestic product (RGDP) growth rate of 4.19%, Central Asia saw a growth rate of 3.9%, and Western Asia had a growth rate of 3.1%. Amidst the recent global volatility from 2019 to 2022, there is a varied situation in both regions with a Muslim majority and regions without a Muslim majority. Certain regions had a deceleration in their growth rates, but others witnessed a rapid resurgence. The growth rates in North Africa decreased from 4.19% to 2.33%, while Central Asia's growth rates stayed reasonably consistent but lower, dropping from 3.9% to 3.1%. These figures suggest that both regions are facing ongoing economic issues. Europe, a non-Muslim continent, notably saw declining growth rates throughout the previous period of global economic instability, perhaps influenced by a combination of geopolitical and economic causes.

In summary, the evidence indicates that regions with a majority Muslim population, including Southern Asia and Western Asia, have demonstrated the ability to maintain consistently high rates of economic growth, even during times of global economic crisis. Nevertheless, there are variations within specific regions, and the economic performance is impacted by a blend of internal elements like governance and economic policies, as well as external factors like global economic conditions and geopolitical tensions. See Figure 1.

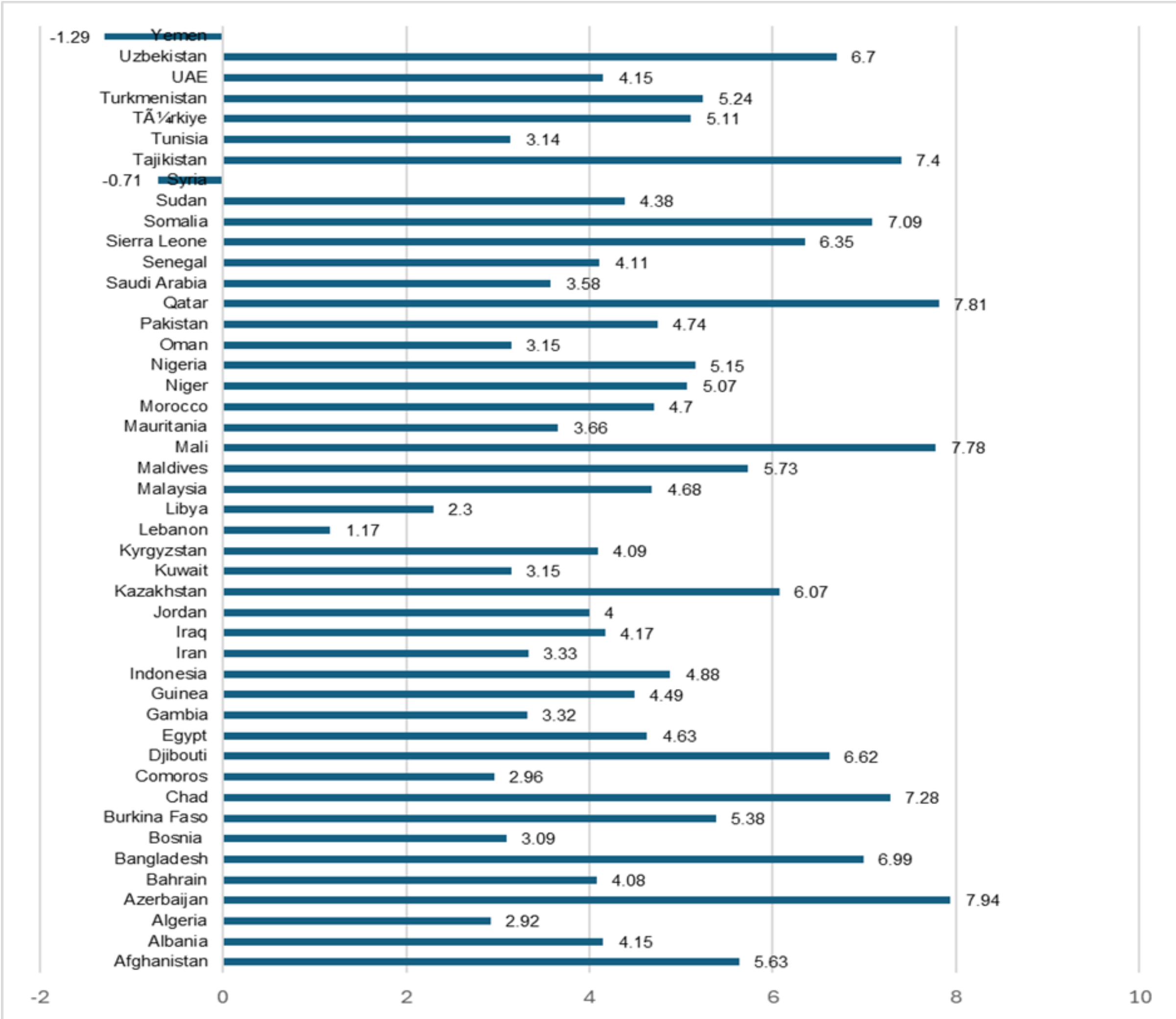


Figure 1: Real GDP Growth Rate of Muslim Majority Countries 2000 – 2021
Source: Authors' computation using World Bank's World Development Indicators

According to the Pew Research Centre and the World Religion Database (WRD), the 46 countries in Figure 1 above are the Muslim majority countries for the period reviewed. The data is not clear about Nigeria, with Pew putting it at approximately 50% and WRD at less than 50%. Countries in the upper quartile (top 25%) of the growth rate of the 46 countries are Azerbaijan (7.94%), Qatar (7.81%), Mali (7.78%), Tajikistan (7.4%), Chad (7.28%), Somalia (7.09%), Bangladesh (6.99%), Uzbekistan (6.7%), Djibouti (6.62%), Sierra Leone (6.35%), Kazakhstan (6.07%), and Maldives (5.73%). These countries are naturally resource-rich, and it accounts for more than half of their growth (Haddadi, 2015). Countries in the lower quartile (bottom 25%) growth rate are Iran (3.33%), Gambia (3.32%), Kuwait (3.15%), Oman (3.15%), Tunisia (3.14%), Bosnia (3.09%), Comoros (2.96%), Algeria (2.92%), Libya (2.3%), Lebanon (1.17%), Syria (-0.71), and Yemen (-1.29). Iran has been under Western sanctions, and the others have been affected by political instability, the Arab Spring, terrorism, and limited natural resources, as in the case of The Gambia.

Given that through globalisation the world economies have become more intertwined and interdependent, Figure 2 below shows the real GDP growth rate of the top 5 most populous Muslim countries[1] in the world as

[1]India is excluded though its Muslim population is among the top 5 in the world according to the Pew Research Centre. This is because they make up very much less than 25% of Indian population.

against their levels of globalisation for the period 2000 to 2021. Based on the figure, none of the 12 Muslim-majority nations with the highest real GDP growth rates are ranked in the top quartile of the globalisation index. Out of the five most populous Muslim countries, only Egypt (63.2%) and Indonesia (58.4%) have a globalisation index above the upper quartile of Muslim-majority countries. This implies that the leading developing nations in the Muslim world have not been highly globalised.

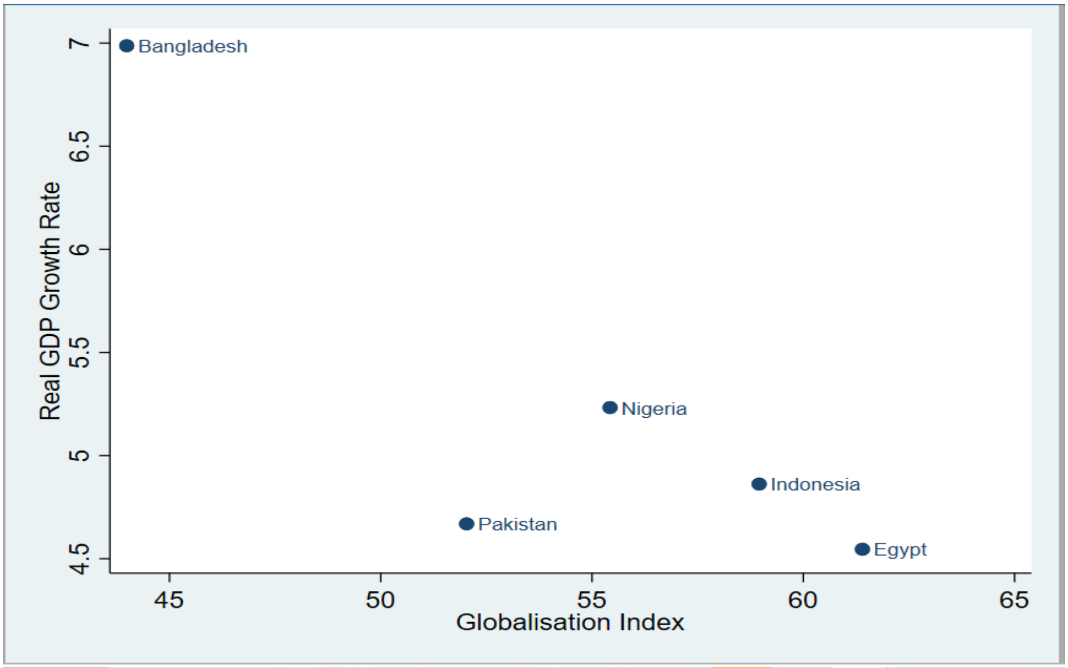


Figure 2: Real GDP Growth Rate and Globalisation of Top 5 Muslim Populous Countries 2000-2021
Source: Authors' computation using World Bank's World Development Indicators and the KOF Index of Globalisation

2.2 Empirical Literature

The impact of volatility on economic growth has been extensively examined and is frequently seen in the literature on economic growth. Nevertheless, the outcomes have been inconclusive, and the focus of the discussions has revolved around the interplay between technology, trade, and political stability. The effects of worldwide economic volatility on the economies of Muslim countries, however, have not received much attention. This study distinguishes itself from past research by specifically examining the top five countries with the highest Muslim populations.

In their cross-country exercise, Ramey and Ramey (1995) conducted ground-breaking research that revealed a negative relationship between volatility and growth. More precisely, their research identifies a negative relationship between average output growth rates and the level of volatility in those rates. Subsequently, Al-Marhubi (1998) and Kose et al., (2005), and other researchers further expanded upon their work. The overall conclusion of these studies suggests that volatility has a detrimental effect on economic growth, especially in financially and institutionally undeveloped countries.

Volatility and the onset of a recession have a positive relationship in the business cycle. A recession can result in increased research and development (R&D) or the elimination of the least productive enterprises (Khan et al., 2023). This entire process results in increased economic growth accompanied by increased volatility (Güreşçi, 2018). When other measures of volatility are taken into account, they have a minimal effect on output, but the effect is positive (Bairagi, 2017).

Empirical research has emphasised the interdependence of the global economy across different areas by investigating the economic consequences of global events, such as financial crises. Research conducted by Hayami and Godo (2005), Petrakis (2020), and Sparrow et al. (2016) highlights the interconnectedness of the global economy, demonstrating how economic disturbances in one area can have far-reaching effects worldwide. Nevertheless, there is a lack of comprehension of the consequences for countries with a Muslim majority.

Research that specifically concentrates on examining the economic resilience and vulnerability of countries with a Muslim-majority population provides precise and focused information. Muhammad and Triharyono (2019) evaluate the ability to recover from the Global Financial Crisis, while Khan et al. (2023) investigate susceptibility to changes in commodity prices. Although these contributions are valuable, further study is required to investigate the effects of global volatility across the countries with the most Muslim populations based on their exposure to globalisation and the accompanying effects of global volatility.

Nasution et al. (2022), in their study, specifically examine the influence of global volatility on nations with a Muslim-majority population. Nevertheless, studies in this field are still progressing. Sector-specific investigations, such as the study conducted by Hassan et al. (2022) on the technology sector and the research conducted by Ali and Rahman (2021) on oil-dependent nations, provide nuanced insights into the varying effects of global volatility.

Siddiqui and Rizvi (2023) examine policy responses, with a particular focus on the importance of flexible frameworks. Furthermore, Malik and Ahmed (2022) emphasise the capacity of Islamic financing instruments to boost economic resilience. To summarise, whereas current empirical research offers useful insights, there are still gaps. This study intends to address the research gap regarding the impact of global volatility on countries with the greatest Muslim populations, which is currently poorly understood. Although there is some research available on the economic consequences of global volatility, there is a noticeable shortage of thorough study that explicitly examines nations with Muslim-majority populations. This study uses a difference-in-difference approach to provide a detailed understanding of how volatility in global economic conditions specifically impacts these countries throughout time.

Recent empirical research has increasingly employed the Difference-in-Difference (DID) framework to estimate the economic impact of COVID-19 in emerging and developing economies. Many of these studies rely on temporal variation in pre- and post-pandemic periods combined with cross-sectional exposure differences—such as lockdown intensity, fiscal capacity, health system readiness, or sectoral dependence—to identify causal effects (Nasution et al., 2022; Ghouse et al., 2022). The identification strategy typically exploits exogenous timing of the pandemic shock while assuming that, absent COVID-19, treated and control groups would have followed parallel growth paths. For example, DID designs comparing countries with stronger versus weaker fiscal stimulus packages or varying degrees of mobility restrictions rely on this counterfactual trend assumption to isolate treatment effects. Our study adopts a similar identification logic, comparing the five largest Muslim-population countries with highly resilient economies before and after the onset of global volatility in 2019, thereby situating our approach within the established DID tradition in pandemic-related macroeconomic research.

A central methodological concern in recent DID-based COVID-19 literature is the validity of the parallel trends assumption. Scholars emphasize the importance of pre-treatment graphical inspections, placebo tests, and regression-based pre-trend analyses to ensure credible causal inference (Stock & Watson, 2020; Pesaran et al.,1999). Given the unprecedented and global nature of COVID-19, some studies highlight the difficulty of identifying a "pure" control group unaffected by the shock, thereby raising concerns about differential pre-existing trends and common global disturbances. In response to these methodological discussions, our study explicitly tests for pre-treatment parallel trends using data from 2015–2018 and confirms no statistically significant differential growth patterns between treatment and control groups prior to 2019. This strengthens the credibility of our DID estimates and aligns our empirical strategy with best practices in contemporary pandemic-related causal research.

Another key theme in the DID COVID-19 literature is shock heterogeneity. Emerging evidence suggests that the pandemic generated asymmetric effects across countries depending on economic structure, trade openness, commodity dependence, and institutional quality (Kose et al., 2005; Khan et al., 2023). In many emerging economies, the contraction was amplified by limited fiscal space, reliance on informal labour markets, and exposure to external capital flows. Furthermore, subsequent geopolitical disruptions—particularly the Russia–Ukraine war—introduced additional supply-side and commodity price shocks, compounding the initial pandemic effects. By incorporating both COVID-19 and the Russia–Ukraine conflict within a unified

DID framework, our study captures a broader regime of global volatility rather than a single isolated shock. Methodologically, this approach remains comparable to recent DID applications while extending the literature by examining dual, overlapping global disturbances and their differential impact on structurally comparable demographic macro-groups.

Overall, our empirical design is methodologically consistent with recent DID-based COVID-19 studies in emerging markets, particularly in its use of pre/post shock comparisons, interaction terms, and macroeconomic covariates. However, it contributes to the literature by focusing on the largest Muslim-population countries as a structurally defined treatment group and by comparing them with highly resilient economies identified through the FM Global Resilience Index. In doing so, the study not only adopts established identification strategies but also extends existing research by incorporating demographic-economic structure and multi-shock volatility into the DID framework.

2.3 Theoretical Framework

Volatility causes uncertainty, and uncertainty affects both consumption and investment decisions, which in turn affect output (GDP). According to the Permanent Income Hypothesis (PIH), long-term income determines consumption (Friedman, 1957). When there is uncertainty about income, there are more savings and less consumption, which has a negative impact on growth. With regards to investment, the Real Option Theory (ROT) suggests that uncertainty delays investment, which leads to lower levels of investment and slower economic growth (Reside, 2022). Furthermore, the Mundell-Fleming model explains the effect of global macroeconomic volatility on net exports and the economy of domestic countries. The Mundell-Fleming Trilemma and the IS-LM model all point to the economic thought that global macroeconomic volatility brings uncertainty in exchange rates, which negatively affects exports (Fleming, 1962; Mundell, 1963). The model uses the sum of exports and imports to account for globalisation and openness, which in turn affect growth (Mutalemwa, 2015).

Islamic finance principles, which emphasise risk-sharing and asset-backed financing, offer resilience against global uncertainty. Research by Ghouse et al. (2022) explores this resilience, while Cowan (2018) investigates Zakat's redistributive effects, suggesting its potential role in mitigating economic disparities during volatility. This effect is proxied by the Muslim population in the country.

We considered a simple framework that includes key macroeconomic variables to develop a theoretical model of how global economic volatility affects the domestic economy. Assuming a small open economy where the domestic economy is affected by global economic conditions, we can express GDP or Y_t using the Keynesian Aggregate Demand framework as:

$$Y_t = C_t + I_t + T_t + M_t \tag{1}$$

- C_t: Consumption in the domestic country at time t
- I_t: Investment in the domestic country at time t
- T_t: Sum of import and export of the domestic country at time t
- M: Muslim population of the domestic country at time t
- Y_t: Output or GDP of the domestic country at time t
- V_{gt}: Global macroeconomic volatility at time t

Given that global macroeconomic volatility (V_{gt}) can affect domestic consumption, investment, and net export through uncertainty, the impact on them can be presented as follows:

$$C_t = \bar{C} - a_{1d} . V_{gt} \tag{2}$$
$$I_t = \bar{I} - a_{2d} \cdot V_{gt} \tag{3}$$
$$T_t = \bar{T} - a_{3d} \cdot V_{gt} \tag{4}$$
$$M_t = \bar{M} - a_{4d} \cdot V_{gt} \tag{5}$$

$\bar{C}$, $\bar{I}$, and $\bar{T}$ $\bar{M}$are baseline levels of domestic consumption, investment, Trade, and Muslim population respectively. a_{1d}, a_{2d}, a_{3d} and a_{4d} are coefficients and measure the sensitivity of domestic consumption, investment, and net exports to global macroeconomic volatility. When these expressions (equations 2, 3, 4, and

5) are substituted into the GDP (equation 1), it becomes:

$$Y_t = \bar{C} - a_{1d} . V_{gt} + \bar{I} - a_{2d} \cdot V_{g_t} + \bar{T} - a_{3d} \cdot V_{gt} + \bar{M} - a_{4d} \cdot V_{gt} \quad (6)$$

Simplifying further:

$$Y_t = \bar{Y} - (a_{1d} + a_{2d} + a_{3d} + a_{4d}) \cdot V_{gt} \quad (7)$$

$\bar{Y} = \bar{C} + \bar{I} + \overline{NX}$ is the baseline level of domestic GDP. Equation 6 shows that global economic volatility negatively affect domestic economies. The terms $a_{1d} + a_{2d} + a_{3d} + a_{4d}$ are the combined impact of global economic volatility on domestic consumption, investment, trade, and Islamic economics. If $a_{1d} + a_{2d} + a_{3d} + a_{4d}$ is positive, increase in global economic volatility will decrease domestic GDP, and vice versa. Similar frameworks have been used in various studies (Chatterjee & Shukayev, 2011; Kose et al., 2005; Silva et al., 2017). Essentially, this theoretical model proposes that increased global economic volatility has a detrimental effect on home country GDP by adversely impacting domestic consumption, investment, trade, and Islamic economic and financial systems. The extent of the impact of global economic volatility on domestic country economy is determined by the magnitudes of the coefficients of a_{1d}, a_{2d}, a_{3d}, and a_{4d}.

3. Data and Methodology

Econometric model

To investigate the causal impact of global volatility on the top five countries with the highest Muslim population, the study employs the Difference-in-Difference (DID) approach. It is used in this study to compare the growth of the sampled Muslim countries with other countries before and after the global volatility as a result of COVID-19 and the Russia-Ukraine conflict. Generally, the DID regression model is expressed as:

$$Y_{it} = \beta_0 + \delta_0 after_{it} + \beta_1 treated_{it} + \delta_1 after_{it} * treated_{it} + V_{it} + U_{it} \quad (8)$$

Based on equation vi, Y_{it} is GDP, the before is the period 2015 to 2018 after is 2019 to 2022 during the period of volatility. The treated are the 5 Muslim countries assumed to be affected by volatility which is the treatment and the controlled are the top 5 resilient countries (Norway, Denmark, Finland, Sweden, and Switzerland) according to the FM Global Resilience Index for the period under investigation (Wilson et al., 2022). V_{it} is the vector of controlled variables (investment, consumption, trade, and Muslim population). To account for the interactions in equation vi, the interaction term between after and treated includes the treatment indicator and the variable representing the subgroup and conditions of interest.

- δ_1 is the effect of the treatment (volatility) for the after period (2019 to 2022)
- $\beta_0 = \bar{Y}_{0c}$ is the outcome for the control units where treated = 0 for before and after
- $\beta_0 + \beta_1 = \bar{Y}_{0t}$, outcome for treated units where treated = 1 for before and after = 0
- $\beta_0 + \delta_0 = \bar{Y}_{1c}$, outcome for control units where treated = 0 for after and 1 for after also
- $\beta_0 + \delta_0 + \beta_1 + \delta_1 = \bar{Y}_{1t}$, outcome for treated unit where treated = 1 for before and after

Thus, the DID effect is:

$$\delta_1 = (\bar{Y}_{1t} - \bar{Y}_{0t}) - (\bar{Y}_{1c} - \bar{Y}_{0c}) = (\bar{Y}_{1t} - \bar{Y}_{1c}) - (\bar{Y}_{0t} - \bar{Y}_{0c}) \quad (9)$$

One of the strengths of DID is its ability to control for time-invariant confounding factors that affect both the treated and control groups. This technique makes it robust to the omitted variable problem and hence adequately controls endogeneity.

Data and variable description

Data on real GDP and its growth rate is sourced from the World Bank's Development Indicators at 2015 U.S. dollar prices. Investment is measured by the World Bank's Development Indicators. Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories expressed in 2015 U.S. dollar prices. Consumption is also measured.

The World Bank's Development Indicators final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (formerly private consumption) and general government final consumption expenditure (formerly general government consumption). Data are in constant 2015 prices, expressed in U.S. dollars. For trade and globalisation, import and export data at 2015 U.S. dollar prices from the United Nations Conference on Trade and Development (UNCTAD) are used. Data from the Pew Research Centre and the World Religion Database (WRD) are used for the global Muslim population. Muslim population represents a structural demographic proxy linked to Islamic Finance, redistribution mechanisms like zakat, labour market composition, and institutional characteristics across the economies. These capture structural economic channels that may influence resilience. We selected the control group of Norway, Denmark, Finland, Sweden, and Switzerland due to their high Global Resilience Index (GRI). The data was sourced from FM Global, which provides the most widely used GRI in economics and finance. It entails economic, environmental, social, political, and infrastructure resilience to global shocks.

Panel unit root test

The popular Levin-Lin-Chu (LLC) test for panel unit roots is employed to test whether the variables real GDP, investment, consumption, trade, and Muslim population are stationary or have a unit root across the countries and years sampled. The LLC is built upon the Augmented Dickey-Fuller (ADF) and makes it robust in accounting for cross-sectional dependence among panel units (Pesaran, Shin, & Smith, 1999). We compute the LLC test statistic as follows:

$$T * \frac{\sum_{i=1}^{N}\sum_{t=1}^{T}\hat{\mathrm{p}}_{it}}{\left(\sum_{i=1}^{N}\sum_{t=1}^{T}\hat{\mathrm{q}}_{it}^{2}\right)^{0.5}} \tag{10}$$

T is the number of periods, years in this case

N is the number of cross-sectional units, countries in this case

$\hat{\mathrm{p}}_{it}$ is the coefficient estimate from the regression of first-differenced values on lagged levels including cross-sectional averages of lagged first differences.

$\hat{\mathrm{q}}_{it}^{2}$ is the estimated variance of the residuals from the above regression.

The null hypothesis is that there is a unit root or non-stationarity, and the alternative is that there is no unit root, or the series are stationary. The test statistic follows a normal distribution, and if it is greater than the critical value from the standard normal distribution, the null hypothesis is rejected, concluding that the series is stationary.

Multicollinearity test

Also, in panel regression, as in this case, multicollinearity can arise from time-invariant characteristics and common shocks affecting all the units, resulting in high correlation among the explanatory variables within and across times (Stock & Watson, 2020). We must check for and correct any present multicollinearity to ensure reliability, validity, and interpretability. A correlation matrix is used to detect it, and a correlation of .8 and above is deemed to be high and hence the presence of multicollinearity. Variance Inflation Factor (VIF) is also used, and a VIF of over 10 is considered high. We calculate the VIF for each independent Xi variable as follows where R_i^2 is the coefficient of determination:

$$VIF_i = \frac{1}{1-R_i^2} \tag{11}$$

Pre-treatment trend test

A key identifying assumption of the DID framework is the parallel trends assumption, which requires that, in the absence of treatment, the treated and control groups would have followed similar outcome trajectories over time (Stock & Watson, 2020). To validate this assumption, we conduct a pre-treatment trend analysis using data from 2015–2018, the period prior to the onset of global volatility associated with COVID-19 and the Russia–Ukraine war.

Regression-based pre-trend (placebo) test

To formally test for differential pre-treatment trends, we estimate the following placebo regression restricted to the pre-treatment period (2015–2018):

$$Log\ GDP_{it} = \alpha + \beta_i Treated_i + \beta_2 t + \beta_3 (Treated_i \times t) + \varepsilon_{it} \quad (12)$$

Where:

- t is a linear time trend for 2015–2018,
- $\text{Treated}_i \times t$ captures whether treated countries experienced different growth trends relative to controls prior to 2019.

The coefficient on the interaction term $\beta_3$represents the differential pre-treatment trend.

5. Results and Discussion

The measurements of real GDP, investment, consumption, and trade are expressed in millions of dollars. The Muslim population is quantified in millions. These variables exhibit substantial disparities between their minimum and highest values, indicating a broad spectrum of values across the dataset pertaining to the size of the countries. See Table below for summary descriptive statistics.

Table 2: Summary Descriptive Statistics

	Real GDP	Investment	Consumption	Trade	Muslim Population
Mean	4.75e+11	1.20e+11	3.49e+11	2.95e+11	77.91542
Standard Deviation	2.28e+11	8.38e+10	1.40e+11	2.43e+11	87.01081
Minimum	1.95e+11	4.71e+10	1.52e+11	76895.08	.016345
Maximum	1.12e+12	3.64e+11	7.23e+11	9.74e+11	241.52
Variance	5.18e+22	7.02e+21	1.97e+22	5.91e+22	7570.881
Skewness	1.217587	1.697188	.8744698	1.1622848	.5492165
Kurtosis	3.706512	5.061958	3.29083	3.839096	1.796025
Observation	80	80	80	80	80

The standard deviation figures provide additional evidence of the level of variation within each variable among the various countries. The positive skewness values signify a right-skewed distribution, characterised by a longer tail on the right side. The skewness and kurtosis values for real GDP, investment, consumption, and trade show that the data does not perfectly follow a normal distribution, which means it might not be normal. Nevertheless, the skewness and kurtosis values fall within acceptable limits, suggesting that, although the distributions may deviate from normality, they do not exhibit extreme skewness or kurtosis. Furthermore, the Muslim Population variable, which has a skewness value approaching zero and a moderate kurtosis value, seems to have a distribution that is more like a normal distribution compared to the other variables.

Table 3: Results of Levin-Lin-Cho Panel Unit Root Test

Variable		LLC Statistic		P-value	
		At level	Logged	At level	Logged
Real GDP	Unadjusted t	0.8670	-12.1741	0.9519	0.0000***
	Adjusted t*	1.6636	-7.5356		
Investment	Unadjusted t	3.2309	-12.9593	0.1190	0.0000***
	Adjusted t*	2.0756	-8.9016		
Consumption	Unadjusted t	-0.6441	-11.4006	0.6404	0.0000***
	Adjusted t*	0.3595	-6.6640		
Trade	Unadjusted t	-26.8757	-5.1519	0.1021	0.0001**
	Adjusted t*	-24.6138	-3.7584		
Muslim Population	Unadjusted t	-9.5798	-3.4426	0.7290	0.0251**
	Adjusted t*	0.6096	-0.6711		

Note: ***, and ** are significant are 99% and 95%.

At level, all the variables are non-stationary. Given a p-value of greater than .05, one fails to reject the null hypothesis that the variable has unit root. To avoid spurious regression, biased estimates, inefficiency, and misleading interpretation, the variables are log transformed and after testing again for unit root, all show less than .05 p-values. Hence, the null hypothesis is rejected.

Table 4: Correlation Matrix

	Log Investment	Log Consumption	Log Trade	Log Muslim Population
Log Investment	1.0000			
Log Consumption	0.3715	1.0000		
Log Trade	0.0432	0.7474	1.0000	
Log Muslim Population	-0.3534	-0.1183	0.0971	1.0000

The correlation matrix shows that the independent variables are independent of each other with correlation very less than 1. 0.7474 in the case of trade and consumption is acceptable because it is less than 80% (Shrestha, 2020).

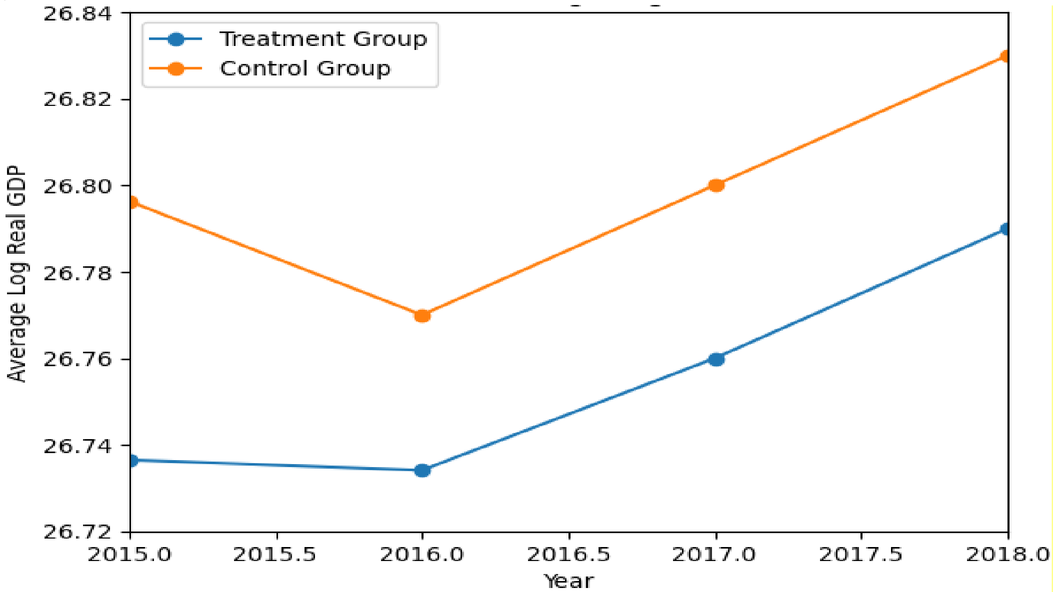


Figure 2: Pre-Treatment Trends in Average Log Real GDP (2015 – 2018)
Source: Authors' computation using World Bank's World Development Indicators

We compare the average log real GDP trends of the treated countries (Indonesia, Pakistan, Bangladesh, Nigeria, and Egypt) and the control group (Norway, Denmark, Finland, Sweden, and Switzerland) over the pre-treatment period. The mean log GDP values evolve in a largely parallel fashion, with both groups exhibiting modest upward growth trends and no visible divergence. The annual average growth rates for both groups in Figure 2 above differ only marginally, and the gap between the groups remains statistically and economically stable across the four pre-treatment years. This preliminary evidence supports the plausibility of the parallel trends assumption.

To formally test for differential pre-treatment trends, we estimate the placebo regression restricted to the pre-treatment period (2015–2018). The results are in Table 5 below.

Table 5: Placebo Regression Results

Variable	**Coefficient**	**Std. Error**	**p-value**
Treated × Time	0.0041	0.0063	0.517
Time Trend	0.0215***	0.0048	0.000
Treated	-0.0387	0.0291	0.191

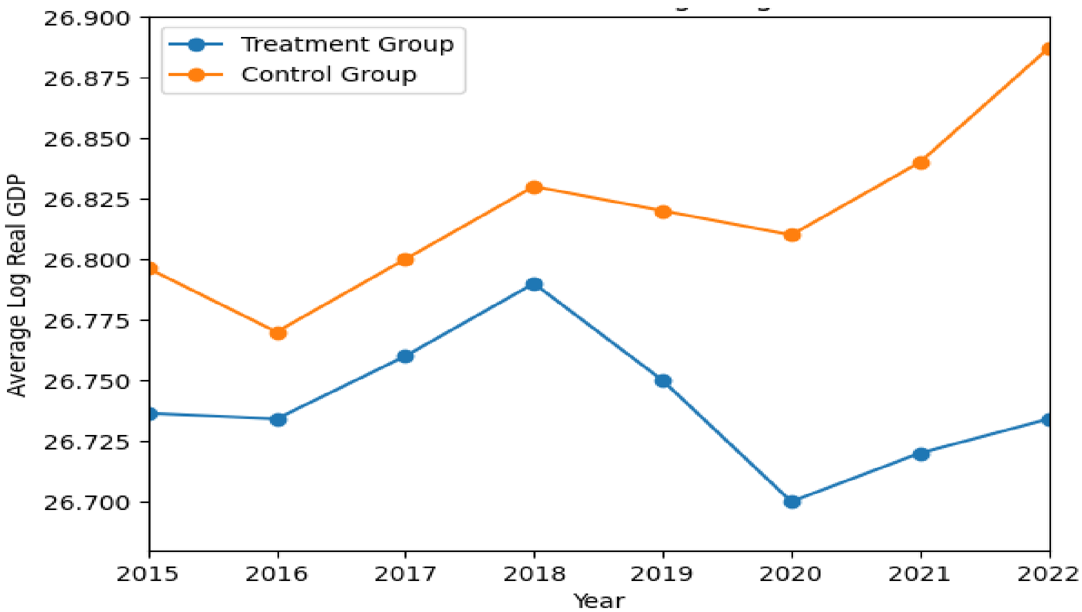
The interaction term between treatment status and time is statistically insignificant ($p > 0.10$), indicating that there is no evidence of differential pre-treatment trends between the treatment and control groups. In other words, prior to the global volatility shock in 2019, the growth trajectories of both groups evolved in parallel.

Table 6: Summary DID Results

Treatment	After		Total
	0	1	
0	26.736503	26.796314	26.766408
1	26.734124	26.887064	26.810585
Total	26.70431	26.84162	26.788496

DID (δ_1) = ($\bar{Y}_{1t}$ - $\bar{Y}_{0t}$) – ($\bar{Y}_{1c}$ - $\bar{Y}_{0c}$) = ($\bar{Y}_{1t}$ - $\bar{Y}_{1c}$) – ($\bar{Y}_{0t}$ - $\bar{Y}_{0c}$) from equation (8) in methodology.
DID (δ_1) = (26.734124 – 26.887064) – (26.736503 – 26.796314) = (26.70431 – 26.84162) – (26.766408 - 26.810585) = -0.93111

Though the result does not test statistical significance, it indicates that on average volatility, the treatment reduces economic growth by 0.93111%.



Source: Authors' computation using World Bank's World Development Indicators
Figure 3: Difference-in-Difference Trends in Average Log Real GDP (2015 – 2022)

The full 2015–2022 DID trend in Figure 3 above clearly shows parallel pre-treatment trends (2015–2018), post-2019 divergence, a sharper contraction for the treatment group during global volatility and continued relative resilience in the control group.

Table 7: Results of the DID Regression

Variables	Results Without Covariates	Results With Covariate
Treatment*After	-0.93111**	-0.0537**
	(0.0188)	(0.0243)
Constant	0.6735***	0.0452**
	(0.0981)	(0.0513)
Log Investment		0.2645***
		(0.0177)
Log Consumption		0.7955***
		(0.0276)
Log Trade		0.0087
		(0.0015)
Log Muslim Population		0.0053
		(0.0081)
Observation	80	80
R-squared	0.0206	0.6387
Root MSE	0.043	0.0535
F-stat	32.64	743.92
Prob>F	0.0481	0.0182

Notes: Standard errors in parenthesis, *** p<0.01, ** p<0.05, * p<0.1

The table presents the results of the difference-in-difference regression analysis, which investigates the economic impact of global volatility on countries with the largest Muslim populations. The first column displays the results without covariates, while the second column includes results with covariates. The treatment variable "Treatment*After" captures the interaction effect between the treatment (global economic volatility) and the post-treatment period (2019–2022). The coefficient estimates indicate the change in the dependent variable for the treated units during the post-treatment period compared to the control units.

In the model without covariates, the coefficient for "Treatment*After" is statistically significant at the 5% level (-0.93111**, p = 0.0423), suggesting that the treated units, which are the sampled most populous Muslim nations, experienced a decrease in their real GDP relative to the control units following the onset of global economic volatility. However, after including covariates in the model, the coefficient for "Treatment*After" becomes much smaller and remains statistically significant at the 5% level (-0.0537**, p = 0.0311). This finding suggests that a portion of the effect attributed to global economic volatility in the initial model was actually explained by the included covariates. The negative impact of global economic volatility on the economies of the five countries with the largest Muslim populations is in line with the pioneering work of Ram and Ram (1995). They also observed the negative effect of volatility on growth in Western countries.

The significance of the covariates, investment and consumption, follows the growth theories of Keynes and others that investment and consumption positively affect growth. This finding is also in line with studies on Muslim countries by Naz and Gulzar (2022), Hamdi (2015), and Khalfaoui and Guenichi (2022). Trade and the Muslim population are positive but not significant. Political instability, weak infrastructure and institutions may weaken the impact of trade on the economies of Muslim countries (Malik & Awadallah, 2013). The Muslim population might not significantly affect the economy due to limited access to quality education and jobs (Shawtari, Elsalem, Salem, & Shah, 2023).

Additionally, the inclusion of covariates substantially improves the model fit, as indicated by the increase in R-squared from 0.0206 to 0.6387. The root mean square error (Root MSE) decreases from 0.043 to 0.0535, indicating better model precision with covariates. The F-statistics also increase from 32.64 to 743.92, indicating a significant improvement in overall model fit with the inclusion of covariates.

Beyond statistical significance, the magnitude of the estimated treatment effect is economically meaningful. The DID interaction coefficient of −0.0537 in the log specification implies an approximate 5 percent relative decline in real GDP for the treated countries during the post-2019 global volatility period. Given that the average real GDP of the sampled countries exceeds USD 475 billion, this corresponds to an estimated output shortfall of roughly USD 20–25 billion per country, on average. Such a contraction is comparable in magnitude to output losses observed during major global crises, including the Global Financial Crisis, where emerging economies experienced growth reductions of between 2 and 6 percent (Kose, Prasad, & Terrones, 2005; Ramey & Ramey, 1995). Therefore, the estimated effect reflects not merely statistical significance but a substantial macroeconomic impact with tangible implications for employment, fiscal stability, and development outcomes in the affected economies.

Overall, these results suggest that global economic volatility does have a significant impact on the economic outcomes of the treated units compared to the control units; this effect is partially explained by differences in log investment, log consumption, log trade, and log Muslim population between the treated and control units.

Conclusion and Recommendation

The study uses a difference-in-difference approach to examine the economic impact of global volatility on countries with the largest Muslim populations, yielding valuable insights into the dynamics of economic vulnerability among these nations. The analysis reveals that the treated units, comprising populous Muslim countries, experienced a significant decline in their real GDP relative to more resilient countries in the control units following periods of global economic volatility. However, the inclusion of covariates in the regression models highlights the importance of considering additional factors such as investment, consumption, trade, and population size, which partially explain the observed effects. Nonetheless, the findings underscore the susceptibility of these countries to external economic shocks and the need for targeted policy interventions to mitigate adverse impacts and promote economic resilience. For Indonesia, diversification beyond commodity exports, reducing oil dependency in Nigeria, and fiscal stabilisation and export upgrading in Pakistan could reduce their susceptibility to external economic shocks. Although the study offers intriguing insights, it is important to acknowledge its limitations. The study is dependent on secondary data sources, which are susceptible to measurement errors, data gaps, or discrepancies. Differences in economic structure, policy environment, and external factors can impact the extent and orientation of the observed impacts in alternative situations.

Acknowledgement

This study received no funding.

References

Al-Marhubi, F. (1998). Cross-country evidence on the link between inflation volatility and growth. *Applied Economics*, *30*(10), 1317–1326. https://doi.org/10.1080/000368498324931

Bairagi, R. (2017). Impact of foreign direct investment volatility on economic development in the Indian subcontinent. *The World Economy*, *40*(12), 2832–2853. https://doi.org/10.1111/TWEC.12496

Chatterjee, P., & Shukayev, M. D. (2011). Are Average Growth Rate and Volatility Related? *SSRN Electronic Journal*, (February 2006). https://doi.org/10.2139/ssrn.888747

Cowan, D. (2018). The coming economic implosion of Saudi Arabia: A behavioural perspective. *The Coming Economic Implosion of Saudi Arabia: A Behavioural Perspective*, 1–317. https://doi.org/10.1007/978-3-319-74709-5

Fleming, J. M. (1962). Domestic Financial Policies Under Fixed and Floating Exchange Rates. *IMF Staff Papers*, *9*(3), 369–380.

Friedman, M. (1957). A Theory of the Consumption Function. *Princeton University Press.*, *I*, 20–37. https://doi.org/10.2307/j.ctv39x7zh.6

Ghouse, G., Ejaz, N., Bhatti, M. I., & Aslam, A. (2022). Performance of Islamic vs conventional banks in OIC countries: Resilience and recovery during Covid-19. *Borsa Istanbul Review*, *22*, S60–S78. https://doi.org/10.1016/J.BIR.2022.11.020

Güreşçi, G. (2018). Effects of Macroeconomic Volatility on Economic Growth: Evidence from the European Union. *International Journal of Management Economics and Business*, *14*(3), 0–0.

https://doi.org/10.17130/ijmeb.2018343112

Haddadi, M. (2015). Regional Organizations and International Peace and Security in the Middle East. *International Journal of Academic Research in Business and Social Sciences*, *5*(3), 277. https://doi.org/10.6007/IJARBSS/v5-i3/1518

Hamdi, K. (2015). Islam and Economic Growth. *International Journal of Social Science Studies*, *3*(6), 62–69. https://doi.org/10.11114/ijsss.v3i6.1019

Hayami, Y., & Godo, Y. (2005). Development economics: From the poverty to the wealth of nations. *Development Economics: From the Poverty to the Wealth of Nations*, 1–448. https://doi.org/10.1093/0199272700.001.0001

Hussain Khan, M., Ahmed, J., Mughal, M., Hussain Khan, M., Ahmed, J., & Mughal, M. (2020). *Oil Price Volatility and Stock Returns: Evidence from Three Oil-price Wars*. Retrieved from https://econpapers.repec.org/RePEc:pid:wpaper:2020:22

Josua, M., & Edel, M. (2015). To Repress or Not to Repress—Regime Survival Strategies in the Arab Spring. *Terrorism and Political Violence*, *27*(2), 289–309. https://doi.org/10.1080/09546553.2013.806911

Kawai, M., & Sheng, A. (2012). Capital market reform in Asia: Towards developed and integrated markets in times of change. *Capital Market Reform in Asia: Towards Developed and Integrated Markets in Times of Change*, 1–359. https://doi.org/10.4135/9788132114024

Khalfaoui, H., & Guenichi, H. (2022). Does Islam promote growth: evidence from Arab Muslim countries and non-Arab Muslim countries. *International Journal of Law and Management*, *64*(2), 206–224. https://doi.org/10.1108/IJLMA-07-2021-0166

Khan, M. H., Ahmed, J., Mughal, M., & Khan, I. H. (2023). Oil price volatility and stock returns: Evidence from three oil-price wars. *International Journal of Finance and Economics*, *28*(3), 3162–3182. https://doi.org/10.1002/ijfe.2588

Kose, M. A., Prasad, E. S., & Terrones, M. E. (2005). Growth and volatility in an era of globalization. *IMF Staff Papers*, *52*(SPEC. ISS.), 31–63. https://doi.org/10.2307/30035982

Malik, A., & Awadallah, B. (2013). The Economics of the Arab Spring. *World Development*, *45*(October), 296–313. https://doi.org/10.1016/j.worlddev.2012.12.015

Muhammad, R., & Triharyono, C. (2019). Analysis of Islamic banking financial performance before, during and after global financial crisis. *Jurnal Ekonomi & Keuangan Islam*, *5*(2), 80–86. https://doi.org/10.20885/jeki.vol5.iss2.art5

Mundell, R. A. (1963). Capital Mobility and Stabilization Policy under Fixed and Flexible Exchange Rates The Canadian Journal of Economics and Political Science / Revue canadienned ' Economique et Capital Mobility and Stabilization Policy Under Fixed and Flexible Exchange Rate. *Canadian Journal of Economics and Political Science*, *29*(4), 475–485.

Mutalemwa, D. K. (2015). Does globalisation impact SME development in Africa? *African Journal of Economic and Management Studies*, *6*(2), 164–182. https://doi.org/10.1108/AJEMS-01-2015-0012/FULL/XML

Nasution, L. N., Suhendi, S., Rusiadi, R., Rangkuty, D. M., & Abdiyanto, A. (2022b). COVID-19 Pandemic: Impact on Economic Stability In 8-Em Muslim Countries. *Atestasi : Jurnal Ilmiah Akuntansi*, *5*(1). https://doi.org/10.57178/atestasi.v5i1.626

Naz, S. A., & Gulzar, S. (2022). Does the Sukuk Issuance Boost Economic Growth? Evidence from Selected Islamic Economies. *Global Business Review*. https://doi.org/10.1177/09721509221093894

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled Mean Group Estimation of Dynamic Heterogeneous

Panels. *Journal of the American Statistical Association*, *94*(446), 621. https://doi.org/10.2307/2670182

Petrakis, P. E. (2020). The Evolution of Economy and Economic Thought. *Theoretical Approaches to Economic Growth and Development*, 227–253. https://doi.org/10.1007/978-3-030-50068-9_9

Qital, S. Al, & Rusydiana, A. S. (2022). Islamic Economic Crisis: A Systematic Review Using Bibliometric Analysis. *Journal of Islamic Economics (JoIE)*, *2*(2), 126–149.

https://doi.org/10.21154/JOIE.V2I2.5075

Ramey, G., & Ramey, V. A. (1995). American Economic Association Cross-Country Evidence on the Link Between Volatility. *Source: The American Economic Review*, *85*(5), 1138–1151.

Reside, R. E. (2022). *Real option: A Review of Selected Theories and Applications* (No. 2022–02).

Shawtari, F. A., Elsalem, B. A., Salem, M. A., & Shah, M. E. (2023). Financial development and economic diversification in Qatar: does Islamic finance matters. *Journal of Islamic Accounting and Business Research*. https://doi.org/10.1108/JIABR-01-2022-0021

Shrestha, N. (2020). Detecting Multicollinearity in Regression Analysis. *American Journal of Applied Mathematics and Statistics*, *8*(2), 39–42. https://doi.org/10.12691/ajams-8-2-1

Silva, S. H. R. d., Tabak, B. M., Cajueiro, D. O., & Fazio, D. M. (2017). Economic growth, volatility and their interaction: What's the role of finance? *Economic Systems*, *41*(3), 433–444. https://doi.org/10.1016/j.ecosys.2016.10.008

Sparrow, P., Brewster, C., & Chung, C. (2016). Globalizing human resource management: Second edition. In *Globalizing Human Resource Management: Second Edition*. https://doi.org/10.4324/9781315668611

Stock, J. H., & Watson, M. W. (2020). Introduction to Econometrics, Fourth Edition. In *Pearson Addison Wesley* (2nd ed., Vol. 20). Boston Massachusetts: Pearson Addison Wesley.

Wilson, W., Ottino-loffler, J., & Sample, E. (2022). *State Resilience Index Annual Report 2022*. Retrieved from www.fundforpeace.org

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 69-91
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Bridging Juristic Divides: A Comparative Analysis of Malaysian and Gulf Cooperation Council (GCC) Countries' *Fatwas* in Islamic Banking

Mohamed Fairooz Abdul Khir[a], Mohamad Akram Laldin[b]
Syafwendi Syafril[c*]

[a,b] *School of Graduates and Professional Studies, INCEIF University, Kuala Lumpur, Malaysia*
[c] *Shariah Business Management, Faculty of Islamic Economics and Business, UIN Raden Intan Lampung, Lampung, Indonesia*

**Corresponding author: syafwendis@radenintan.ac.id*

Abstract
Persistent divergence in Shariah rulings governing Islamic finance has generated ongoing debate regarding the feasibility and desirability of standardization across jurisdictions. While juristic plurality (*ikhtilāf fiqhī*) is an established feature of Islamic jurisprudence, excessive fragmentation in fatwas poses regulatory and operational challenges for Islamic financial institutions operating in an increasingly cross-border environment. This study examines the possibility of Shariah harmonization by conducting a comparative doctrinal analysis of selected fatwas issued by centralized and decentralized Shariah governance bodies, with particular reference to Malaysia and Gulf Cooperation Council (GCC) jurisdictions. Employing a qualitative legal methodology grounded in comparative fiqh and *uṣūl al-fiqh*, the study analyzes key Shariah resolutions related to core Islamic banking instruments, including financing, guarantees, liquidity management, and contractual undertakings. The findings demonstrate that divergences in fatwas do not stem from an absence of Shariah reasoning, but rather from methodological differences in interpretive approaches, juristic prioritization, and regulatory context. Importantly, the study clarifies that scholarly disagreement reflects legitimate interpretive variance and that instances of polemical dismissal among scholars represent ethical concerns (*akhlāq al-ikhtilāf*) rather than jurisprudential principles. The paper argues that rigid standardization risks undermining *ijtihād* and juristic plurality, while uncoordinated divergence threatens legal certainty and market confidence. As a normative contribution, the study advances a middle-path framework of coordinated harmonization through apex Shariah bodies and collective *ijtihād*, preserving the dignity of *mujtahids* while enhancing regulatory coherence. This approach offers a pragmatic pathway for strengthening Shariah governance and fostering sustainable growth in the global Islamic finance industry.
.

Keywords: *Fatwa, Islamic banking, Malaysia, GCC Countries*

1. Introduction

The fundamental difference between Islamic and traditional banking lies in their foundational principles and the guidelines they follow. It is widely recognized that all activities and operations in Islamic banking must adhere to Shariah law. Therefore, stakeholders in Islamic banks, including customers, governments, Shariah advisors, shareholders, and managers, must ensure that the bank's operations do not violate any Shariah rulings. This makes the resolutions (*fatwas*) issued by a bank's Shariah board crucial, as they offer essential guidance and establish a standard for the bank to follow in its daily operations and product development (Bhuiyan et al., 2020).

Article history
Received: 3 August 2025
Accepted: 3 March 2026

In this context, *fatwas* (Shariah resolutions) are crucial for advancing, regulating, and overseeing the growth of Islamic banking and finance (Khan, 2007; Devi & Hamid, 2024; Syafril, 2025). They also ensure that the practice of Islamic banking aligns with the authentic principles of Islamic finance. Given their importance, scholars have outlined several roles of fatwas, including: 1) resolving ambiguous issues in banking and finance by providing Islamic rulings, 2) issuing resolutions and standards as required by the industry, 3) clarifying what is permissible and what is prohibited in financial transactions within banking and finance, and 4) ensuring that Islamic law requirements are met when new products are developed, prior to their marketing (Lahsasna, 2010; Zaini & Shuib, 2021; Suhendar et al., 2023).

In certain countries, each Islamic Financial Institution (IFI) is permitted to independently issue *fatwas*, whereas other countries centralize the issuance of *fatwas*, rendering them obligatory for all IFIs within their jurisdiction. The Middle Eastern countries exemplify the former approach, while Malaysia and Indonesia illustrate the latter. This divergence has resulted in notable differences in the adoption of *fatwas* between these two groups (Zaidi, 2008; Setyowati et al., 2023). A pertinent example of this discrepancy is the issue of the leakage of Islamic funds into non-Islamic investments. In Malaysia, Islamic funds are prohibited from being diverted into the conventional *ribā*-based financial market. This is clearly articulated in the resolution of the Shariah Advisory Council (SAC) of Bank Negara Malaysia (Bank Negara Malaysia, 2010).

According to the resolution by BNM, all Islamic financial transactions in Malaysia must fully adhere to Shariah principles. In contrast, in the GCC (Gulf Cooperation Countries), conventional banks are permitted to generate funds to recapitalize institutions based on *ribā* or to engage in activities that may not align with Shariah investment standards (Kuwait Financial House, 2011). Another instance is the practice of *bay‘ al-‘īnah*, which is temporarily permitted in Malaysia but is strictly forbidden in Middle Eastern nations because it is considered a loophole for *ribā al-jāhiliyah*. It has been noted that the GCIBFI (General Council for Islamic Banks and Financial Institutions) conducted a comparative analysis of 6000 fatwas, revealing that only 10% of the opinions are contested, while scholars concur on the remaining 90% (Hasan, 2009).

The study seeks to compare Malaysian *fatwas* on Islamic banking with those of the GCC countries and subsequently quantitatively assess the differences identified. The findings are expected to facilitate an understanding of the extent of divergence between the *fatwas* issued by these two jurisdictions. Furthermore, the study aims to elucidate the Shariah foundations underlying the resolutions adopted by the respective *fatwa*-issuing bodies. This research is pivotal for advancing the harmonization and standardization of Shariah rulings in Malaysia and the GCC countries by examining the Shariah justifications of the *fatwas*, particularly in instances where significant discrepancies exist. Additionally, this study serves as a valuable resource for members of the Islamic finance community, enabling them to discern the differences and similarities in *fatwas* on Islamic banking between Malaysia and the GCC countries. The initial section of the paper will provide a concise explanation of the concepts of fatwa and *khilāf* to offer a clear understanding of their true nature from a Shariah perspective. Subsequently, the methodology employed to compare the fatwas will be elucidated. Thereafter, the findings will be presented and analyzed from various perspectives. Finally, the paper will explore the concept of standardization as a proposed solution for addressing inconsistencies in interpretation.

2. Literature Review

2.1 The Nature of Fatwas

The meaning of *fatwa* must be thoroughly examined to know whether or not *fatwas* are binding in nature. Literally, the word *fatwa* is derived from the verb *aftā*, or its noun *ifta'*, which connote two important meanings. Firstly, *fatwa* means seriousness, which implies being serious and quiet. *Al-fatā*, which is translated as 'young man' or 'one in the prime of life', connotes one who possesses these qualities. Secondly, *fatwa* means an explanation or clarification, more particularly, an explanation of an unclear matter (Lahsasna, 2010; Salleh et al., 2021; Ansori, 2022)

A *fatwa* is defined as an Islamic ruling on a specific point of Islamic law, issued by a recognized authority based on sound evidence (Lahsasna, 2010). It serves as a response to an ambiguous Shariah matter, involving the declaration and explanation of the Shariah ruling, and is characterized by its non-binding nature (Al-ZuÍaylī, 1998; Shaharuddin, 2015; Zaini & Shuib, 2021). The non-binding aspect implies that the *mustaftī*, or the individual seeking the Shariah ruling, is not compelled to adhere to the issued *fatwa*; consequently, a person who chooses not to follow it should not face punishment. Furthermore, the non-binding nature of a *fatwa* distinguishes it from *qaḍā,* a judgment delivered by a judge (Kermeli, 2000; Ali, 2022). *Qaḍā* also involves the declaration and explanation of a Shariah ruling, but it is inherently binding. This distinction is clearly articulated by *Muṣṭafā al-Ruhaybānī* in his scholarly work *Maṭālib Uli al-Nuhā fi Sharh Ghāyat al-Muntahā:*

"Fatwa is the clarification of the Shariahruling for the person asking about it. It is a nonbinding notification, while qaḍ'ā *(judgment) is the clarification of the Shariahruling and enforcing compliance with it. Hence, qaḍā differs from fatwa in that it is binding."* (Musṭafā al-Ruhaybānī, n.d.)

In contemporary Islamic finance, it is a standard procedure that the *fatwa* issued by the Shariah board of an IFI is obligatory for the *mustaftī,* which is the IFI itself. This requirement is explicitly outlined in the Shariah standards set by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

"The institution is obliged to follow the fatwa once it is issued, regardless of whether it meets the satisfaction of the management or not. This obligation holds true when the fatwa entails enforcement or prohibition of a certain act. When the fatwa entails permissibility of the act in question, the institution has the right to refrain from following it, if it believes that for practical needs it has to do so. In this case, however, rejection of the board's fatwa should be reported to the General Assembly of the institution" (AAOIFI, 2017).

According to AAOIFI guidelines, an institution should not adhere to the *fatwa* of other Shariah advisory boards unless its own board grants permission (AAOIFI, 2017). This guideline is intended to avoid the practice of combining the views of two *mujtahids* to form a new ruling that neither would individually endorse (*talfīq*) and selecting the most lenient opinion from different schools of thought (*tatabbu' al-rukhas*) without adhering to their specific criteria (AAOIFI, 2017).

2.2 *Al-Khilāf* (Disagreement) in *Fatwa*

A *fatwa* is the result of a scholar's *ijtihād* on the Shariah matter at hand. Hence, it can be said that a mufti is a *mujtahid* as well as a jurist who has the task to provide the Islamic ruling on various religious issues presented to him based on sound evidence and a proper methodology of *ijtihād* as prescribed in Islamic jurisprudence. Therefore, the issuer of *fatwa* must possess the minimum requirements of being *mujtahid* such as having sufficient knowledge of the Qur'ān, the Sunnah, *ijmā'* and *khilāf* (consensus and disagreement), Arabic language, *ushūl al-fiqh* (the methods of Islamic jurisprudence) and *maqāsid al-Sharī'ah*. In addition, a mufti in an Islamic finance issue must have deep and comprehensive understanding of the objectives of the Shariah with regard to Islamic finance and should be well acquainted with the operations of contemporary Islamic finance and the context in which it operates (Lahsasna, 2010; Ismail, 2021).

In recent academic discussions, there has been a notable increase in the debate surrounding the alignment of fatwas within the global Islamic banking sector. The primary conflict lies between the commercial need for uniformity and the maintenance of juristic diversity (khilāf). Advocates for harmonization contend that in a globally connected market, differing fatwas lead to considerable operational challenges. These challenges include heightened compliance expenses, legal ambiguities in international contracts, and reputational risks linked to "fatwa shopping" (Oseni, Abu U. F. Ahmad, et al., 2016; Oseni, 2017; Hakim, 2018; Zaini & Shuib, 2021). The absence of standardization is viewed as a key factor in market fragmentation, obstructing the smooth movement of capital and the creation of globally recognized products, especially in the sukuk market where structural variations can discourage international investors (Khan, 2007; Mukhlisin et al., 2015; Devi & Hamid, 2024; Syafril, 2025). The emergence of Islamic fintech has further intensified these demands, as digital platforms need standardized Shariah guidelines to function effectively across various jurisdictions (Mun'im et al., 2025). On the other hand, a strong opposing view warns against the dangers of enforced standardization. Scholars such as Shaharuddin (2016) and Mohamad (2024) stress that juristic diversity is not a defect but a characteristic of Islamic law, showcasing the flexibility of ijtihād (independent legal reasoning). They argue that a uniform code could hinder the Shariah's capacity to adjust to distinct local circumstances and socio-economic demands, potentially undermining the higher objectives (*maqāṣid*) of Islamic law for the sake of commercial ease.

The discussion has evolved from a simple "for or against" argument to a more detailed examination of the methods and extent of harmonization. The emphasis is now on creating robust Shariah governance structures that can accommodate, rather than eradicate, juristic differences. A significant amount of research has been done comparing the centralized Shariah advisory councils in Malaysia and Indonesia with the decentralized, institution-specific boards common in the GCC (Kismawadi, 2025; Mukhlisin et al., 2015; Soualhi & Bouhraoua, 2018; Zakariyah, 2015). Although centralized systems encourage national uniformity, their decisions may not be widely accepted internationally. This has increased the importance of international standard-setting organizations like the AAOIFI and the Islamic Financial Services Board (IFSB). Nonetheless, their impact is still debated; while AAOIFI's standards are highly regarded, they are not universally adopted, and the process of their development has been criticized for allegedly lacking representation from all major juristic schools (El-Halaby et al., 2021; Elhalaby et al., 2023). The challenge of achieving a truly global consensus via collective *ijtihād* (*ijtihād jamāʿī*) remains formidable, hindered by deep-seated methodological differences between regions (Shaharuddin, 2015).

In response to these challenges of governance, scholars are proposing innovative approaches and methodologies to foster greater alignment. One emerging area is the application of Regulatory Technology (RegTech) to map and analyze the global landscape of *fatwas*, using data analytics to identify patterns of convergence and divergence in real-time (Buchak et al., 2018; Rabbani et al., 2020). Another prominent idea is a multi-layered harmonization model, which proposes alignment on universal principles (*uṣūl*) at the global level, consensus on product structures at the regional level, and flexibility for specific applications at the local level (Ercanbrack, 2019; Yussuf et al., 2021; Paksi, 2022). This approach respects both the need for global standards and local contexts. Furthermore, there is a growing consensus that bridging juristic divides requires enhanced academic-industry collaboration to ensure that Shariah rulings are both jurisprudentially sound and commercially viable. Understanding the enduring influence of traditional *madhhab* (schools of thought) on contemporary *fatwa* issuance is also critical, as historical legal traditions continue to shape modern interpretations (Kok et al., 2022). This new wave of research moves beyond governance structures to explore practical tools and frameworks for achieving what some term "managed divergence" or "dynamic harmonization".

Despite the breadth of theoretical, conceptual, and governance-focused discussions, a significant research gap persists in the empirical and quantitative assessment of the issue. The existing literature is abundant with prescriptive studies on achieving harmonization but lacks descriptive studies that systematically assess the actual extent of fatwa divergence among major Islamic finance jurisdictions. A recent review specifically advocates for more data-driven, comparative analyses to advance the harmonization debate beyond anecdotal evidence and theoretical frameworks (Mukhlisin et al., 2015; Shaharuddin, 2015; Tunnur & Amalia, 2024; Devi & Hamid, 2024). Without a clear, quantitative understanding of where the similarities and differences truly exist across various core banking principles, efforts toward standardization remain speculative. This study seeks to address this critical gap by offering a detailed, quantitative comparison between the foundational Shariah resolutions of Malaysia and the GCC, thereby anchoring the harmonization debate in empirical evidence and pinpointing the most promising areas for future consensus-building.

2.3 Ethics of Disagreement

Since the time of the Companions, mujtahids have frequently held divergent views on judicial matters, a phenomenon that persists to the present day. Provided these disagreements were not motivated by self-interest or a desire to create discord, it can be posited that they were all pursuing the correct path. Their primary objective was to address ambiguous Shariah issues and elucidate the truth for the *Ummah*, with the sole aim of seeking the pleasure of Allah S.W.T (Ismail, 2021). Consequently, differences in fatwas should not lead us, as *muqallids* (followers), to conflict; rather, we should respect each other's perspectives. Classical scholars have established exemplary standards for managing disagreements in juristic opinions with mutual respect. It was customary for them to support the judgments of those who issued sound verdicts, irrespective of their legal schools.

The ethics of *Fatwa* in Islamic banking and finance are debated because *Fatwas*, while authoritative, often provide non-binding interpretations that influence product design and regulatory compliance. The literature highlights that multiple Shariah interpretations and differing Fatwas create ethical disputes and uncertainty for both practitioners and customers (Ullah et al., 2016). *Fatwa* shopping, where banks seek favorable rulings, exacerbates tensions surrounding legitimacy, trust, and appropriate risk-taking in Islamic finance (Oseni, Abu Umar Faruq Ahmad, et al., 2016; Oseni, 2017). Governance mechanisms, particularly Shariah Supervisory Boards, are crucial for ethical assurance, but research questions their effectiveness and the legitimacy they provide when *Fatwas* differ, affecting consistent practice in the Islamic banking sector (Haridan et al., 2018). In jurisdictions like Indonesia, Fatwas from the DSN-MUI guide contracts (e.g., *murabahah*), yet empirical work shows misalignment between Fatwas and actual practice, underscoring governance and enforcement gaps (Ibrahim & Salam, 2021; Maulani et al., 2023). There are ongoing calls for standardization, harmonization of Fatwas, and stronger consumer protection frameworks to align normative guidance with real-world banking, ensuring ethical consistency across markets (Devi & Hamid, 2024; Khan, 2019).

In conclusion, the ongoing debate regarding ethical disagreements stemming from differing fatwa interpretations highlights the inherent complexities within Islamic banking practices. The reliance on varying interpretations of Islamic law has critical implications for consistency, transparency, and the credibility of Islamic financial institutions. There is a compelling need for deliberative efforts to harmonize fatwas and develop robust frameworks that reconcile differing opinions while reflecting the ethical tenets of Islamic finance. This cohesion is paramount not only for the success of Islamic banks but also for the trust and confidence of stakeholders, including consumers, regulators, and the broader financial community.

3. Methodology

This study compares various *fatwas* on Islamic banking issued by Malaysia and the GCC countries. It proceeded by collecting *fatwas* related to Islamic banking resolved by the selected *fatwa*-issuing bodies in the two areas. Each *fatwa* is further examined and analyzed, mainly in relation to its verdict on the permissibility or impermissibility of the act, or its permissibility with conditions. Then comparison is made of these *fatwas* to produce the percentage of differences and similarities between them. In order to provide clearer understanding of the methodologies used in this study, this section delineates the scope of the research, and the analytical methods employed.

3.1 Scope of Research

This study adopts a comparative doctrinal approach to examine divergences and convergences in Shariah rulings (fatwas) governing Islamic banking practices across jurisdictions. The analysis focuses on Shariah resolutions issued by leading fatwa authorities in Malaysia and selected Gulf Cooperation Council (GCC) jurisdictions, reflecting two dominant models of Shariah governance in Islamic finance: centralized and decentralized systems.

For Malaysia, this study relies on the Second Edition of the Shariah Resolutions in Islamic Finance published by the Shariah Advisory Council (SAC) of Bank Negara Malaysia (BNM) in 2010. This edition consolidates and refines Shariah rulings issued since the establishment of the SAC and reflects a more mature phase of Malaysia’s Islamic finance regulatory framework. Importantly, under the Central Bank of Malaysia Act, SAC resolutions are legally binding on Islamic financial institutions and courts, rendering them authoritative expressions of Malaysian Shariah positions in Islamic banking. The second edition is therefore methodologically preferable, as it incorporates doctrinal refinements, regulatory clarifications, and harmonization efforts that were not fully captured in the first edition, while still maintaining continuity with earlier rulings.

In contrast, Shariah governance in GCC countries is largely decentralized, with fatwas issued by institutional Shariah boards or transnational juristic bodies. Accordingly, this study selects five prominent fatwa-issuing institutions to represent prevailing Shariah interpretations in the Middle East: (i) Dubai Islamic Bank (DIB), (ii) Dallah al-Barakah Bank (DAB), (iii) Kuwait Finance House (KFH), (iv) the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), and (v) Majmaʿ al-Fiqh al-Islāmī (Islamic Fiqh Academy). These bodies were chosen due to their historical influence, cross-border impact, and frequent citation by Islamic financial institutions and regulators within GCC jurisdictions.

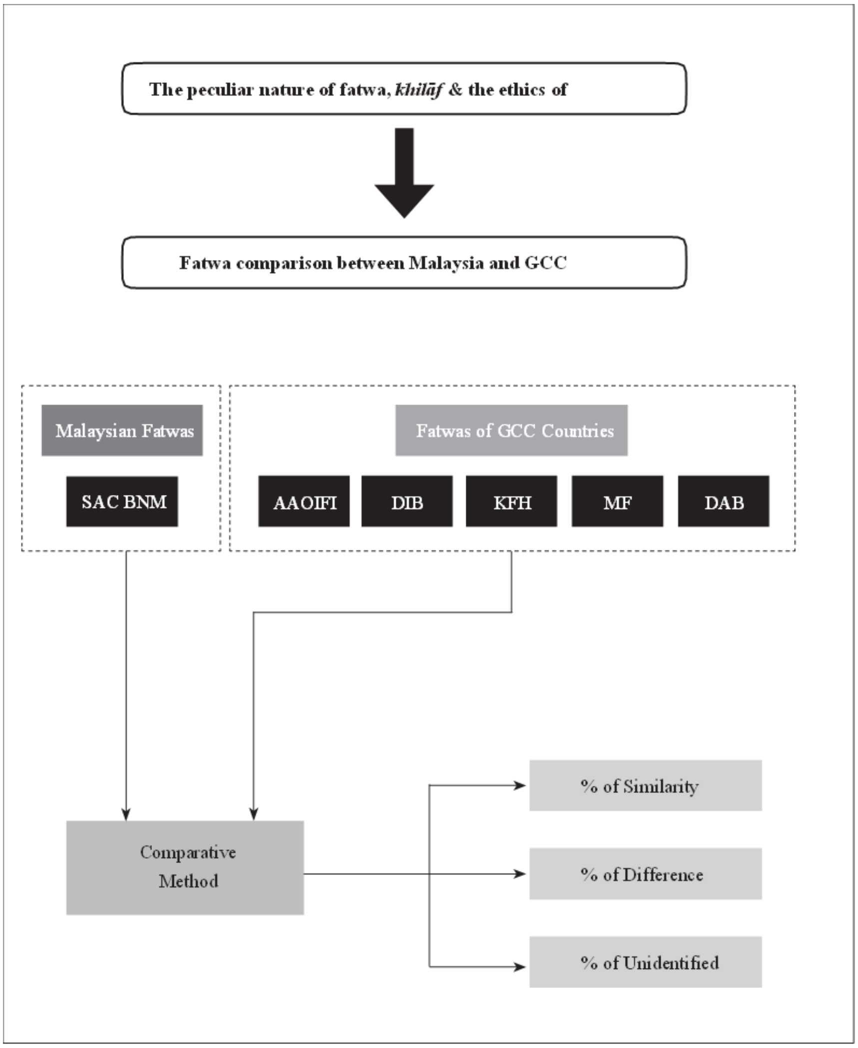


Figure 1: Flow Chart of the Paper
Source: Author's own

The study compares twelve selected Shariah resolutions, namely: *ʿīnah, mushārakah mutanāqiṣah, taʿwīḍ, gharāmah, hibah* on bank deposits*, ibrāʾ, tawarruq, qard, kafālah bi al-ujrah, muḍārabah, waʿd, and hibah in muḍārabah* contracts. These resolutions are deliberately selected for three interrelated reasons. First, they represent core contractual and operational instruments in Islamic banking, directly affecting financing, deposits, guarantees, default management, and profit distribution. Second, these concepts are jurisprudentially contested, with notable differences in acceptance, structuring, or conditionality across jurisdictions, making them particularly suitable for comparative analysis. Third, many of these resolutions (such as *ʿīnah, tawarruq, taʿwīḍ, and gharāmah*) sit at the intersection of legal form and Shariah substance, thus revealing deeper methodological differences in *uṣūl al-fiqh*, *maqāṣid al-Shariah* reasoning, and regulatory pragmatism between Malaysia and GCC fatwa authorities.

Table 1: Selected Shariah Principles

No.	Shariah Principle	No.	Shariah Principle
1.	*Wa'd Mulzim* (Binding Promise)	7.	*Hibah* (Gift) in a *Muḍārabah* Contract
2.	*Bay' al-'Īnah* (Sale and Buyback)	8.	*Muḍārabah* (Silent Partnership)
3.	*Kafālah bi al-Ajr* (Fee for a Guarantee)	9.	*Qarḍ* (Loan of a Fungible)
4.	*Tawarruq Fiqhī*	10.	*Ibrā'* (Rebate)
5.	*Mushārakah Mutanāqisah*	11.	*Ta'wīḍ* (Compensation)
6.	*Hibah* (Gift) on a Bank Deposit	12.	*Gharāmah* (Penalty)

Source: Author's own

The comparative analysis is conducted by systematically examining the doctrinal basis, juristic reasoning, and practical implications of each resolution across the selected bodies. While the study is necessarily limited to one Malaysian authority and five GCC-based institutions, this design allows for a focused yet meaningful comparison between centralized and decentralized Shariah governance models. The findings are intended to illuminate patterns of convergence and divergence in contemporary Islamic banking fatwas and to contribute to ongoing discussions on Shariah harmonization and regulatory consistency in Islamic finance.

3.2 Method of Analysis

Fatwas concerning the twelve Shariah principles mentioned above were gathered from the numerous *fatwas* issued by the chosen Shariah boards. A comparative approach was then utilized to identify the differences and similarities among these *fatwas*, based on three legal values attributed to the principles: permissibility, impermissibility, and permissibility with conditions. Therefore, similarity and difference refer to the likeness and variance in the aforementioned values. For instance, there is only *x*% difference in the permissibility of Shariah Principal Y whereas only *q*% difference occurs in Shariah Principal Z. The following formula is used to calculate the percentage of difference and similarity of the *fatwas*:

$$\frac{P_1}{A} \times 100\% = D_1 \qquad \frac{P_2}{A} \times 100\% = D_2$$

Where:

P_1 = The number of the compared fatwa-issuing bodies that have similar resolutions to that of BNM

P_2 = The number of the compared fatwa-issuing bodies that have different resolutions from that of BNM.

A = Total number of the compared fatwa-issuing bodies

D_1 = Percentage of similarity

D_2 = Percentage of difference

BNM resolved that juristic issue A is permissible. AAOIFI and DAB resolved that it is impermissible while DIB, KFH and MF resolved that it is permissible with conditions. This case shows that only one *fatwa*-issuing authority aligns with BNM's decision, while four others have differing resolutions. Here, we demonstrate how this operates.

(a) Percentage of similarity:

$$\frac{P1}{A} x\ 100\% = D1; P1 = 1\ and\ A = 5$$

1/5 x 100% = 20%, Hence the similarity is 20%.

(b) Percentage of similarity:
$\frac{P2}{A} x\ 100\% = D2; P2 = 4\ and\ A = 5$

4/5 x 100% = 80%, Hence, the percentage of difference is 80%.

In some cases, certain *fatwa*-issuing authorities might not have released any fatwas concerning specific Shariah principles. As a result, an extra column labeled "unidentified" is added to the formula. This column indicates the percentage of *fatwa*-issuing bodies that have not issued any fatwas on the Shariah principles being compared. The percentage of the unidentified is calculated using the following formula.

$$U = 100\% - (D_1 + D_2)$$

Where:
U = Percentage of unidentified
D1 = Percentage of similarity
D2 = Percentage of difference

BNM determined that legal issue B is not allowed, whereas AAOIFI and DAB concluded that it is acceptable. On the other hand, DIB's decision aligns with BNM's, while MF and KFH have not issued any rulings on the matter. This situation illustrates that only one fatwa-issuing authority (DIB) shares a similar decision with BNM, two authorities have differing resolutions, and two others have not made any decisions on the issue. Consequently, the percentage of unidentified is as follows.

BNM resolved that juristic issue B is impermissible, whereas AAOIFI and DAB resolved that it is permissible. On the other hand, DIB's decision aligns with BNM's, while MF and KFH have not issued any rulings on the matter. This situation illustrates that only one *fatwa*-issuing authority DIB shares a similar decision with BNM, two authorities have differing resolutions, and two others have not made any decisions on the issue. Consequently, the percentage of unidentified is as follows:

(c) Percentage of unidentified: $U = 100\% - (D_1 + D_2)$

Suppose $D_1 = 1/5 \times 100\% = 20\%$
$D_2 = 2/5 \times 100\% = 40\%$
$U = 100\% - (20\% + 40\%)$
$U = 40\%$

Based on the above calculation, the percentage of the unidentified is 40%. In other words, 40% of the compared *fatwa*-issuing bodies have no resolution regarding this issue.

Moreover, as for the analytical part of this study, the following three steps are employed. Fisrtly, comparison is made between the selected *fatwa*-issuing bodies on the three different legal values assigned to the twelve Shariah principles namely, permissibility, impermissibility and, permissibility with conditions. Secondly*,* the percentage of differences and similarities between the *fatwas* issued in Malaysia and GCC countries is highlighted along with instances of unidentified *fatwas*.Thirdly*,* the substantive justification of each *fatwa*, which comprises the essential factors causing the difference of opinion, is elucidated to nurture mutual respect among *fatwa*-issuing bodies in particular and the Islamic finance community in general.

In addition to the qualitative doctrinal analysis, this study incorporates limited descriptive statistical observations as a supplementary analytical tool. These quantitative elements are employed solely to illustrate patterns emerging from the comparative Shariah analysis and to contextualize institutional practices across jurisdictions. They are not intended to generate independent empirical claims, test hypotheses, or establish causal relationships. Accordingly, the primary methodological orientation of this research remains normative and comparative in nature, with statistical observations serving a supportive and corroborative function to reinforce the legal findings.

4. Results and Discussion

4.1 Comparative Examination of *Fatwas*

This section analytically discusses the findings and results of the comparative examination of *fatwas* related to the twelve Shariah principles. Percentages of difference and similarity for each *fatwa* are presented along with the legal justifications.

4.1.1 Wa'd Mulzim (Binding Promise)

All *fatwa*-issuing bodies agree that a promise is binding upon the promisor. The binding nature of the promise in this context implies that the promisor is obliged to fulfill the promise; failure to do so without justification necessitates compensation for any damages incurred due to the non-fulfillment of the promise (Majma' al-Fiqh al-Islāmī, 1988). However, Majma' al-Fiqh al-Islāmī has determined that the fundamental ruling of a promise is that it is morally binding. It becomes legally binding if it is contingent upon the fulfillment of an obligation and the promisee has already incurred expenses based on such a promise. This resolution is adhered to by DAB (DAB, 2007), BNM (BNM, 2010), and KFH, which state that their *fatwa* is derived from the Mālikī opinion that a promise becomes binding if it creates an obligation, and this obligation arises due to the promise (KFH, 2011). Thus, it is evident that the resolution of Majma' al-Fiqh al-Islāmī aligns with the Mālikī opinion. Furthermore, AAOIFI contends that the customer may be compelled to fulfill their obligation based on the general texts of the Qur'ān and Sunnah, which mandate the fulfillment of obligations and undertakings based on recent fatwa found in Shariah Standards no. 49 regarding unilateral promises (AAOIFI, 2017). DIB does not clearly mention the Shariah justification of its resolution.

Table 2: *Wa'd Mulzim* (Binding Promise)

<table>
<tr><th>Fatwa issued by:</th><th>Permissible</th><th>Im-permissible</th><th>Permissible with condition</th><th>Justification (reason)</th><th>Similarities</th><th>Differences</th><th>Unidentified</th></tr>
<tr><td>BNM</td><td></td><td></td><td>1</td><td>Refer to some Mālikī Opinion</td><td rowspan="6">100%

(5/5 x 100%)</td><td rowspan="6">0%

(0/5 x 100%)</td><td rowspan="6">0%

[100% - (100% + 0%)]</td></tr>
<tr><td>AAOIFI</td><td></td><td></td><td>1</td><td>General sources of the Qur'ān and Sunnah</td></tr>
<tr><td>DAB</td><td></td><td></td><td>1</td><td>Refer to MF</td></tr>
<tr><td>MF</td><td></td><td></td><td>1</td><td>None</td></tr>
<tr><td>KFH</td><td></td><td></td><td>1</td><td>Refer to Mālikī opinion</td></tr>
<tr><td>DIB</td><td></td><td></td><td>1</td><td>None</td></tr>
</table>

Source: Author's own

In summary, no *fatwa*-issuing authority forbids the use of a binding promise in Islamic banking. They believe that a promise becomes binding when it establishes an obligation. Therefore, the *fatwa* released by BNM in this context is exactly the same as the GCC's *fatwa*. This complete alignment suggests that this fatwa could be standardized across all IFIs.

4.1.2 ʻInah Contract (Sale and Buy-back)

Ba'i al-Inah is a controversial Islamic financing structure involving a two-step "sell-and-buy-back" transaction between two parties, designed to generate immediate cash. A seller sells an asset to a buyer on deferred payment, then immediately repurchases it for a lower price in cash, creating an implicit interest-based loan.

It has been observed that all the *fatwa*-issuing bodies in the Middle East prohibit its exercise in Islamic banking and finance, arguing that it leads to the circumvention of *ribā* or serves as a loophole for *riba* (AAOIFI, 2017; KFH, 2011; DAB, 2007). This study discovered that only the SAC of BNM permits its application in Islamic banking. The SAC of BNM adopted the view of the Shafi'i School and set forth two conditions for the validity of *ʻīnah* (BNM, 2010; Abdullah Saif Al Nasser & Datin, 2013): Firstly, the transaction must adhere to the format specified by the Shafi'i School. (The *ʻīnah* used in the industry does not comply with this.) Secondly, the item involved in the transaction must be a non-ribawi good, meaning it can be sold on a deferred payment basis.

Table 3: *Bayʻ al-ʻInah* (Sale and Buy-back)

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM			1	Shafi'i School Opinion	0% (0/5x100%)	100% (5/5x100%)	0% [100%-(100%+0%)]
AAOIFI		1		Circumvent of *riba*			
DAB		1					
MF		1					
KFH		1					
DIB		1					

Source: Author's own

In addition to that, BNM acceptance of *Bayʿ al-ʿĪnah* is grounded in a juristically defensible position within classical Islamic law, particularly the Shāfiʿī school, which permits the transaction so long as each sale contract independently fulfills its essential pillars and conditions without explicit stipulation of an unlawful intention. From this perspective, Shariah validity is assessed on contractual form rather than inferred economic outcomes, distinguishing *Bayʿ al-ʿĪnah* from explicit *ribā*. Beyond doctrinal permissibility SAC of BNM adopts a *maqāṣid*-oriented regulatory approach, recognizing *ḥājah ʿāmmah* (public need) during the formative stages of Malaysia's Islamic banking industry, where the absence of viable Shariah-compliant financing instruments could have undermined financial inclusion and market stability. The allowance of *Bayʿ al-ʿĪnah* thus served to preserve broader objectives such as wealth circulation and institutional viability, while remaining subject to strict operational safeguards to prevent the transaction from degenerating into a prohibited legal stratagem (*ḥīlah fāsidah*).

4.1.3 Kafālah bi al-Ajr (Charging a fee on Guarantee)

Kafālah bi al-Ajr is an Islamic sharia-compliant guarantee contract (*kafalah*) where a guarantor (bank or institution) agrees to fulfill the obligations of another party (*makful anhu*) in exchange for a fee (*Ajr*). Common in Islamic banking, it is frequently used for bank guarantees, letters of credit, and financing products to facilitate transactions.

There are two contrasting viewpoints on this matter. BNM permits charging a fee for the guarantee without specifying that the fee must not surpass the actual costs (BNM, 2010), whereas other *fatwa*-issuing authorities allow the guarantor to set a specific fee and recognize it as income, provided it does not exceed the actual expenses (AAOIFI, 2017; KFH, 2011; DAB, 2007; DIB, n.d.; Majma' al-Fiqh al-Islāmī, 1988). BNM's decision is based on Wahbah al-Zuhayli's view, which allows it due to *maslahah* and community needs. BNM permits *kafālah bi al-ajr* based on a Shariah interpretation that recognizes the permissibility of charging a fee for services (*ujrah*) associated with guarantee arrangements, rather than for the guarantee (*kafālah*) itself. While classical jurists generally viewed *kafālah* as a gratuitous contract (*tabarruʿ*), the Shariah Advisory Council (SAC) adopts a contemporary fiqh approach that distinguishes between the charitable nature of the guarantee and the legitimate costs, expertise, and operational risks involved in providing professional guarantee services within modern financial institutions. From a *maqāṣid al-Shariah* perspective, allowing *kafālah bi al-ajr* facilitates trade, credit enhancement, and risk mitigation in Islamic banking, thereby supporting market efficiency and financial intermediation, provided that the fee is linked to actual administrative services and does not function as compensation for assuming liability in a manner analogous to *riba* (BNM, 2010; Biancone et al., 2020).

On the other hand, among those who insist that the fee for *kafālah* should not exceed actual costs, only DIB and AAOIFI provide a clear rationale. They argue that *kafālah* is a charity-based contract and cannot treat as commercial contract, making it impermissible to charge a fee. AAOIFI further explains that a guarantee implies a willingness to cover the debt if the principal debtor defaults. In such cases, the guaranteed individual must repay the guarantor. If a fee is charged for the guarantee, it constitutes an excess over the loan, which is considered riba (BNM, 2010; DIB, n.d.). Nonetheless, all *fatwa*-issuing bodies allow the bank, as guarantor, to claim for actual expenses (DIB, n.d.) Consequently, the fatwa issued by BNM in this context is entirely different from the GCC, as illustrated in table 4.

Table 4: Kafālah bi al-Ajr (Charging a Fee on Guarantee)

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM	1			Refer to Zuhayli and Ali Abdalla's opinion	0% (0/5x100%)	100% (5/5x100%)	0% [100%-(100%+0%)]
AAOIFI			1	Kafalah is charity and its considered a loan			
DAB			1	None			
MF			1				
KFH			1				
DIB			1	*Kafalah* is charity			

Source: Author's own

4.1.4 Tawarruq (Comodity Murabahah Financing)

Five *fatwa*-issuing bodies, namely: BNM, AAOIFI, DAB, DIB, and KFH, resolved that *tawarruq* is permissible (AAOIFI, 2017; BNM, 2010; DAB, 2007; DIB, n.d.; KFH, 2011). Their resolutions do not explicitly specify the type of *tawarruq*, is it organized or non-organized *tawarruq*. However, some of them laid down certain guidelines which indicate that the type they consider lawful is non-organized *tawarruq*. For example, AAOIFI allow traditional *tawarruq* to use in Islamic finance and classifies organized *tawarruq* as non-compliant. In organized *tawarruq,* the client delegate the institution or its agent to sell, on his behalf, a commodity that he purchased from the same institution, and similarly, the institution accept such delegation

(Kahf & Habbani, 2016; AAOIFI, 2017; Ahmad et al., 2017). KFH put a condition that the bank should not act as an agent to sell the commodity (security) on behalf of the customer (KFH, 2011). DIB and DAB stipulated that the *tawarruq* arrangement must be free from *ʽīnah* arising from the involvement of a third party in the financial arrangement (DAB, 2007; DIB, n.d.). In contrast, it is found that only MF made a clear resolution that the current practice of *tawarruq* is not permissible on the ground that it contains the element of *riba* (Majma' al-Fiqh al-Islāmī, 1988).

Table 5: Tawarruq (Commodity Murabahah Financing)

<table>
<tr><th>Fatwa issued by:</th><th>Permissible</th><th>Impermissible</th><th>Permissible with condition</th><th>Justification (reason)</th><th>Similarities</th><th>Difference</th><th>Unidentified</th></tr>
<tr><td>BNM</td><td></td><td></td><td>1</td><td rowspan="5">Sales transaction</td><td rowspan="6">80%
(4/5x100%)</td><td rowspan="6">20%
(1/5x100%)</td><td rowspan="6">0%
[100%-(80%+20%)]</td></tr>
<tr><td>AAOIFI</td><td></td><td></td><td>1</td></tr>
<tr><td>DAB</td><td></td><td></td><td>1</td></tr>
<tr><td>MF</td><td></td><td>1</td><td></td></tr>
<tr><td>KFH</td><td></td><td></td><td>1</td></tr>
<tr><td>DIB</td><td></td><td></td><td>1</td><td>None</td></tr>
</table>

Source: Author's own

However, BNM permits organized *tawarruq* based on a Shariah position that recognizes its validity as a series of independent and properly executed sale contracts, each fulfilling the essential pillars and conditions of sale under Islamic law. The SAC adopts a form-based juristic approach, supported by recognized opinions within the Ḥanbalī and contemporary fiqh discourse, which allow *tawarruq* so long as genuine asset ownership, possession, and transfer occur, and the transactions are not contractually interlinked in a manner that renders them a disguised *ribā*-based loan. From a *maqāṣid al-Shariah* perspective, BNM views organized *tawarruq* as addressing *ḥājah ʿāmmah* (public need) by providing liquidity and financing solutions essential for the functioning and competitiveness of Islamic banks, while imposing strict operational controls (such as third-party commodity platforms and sequencing requirements) to prevent the arrangement from degenerating into a prohibited legal stratagem (*ḥīlah*).

4.1.5 Mushārakah Mutanāqisah (Diminishing musharakah)

Mushārakah Mutanāqisah (MM) or "Diminishing Partnership" is a Shariah-compliant financing structure where a bank and a customer jointly purchase an asset (e.g., house or car). The customer gradually buys out the bank's equity share over time through rental payments, ultimately becoming the sole owner. It combines partnership (*musharakah*), leasing (*ijarah*), and sale (*bai*) contracts

All *fatwa*-issuing bodies agree on the permissibility of *mushārakah mutanāqisah* with some conditions that must be completely met. In other words, this unanimous view signifies 100% of similarity of *fatwa* in this case between the *fatwa*-issuing bodies of the Middle East and SAC BNM. There is no argumentative explanation provided in their resolutions since this contract is a partnership contract, which is absolutely permissible in Islam. However, they have set different conditions that must be fulfilled (BNM, 2010; DAB, 2007; DIB, n.d.; KFH, 2011; Majma' al-Fiqh al-Islāmī, 1988). SAC BNM only put one condition: that the combining of *ijārah* and *mushārakah* must be concluded separately, while DAB, KFH and DIB opined that the selling price of the shares must be at market price or as pre-agreed by both contracting parties. The most complete explanation about its general rulings and conditions are as presented by *Majma' al-Fiqh al-Islāmī* and AAOIFI.

Table 6: *Mushārakah Mutanāqisah* (Diminishing *Musharakah*)

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM			1	None	100% (5/5x100%)	0% (0/5x100%)	0% [100%-(100%+0%)]
AAOIFI			1				
DAB			1				
MF			1				
KFH			1				
DIB			1				

Source: Author's own

4.1.6 Hibah on a Bank Deposit

There are two opinions regarding this issue: impermissibility, and permissibility with conditions. Majma' al-Fiqh al-Islāmī is the only *fatwa*-issuing body that has yet to issue a resolution on this case. Three other bodies, namely: BNM, AAOIFI and DAB, argue for its permissibility with conditions. BNM and AAOIFI stipulate that the practice of *hibah* should not become a norm and a condition (AAOIFI, 2017; BNM, 2010).

DAB prescribes six conditions for giving *hibah* on a *qarḍ* (DAB, 2007). Firstly, there must be no pre-existing agreement nor any required conditions. Secondly, *hibah* should not become customary. Thirdly, giving *hibah* is not an obligation on the bank, and the customers have no right to ask for it. Fourthly, the distribution scheme must have various forms in terms of the divided proportion of profit and the amount of the account. Thus, the distribution is not to be limited to those who have funds in excess of a certain amount (for example) or to those who have deposited their funds for a certain period. Fifth, the distributed amounts should be taken from the profit of the shareholders with the approval of the management board as their representative. Lastly, the bank must attach these rules or principles when they are going to announce the rewards.

Nonetheless, DAB fails to offer any rationale for the decision. The critics of this Shariah principle include KFH and DIB (DIB, n.d.; KFH, 2011). DIB contends that the party assuming responsibility is entitled to the profit, following the principle "al-kharāj bi al-ḍamān" (revenue is linked to liability) (DIB, n.d.). Since the customer does not assume any risk of loss, the bank should not offer hibah on the customer's deposit. In summary, 50% of fatwa-issuing authorities consider the provision of hibah on bank deposits permissible under certain conditions; 33.33% oppose it; and 16.67% have an unclear stance. Additionally, 40% of the fatwa-issuing bodies in the Middle East align with SAC BNM's resolution on this matter, while another 40% hold a differing view. The opinion of the remaining 20% is unspecified.

Nonetheless, DAB fails to offer any rationale for the decision. The critics of this Shariah principle include KFH and DIB (DIB, n.d.; KFH, 2011). DIB contends that the party assuming responsibility is entitled to the profit, following the principle *"al-kharāj bi al-ḍamān"* (revenue goes with liability) (DIB, n.d.). Since the customer does not assume any risk of loss, the bank should not offer hibah on the customer's deposit. In summary, 50% of *fatwa*-issuing authorities consider the provision of *hibah* on bank deposits permissible under certain conditions; 33.33% oppose it; and 16.67% have an unclear stance. Additionally, 40% of the *fatwa*-issuing bodies in the Middle East align with SAC BNM's resolution on this matter, while another 40% hold a differing view. The opinion of the remaining 20% is unspecified.

Table 7: *Hibah* on a Bank Deposit

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM			1	None	40% (2/5x100%)	40% (2/5x100%)	20% [100%-(40%+40%)]
AAOIFI			1				
DAB			1				
MF	-	-	-				
KFH		1					
DIB		1		*Al-kharaj bi al-daman*			

Source: Author's own

4.1.7 *Hibah* in a *Muḍārabah* Contract

Regarding the Shariah issue of *hibah* on a *muḍārabah* contract, only BNM and DAB have issued an opinion. Both of them resolved that *hibah* on a *muḍārabah* contract is impermissible. BNM justifies its resolution on the premise that the *muḍārabah* contract is based on profit sharing. If the practice of offering *hibah* is allowed, it can affect the very nature of the *muḍārabah* contract (BNM, 2010). Moreover, DAB states that *hibah* on a *muḍārabah* contract is not permissible even if it is not preconditioned. In consequence, the reward or any profit gained from a conventional bank must be allocated for charity (DAB, 2007). The other *fatwa*-issuing bodies, namely: AAOIFI, MF, KFH and DIB, have not commented on this issue. Therefore, only 20% of the *fatwa*-issuing bodies in the Middle East have a similar resolution to SAC BNM's resolution, while the resolution of 80% of them is unidentified.

Table 8: *Hibah* in a *Muḍārabah* Contract

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM		1		Contravene the nature of *mudarabah* contract	20% (1/5x100%)	0% (0/5x100%)	80% [100%-(20%+0%)]
AAOIFI		-		None			
DAB		1					
MF		-					
KFH		-					
DIB		-					

Source: Author's own

4.1.8 *Muḍārabah*

Mudarabah is a Shariah-compliant partnership agreement where one party (the capital provider, *Rabb-ul-Mal*) supplies 100% of the funds for a project, and the other (the manager, *Mudarib*) provides expertise, management, and labor. Profits are shared based on a pre-agreed ratio, while financial losses are borne solely by the capital provider, provided the loss did not result from the manager's misconduct or negligence.

It is agreed that all scholars permit the practice of the *muḍārabah* contract (BNM, 2010; DAB, 2007; DIB, n.d.; KFH, 2011; Majma' al-Fiqh al-Islāmī, 1988). The *muḍārabah* contract, which is based on profit-and-loss sharing, is perceived as the main contract that distinguishes Islamic banking from conventional banking. AAOIFI argues that the permissibility of this contract is based on the Qur'ān, Sūrah al-Muzzammil, verse 20, *Hadiths*, and the statement of Ibn al-Mundhir, who mentioned that there is consensus among the scholars that the *muḍārabah* contract is valid (AAOIFI, 2017). Hence, it can be concluded that the resolutions of *fatwa*-issuing bodies in the Middle East are similar to SAC BNM's resolution.

Table 9: *Muḍārabah*

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM	1			None	100% (5/5x100%)	0% (0/5x100%)	0% [100%-(100%+0%)]
AAOIFI	1			*Qur'an Hadiths* and *Ijma'*			
DAB	1			None			
MF	1						
KFH	1						
DIB	1						

Source: Author's own

4.1.8 Qarḍ (Loan)

All *fatwa*-issuing bodies agreed that *qarḍ* is permissible in the Shariah as long as it is free from interest (AAOIFI, 2017; BNM, 2010; DAB, 2007; DIB, n.d.; KFH, 2011; Majma' al-Fiqh al-Islāmī, 1988). The permissibility of *qarḍ* is legally justified based on the Qur'ān, the Prophetic tradition (Sunnah) and legal consensus (*ijmāʿ*) (BNM, 2007/2010). To conclude, the *fatwas* of the *fatwa*-issuing bodies in the Middle East on this case are 100% similar to that of SAC BNM. In addition, BNM and AAOIFI view that any benefit like *hibah* of added value that is made a condition of a loan contract is prohibited. Nevertheless, it is allowed to give *hibah* provided it is not preconditioned (AAOIFI, 2017; BNM, 2007/2010). As regard to *hibah* on a *qarḍ*, it has already been discussed under *hibah* on a bank deposit. In contrast, DIB resolved that it is prohibited to give the current account holders more than their balance. This is because it is considered profit, and profit belongs to the bank that has borne the risk; as the Prophet (peace be upon him) said, "*al-kharāj bi al-ḍamān* (revenue goes with responsibility)" (DIB, n.d.). Meanwhile, AAOIFI, KFH and MF state that it is permissible for a lending institution to impose a service charge on a loan contract that is equivalent to the actual amount directly spent on such services (AAOIFI, 2017; KFH, 2011; Majma' al-Fiqh al-Islāmī, 1988). Since BNM did not mention charging a fee on *qarḍ* in its first edition of *Shariah Resolutions in Islamic Finance*, we cannot compare Malaysia with the GCC countries on this issue.

Table 10: *Qarḍ* (Loan)

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM	1			*Sunnah and Ijma*			

AAOIFI	1			None	100% (5/5x100%)	0% (0/5x100%)	0% [100%-(100%+0%)]
DAB	1						
MF	1						
KFH	1						
DIB	1						

Source: Author's own

4.1.9 Stipulation of Ibrā' in the Contract

Ibrā' is an Islamic legal term referring to the waiver, release, or relinquishment of a right to collect a debt or claim. In Islamic finance, it acts as a rebate provided by a financier to a customer who settles a sale-based financing, such as *Murabahah*, before the agreed term.

BNM resolved that Islamic banks may stipulate an *ibrā'* clause in Islamic financing agreements for customers who make early settlement. This *fatwa* is justified on the basis of public interest (*maslahah*). SAC BNM argued that the inclusion of an *ibrā'* clause in the agreement may remove confusion on the issue of uncertainty in price (*gharar*). In this regard, the bank is bound to honor its promise with the inclusion of an *ibrā'* clause in the financing agreement (BNM, 2007/2010). This resolution refers to Shaykh Musṭafā al-Zarqa's opinion in his book *al-Madkhal al-Fiqhī al-'Ómm* that the inclusion of a condition in financial contracts such as a sale contract is permissible under Islamic law if the inclusion is made for the purpose of protecting the interests of the transacting parties and it does not contradict the principle of sale and purchase (BNM, 2007/2010). In contrast, all *fatwa*-issuing bodies in the Middle East do not allow the stipulation of *ibrā'* in thecontract as a condition (AAOIFI, 2017; DAB, 2007; DIB, n.d.; KFH, 2011; Majma' al-Fiqh al-Islāmī, 1988). Stipulation of *ibrā'* up-front will be tantamount to *riba* (DAB, 2007; DIB, n.d.; Majma' al-Fiqh al-Islāmī, 1988). Moreover, KFH emphasizes that stipulating it up-front or after the contract either verbally or in writing is all impermissible (KFH, 2011). Early settlement must come solely from the willingness of the customer without any oral or written condition stipulated up- front (KFH, 2011). In addition, the customer should not request for a certain amount to be deducted on account of his early settlement of the debt (DIB, n.d.). To sum up, all the *fatwa*-issuing bodies in the Middle East have a different opinion from SAC BNM on this issue; the former parties disallow it and the latter allows it. Hence the difference is 100%, as highlighted in Table 10.

Table 11: Stipulation of *Ibrā'* in the Contract

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM	1			*Maslahah*	0% (0/5x100%)	100% (5/5x100%)	0% [100%-(0%+100%)]
AAOIFI		1		Mimics Interest based loan			
DAB		1		*Riba*			
MF		1					
KFH		1					
DIB		1					

Source: Author's own

4.1.10 Ta'wīḍ (Late Payment Charge)

Ta'widh is an Islamic finance concept referring to compensation charged by an Islamic financial institution to a customer for actual losses incurred due to the customer's deliberate negligence or breach of contract (wanprestasi), such as delayed payments. It is a compensatory, not punitive, fee based on real costs, distinct from riba (usury)

All *fatwa*-issuing bodies in both Malaysia and the Middle East agreed on the permissibility of *ta'wīḍ*. They resolved that Islamic banks may impose compensation on defaulters who fail to meet their obligations to pay back the financing amount as agreed in the contract. However, the amount of *ta'wīḍ* should not exceed the actual loss suffered by the financier (AAOIFI, 2017, 2017; BNM, 2010; DAB, 2007; DIB, n.d.; Majma' al-Fiqh al-Islāmī, 1988). Dallah al-Barakah and AAOIFI hold that the customer should bear all legal and other expenses incurred by the creditor in order to recover his debt (AAOIFI, 2017; DAB, 2007). Moreover, Majma' al-Fiqh al-Islāmī resolved that the loss that can be compensated includes actual financial loss incurred by the partner, any other material loss, and the gain he was certain of obtaining and that he missed as a result of his partner's default or delay in repayment of debt. It does not include moral losses (Majma' al-Fiqh al-Islāmī, 1988).
The permissibility of charging *ta'wīḍ* is based on the following arguments (BNM, 2010). First, the *Hadiths* narrated by al-Bukhārī: "Procrastination by a rich (debtor) is injustice." Another *Hadiths* narrated by Ibn Mājah and al-Dāraquṭnī states, "(There is) neither harming nor reciprocating harm (in Islam)." Second, delay in debt payment can be compared with *ghasb* (usurpation) of valuable property. The common *'illah* (ratio legis) is obstructing the owner's use of his property and the other party exploiting it in an oppressive way. Lastly, it refer to legal maxim *al-ḍarar yuzāl* (harm should be removed). Meanwhile, Dubai Islamic Bank argues for its permissibility based on the above *Hadiths* and the permissibility of *ta'zīr bi al-māl*. However, the amount of *ta'zīr* can only be determined by a court (DIB, n.d.).

In conclusion, the *fatwas* of the *fatwa*-issuing bodies in the Middle East on this matter are similar to the resolution of SAC BNM. The similarity is 100% and the difference is 0%.

Table 12: *Ta'wīḍ* (Late Payment Charges)

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM	1			*Hadiths qiyas on ghasb* and legal maxim (*al-darar yuzal*)	100% (5/5x100%)	0% (0/5x100%)	0% [100%-(100%+0%)]
AAOIFI	1			Preventing Harm to the Creditor based on principle *la darar wa la dirar*			
DAB	1						
MF	1						
KFH	1						
DIB	1						

Source: Author's own

4.1.11 Gharāmah (Penalty) on Debt

Gharāmah is a monetary penalty or fine imposed by Islamic financial institutions on customers who delay in settling their debt or financing payments. Unlike *ta'widh* (actual compensation for losses), *gharāmah* is punitive, intended to encourage discipline, and must be channeled to charitable bodies rather than recognized as income by the bank.

There are two opinions regarding this issue. Two *fatwa*-issuing bodies opine that it is not permissible while others argue that it is permissible to charge *gharāmah* (penalty or late-payment charge). BNM, AAOIFI, DAB and KFH allow *gharāmah* provided it is not acknowledged as income, and it must be channelled to charity (AAOIFI, 2017; BNM, 2010; DAB, 2007; KFH, 2011). Moreover, the bank may not utilize it to pay any tax imposed on its asset as that will protect the assets (DAB, 2007). AAOIFI argued that *gharāmah* is considered as a commitment to make a donation, which is well established in the Mālikī School(AAOIFI, 2017). In contrast, MF and DIB view that imposing *gharāmah* (penalty) on debt is not allowed (DIB, n.d.; Majma' al-Fiqh al-Islāmī, 1988). The latter (DIB) argued that it is similar to, "*Give me more time; I will give you more money*", whereby this is considered *ribā* as unanimously agreed by the jurists (DIB, n.d.). To conclude, 60% of the *fatwa*-issuing bodies in the Middle East have the same opinion as BNM while 40% of them have a different opinion.

Table 13: *Gharāmah* on Debt

***Fatwa* issued by:**	**Permissible**	**Impermissible**	**Permissible with condition**	**Justification (reason)**	**Similarities**	**Difference**	**Unidentified**
BNM			1	None	60% (3/5x100%)	40% (2/5x100%)	0% [100%-(60%+40%)]
AAOIFI			1	Refer to opinion of Maliki's Jurist			
DAB			1	None			
MF		1					
KFH			1				
DIB		1		*Riba*			

Source: Author's own

4.2 General Overview of the Percentage of Similarities and Differences of *Fatwas* on Islamic Banking Between Malaysia and GCC Countries

This section highlights the overview of the percentage of similarities and differences between *fatwas* on Islamic banking issued in Malaysia and GCC countries. The summary of the percentage of similarities and differences related to the compared Shariah contracts and principles is highlighted in Figure 2.

Figure 2: Summary of the Percentage of Similarities and Differences between Malaysia's Resolutions and GCC

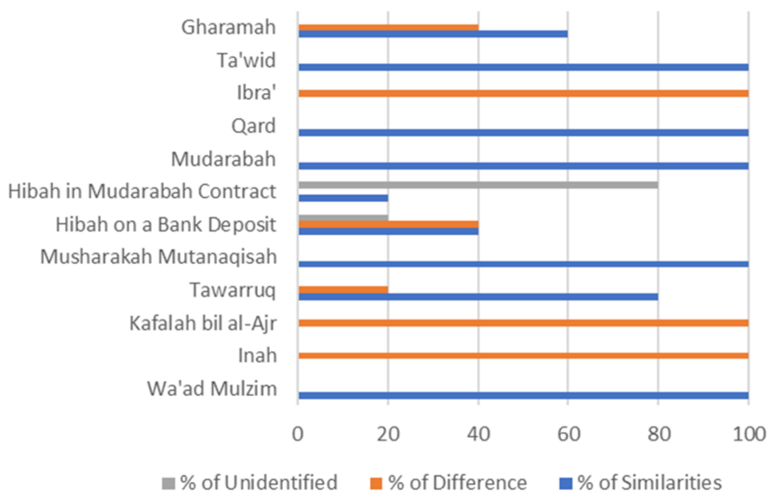


Figure 2: Countries' Resolutions
Source: Author's own

Figure 2 demonstrates that there is complete agreement among the respected fatwa-issuing bodies in GCC countries and Malaysia on five out of twelve Shariah principles: *ta'wīḍ, qarḍ, muḍārabah, mushārakah mutanāqisah, and wa'd mulzim*. This 100% agreement indicates that the Middle Eastern *fatwa*-issuing bodies share the same juristic views as Malaysia on these Shariah principles. Conversely, there is a complete divergence in the *fatwas* issued by the Middle Eastern and Malaysian bodies concerning three Shariah principles: *'īnah, kafālah bi al-ajr,* and the stipulation of *ibrā'* in contracts. This total difference signifies that the Middle Eastern bodies hold distinct juristic opinions from Malaysia on these Shariah contracts. In contrast, there is a 20% agreement on *hibah* in a *muḍārabah* contract and a 20% disagreement on the *tawarruq* contract. The 20% agreement suggests that only one *fatwa*-issuing body in the Middle East aligns with Malaysia's view on *hibah* in a *muḍārabah* contract. Similarly, the 20% disagreement in the case of *tawarruq* indicates that only one Middle Eastern body differs from Malaysia's opinion.

Figure 2 also shows a 40% agreement in *fatwas* related to *hibah* on bank deposits, while a 60% agreement is noted on *gharāmah* on debt. The 40% agreement implies that only two Middle Eastern *fatwa*-issuing bodies share the same juristic opinion as Malaysia regarding *hibah* on bank deposits, whereas the 60% agreement indicates that three Middle Eastern bodies align with Malaysia on *gharāmah* on debt. Additionally, Figure 2 reveals that some *fatwa*-issuing bodies have not yet issued resolutions on certain Shariah principles and contracts. For instance, only one selected *fatwa*-issuing body in GCC countries has issued a fatwa on *hibah* in a *muḍārabah* contract, while the others have remained silent, categorizing them as "unidentified" fatwas, which account for 80%.

On average, the percentage of similarity and difference between BNM and the fatwa-issuing bodies represented by Majma al-Fiqh al-Islāmī (MF), Kuwait Finance House (KFH), Dubai Islamic Bank (DIB), Dallah al-Barakah (DAB), and the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is depicted in Figure 3.

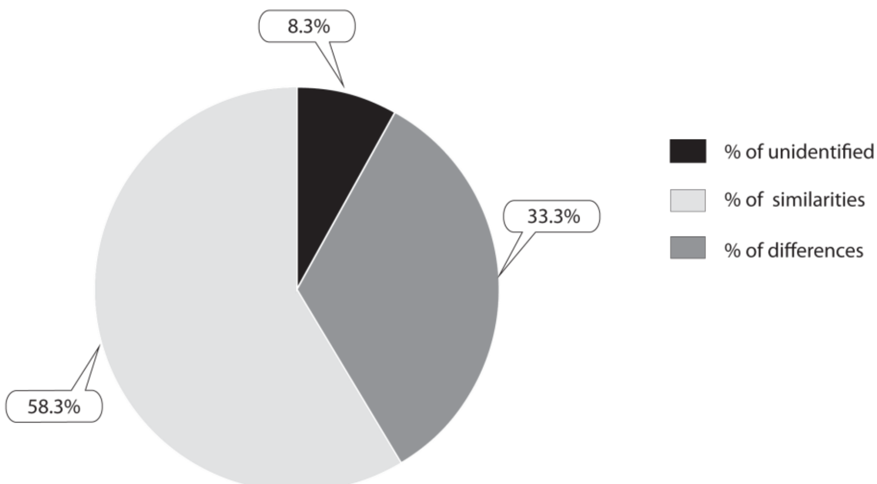


Figure 3: Overall Percentage of Similarity and Difference between Malaysia's Resolutions and the Middle East's Resolutions
Source: Author's own

Figure 3 indicates that the average percentage of similarity is 58.3%, the average percentage difference is 33.3% and the average percentage of unidentified *fatwas* is 8.3%.

While the core findings of this study are derived from doctrinal and comparative Shariah analysis, selected descriptive statistical observations are presented to support and contextualize these findings. The statistics do not constitute a novel empirical contribution; rather, they provide an illustrative overview of observed tendencies that align with the jurisprudential patterns identified in the legal analysis. As such, the quantitative results are interpreted cautiously and are used only to reinforce, not to replace, the study's primary normative conclusions.

4.3 The Possibility of Standardization

Differences in fatwas have been an inherent feature of Islamic jurisprudence since the earliest period of Islam and reflect the dynamic nature of *ijtihād*. A mujtahid may revise a legal opinion upon encountering stronger evidence, changing circumstances, or new factual realities that warrant a reassessment of the applicable Shariah ruling. Such variation is neither anomalous nor indicative of inconsistency in Shariah methodology. Rather, it demonstrates the intellectual vitality of Islamic law and its capacity to respond to diverse contexts. However, while juristic plurality (*ikhtilāf fiqhī*) is doctrinally legitimate, its practical implications for Islamic banking remain a subject of ongoing debate.

From an institutional perspective, Islamic banks argue that excessive divergence in Shariah rulings across jurisdictions may hinder market confidence, complicate product structuring, and impede cross-border transactions. Empirical and doctrinal studies suggest that a lack of convergence in Shariah standards can undermine regulatory clarity and create uncertainty in compliance practices, thereby constraining industry growth (Hakim, 2013; Shaharuddin, 2015; Devi & Hamid, 2024; Syafril, 2025). Consequently, proponents of harmonization argue that a degree of standardization could enhance stability and facilitate the sustainable expansion of Islamic finance without negating legitimate juristic diversity (Abdul Hamid, 2008; Antonio & Rusydiana, 2008).

Debates surrounding standardization are often intensified by high-profile fatwas that diverge sharply from dominant scholarly positions, such as Muḥammad Ṭanṭāwī's ruling on the permissibility of certain forms of bank interest. While this fatwa was strongly contested, it is important to emphasize that such rulings were not issued in the absence of Shariah reasoning. Rather, they were grounded in specific interpretive methodologies and readings of ribā, even if rejected by the majority. Similarly, subsequent endorsements by al-Azhar's Islamic Research Institute reflected collective scholarly deliberation rather than arbitrary opinion. Disagreement over conclusions, therefore, should not be conflated with a lack of scholarly rigor or Shariah legitimacy.

Classical and contemporary scholars have consistently affirmed that juristic disagreement is natural and, within limits, beneficial. Wahbah Al-Zuhayli (2010) emphasized that divergence in juristic rulings is unavoidable in any legal system and that most disagreements arise at the level of interpretive detail (*furūʿ*), not foundational principles (*uṣūl*). He further argued that such differences constitute a mercy for the Ummah, allowing flexibility across cultures and circumstances. Importantly, the presence of disagreement does not justify dismissing alternative opinions as un-Islamic or deficient. Disrespect among scholars reflects an ethical lapse (*akhlāq al-ikhtilāf*), not a jurisprudential principle, and should be clearly distinguished from legitimate scholarly critique.

Opposition to rigid standardization is primarily rooted in two concerns. First, enforcing uniform Shariah rulings risks marginalizing *ijtihād*, thereby weakening the very mechanism that ensures Shariah's adaptability across time and place. Second, given the plurality of recognized schools of law, mandatory standardization may implicitly privilege one juristic methodology over others, undermining the inclusivity of Islamic legal tradition. This concern is historically illustrated by Imām Mālik's refusal to impose al-Muwaṭṭaʾ as a binding legal code despite its scholarly authority, reflecting an early recognition of the dangers of enforced uniformity.

Accordingly, contemporary proposals favor coordinated harmonization rather than absolute standardization. Initiatives such as AAOIFI's Shariah standards and the establishment of national apex Shariah bodies represent pragmatic models that preserve juristic plurality while ensuring regulatory coherence. These bodies do not negate scholarly disagreement but channel collective *ijtihād* to provide authoritative guidance for Islamic financial institutions. A globally representative supreme Shariah board, as envisaged by some scholars, could further enhance convergence on critical issues while respecting the dignity, independence, and scholarly legitimacy of all mujtahids involved.

5. Conclusion and recommendation

This study has examined the enduring debate on Shariah standardization in Islamic finance through a comparative analysis of juristic opinions and institutional fatwas across centralized and decentralized governance systems. The findings confirm that divergence in Shariah rulings is not indicative of methodological weakness or absence of Shariah reasoning, but rather reflects legitimate differences in interpretive approaches, juristic prioritization, and regulatory contexts. Such plurality is deeply rooted in Islamic legal tradition and constitutes a defining strength of Shariah jurisprudence, particularly in matters of *muʿāmalāt*. However, when translated into the operational domain of Islamic banking, uncoordinated divergence may undermine legal certainty, regulatory consistency, and stakeholder confidence, especially in cross-border financial activities.

The study concludes that absolute standardization of Shariah rulings is neither feasible nor desirable, as it risks marginalizing *ijtihād* and undermining the dignity and independence of mujtahids. At the same time, unchecked fragmentation in fatwas poses practical challenges to the sustainable development of the Islamic finance industry. Accordingly, a balanced approach that distinguishes between foundational principles (*uṣūl*) and interpretive details (*furūʿ*) is essential for reconciling juristic plurality with institutional stability.

The findings of this study have significant practical implications for the global Islamic finance industry, particularly for regulators and financial institutions. First, Islamic finance regulators and standard-setting bodies should pursue coordinated Shariah harmonization rather than rigid standardization, focusing on high-impact commercial practices where legal certainty is critical. This may be achieved through structured dialogue and collective ijtihād among leading Shariah scholars. Second, the global Shariah institutions such as AOIFI should strengthen collaboration mechanisms to issue interpretive guidance that respects juristic diversity while narrowing unnecessary divergences. Third, Shariah governance frameworks should explicitly promote ethical norms of scholarly disagreement (*akhlāq al-ikhtilāf*), ensuring that intellectual critique remains methodologically rigorous and professionally respectful.

Finally, future research should adopt longitudinal and empirical approaches to assess how harmonization initiatives influence market confidence, regulatory efficiency, and Shariah compliance outcomes across jurisdictions, thereby enriching policy-oriented discourse in Islamic finance.

References

AAOIFI. (2017). *Shariah Standards*. Dar AlMaiman for Publishing & Distributing.

Abdul Hamid, M. (2008). Harmonization of common law and shari’ah in Malaysia: A practical approach’paper presented at the Abd Al-Razzaq Al-Sanhuri Lecture. *Islamic Legal Studies Program, Harvard Law School*, *6*.

Abdullah Saif Al Nasser, S. & Datin. (2013). Introduction to history of Islamic banking in Malaysia. *Humanomics*, *29*(2), 80–87. https://doi.org/10.1108/08288661311319157

Ahmad, E. F., Shihama, M., Mohamad Tarmizi, N. A., Jibril, S. M., Djama, S. I., & Muneeza, A. (2017). Tawarruq as a product for financing within the Islamic banking system: A case study of Malaysian Islamic banking system. *International Journal of Management and Applied Research*, *4*(1), 31–43.

Ali, M. (2022). *Fatwas on Inter-faith Marriage in Indonesia*. *9*(3). https://escholarship.org/uc/item/7sq681t7

Al-ZuÍaylī. (1998). *Ódāb al-Fatwā*. Dār al-Maktabi.

Ansori, A. (2022). *Position of fatwa in Islamic law: The effectiveness of MUI, NU, and Muhammadiyah fatwas*. *22*(1), 53–72.

Antonio, M. S., & Rusydiana, A. S. (2008). What is the Future Outlook of Shar’iah Harmonization. *ISRA) Islamic Finance Seminar, Kuala Lumpur*, *11*(11).

Bank Negara Malaysia. (2010). Shariah resolutions in Islamic finance. In *Bank Negara Malaysia*.

Bhuiyan, A. B., Ali, M. J., Islam, K. A., Alam, M. S., & Solaiman, M. (2020). The Issues and Challenges of Shariah Harmonization of The Cross Border Transactioins: Conceptual Review of Islamic Banking Industries. *International Journal of Shari'ah and Corporate Governance Research*.

Biancone, P. P., Saiti, B., Petricean, D., & Chmet, F. (2020). The bibliometric analysis of Islamic banking and finance. *Journal of Islamic Accounting and Business Research*.

BNM. (2010). *Shariah Resolutions in Islamic Finance* (2nd ed.). Bank Negara Malaysia. https://www.bnm.gov.my/documents/20124/9198675/shariah_resolutions_2nd_edition_EN.pdf (Original work published 2007, Bank Negara Malaysia)

Buchak, G., Matvos, G., Piskorski, T., & Seru, A. (2018). Fintech, regulatory arbitrage, and the rise of shadow banks. *Journal of Financial Economics*, *130*(3), 453–483. https://doi.org/10.1016/j.jfineco.2018.03.011

DAB. (2007). *Al-Fatāwā al-Sharʿiyyah, Majmūʿat al-Barakah al- Masrafiyyah* (1st ed.). Dallah al-baralkah Bank.

Devi, A., & Hamid, B. A. (2024). Challenges and Obstacles in the Standardization and Harmonization of Fatwa in Islamic Finance Industry and Way Forward. *Ekonomi Islam Indonesia*, *6*(1). https://doi.org/10.58968/eii.v6i1.494

DIB. (n.d.). *Hay'ah al-Fatāwā wa al-Raqābah al-SharÑiyyah of Dubai Islamic Bank (DIB), Fatāwā,*. Dār al-Bashā'ir al- Islāmiyyah.

El-Halaby, S., Aboul-Dahab, S., & Bin Qoud, N. (2021). *A systematic literature review on AAOIFI standards*. *19*(2), 133–183.

Elhalaby, S., Sarea, A., Alnesafi, A., & Al-Absy, M. S. M. (2023). *The adoption of AAOIFI standards by Islamic banks: Understanding the microeconomic consequences*. *11*(2), 39.

Ercanbrack, J. (2019). *The standardization of Islamic financial law: Lawmaking in modern financial markets*. *67*(4), 825–860.

Hakim, R. (2013). Harmonization of Shariah Rulings in Islamic Finance: An Analysis. *Ijtihad: Jurnal Hukum Dan Ekonomi Islam*, *7*(2).

Hakim, R. (2018). Pro Kontra Fatwa Dana Talangan Haji. *Iqtishodia: Jurnal Ekonomi Syariah*, *3*(1), Article 1.

Haridan, N. M., Hassan, A. F. S., & Karbhari, Y. (2018). Governance, Religious Assurance and Islamic Banks: Do Shariah Boards Effectively Serve? *Journal of Management & Governance*, *22*(4), 1015–1043. https://doi.org/10.1007/s10997-018-9418-8

Hasan, Z. B. (2009). Regulatory framework of Shari'ah governance system in Malaysia, GCC Countries and the UK. *Kyoto Bulletin of Islamic Area Studies*, 3–2.

Ibrahim, A., & Salam, A. J. (2021). A Comparative Analysis of DSN-MUI Fatwas Regarding Murabahah Contract and the Real Context Application (A Study at Islamic Banking in Aceh). *Samarah Jurnal Hukum Keluarga Dan Hukum Islam*, *5*(1), 372. https://doi.org/10.22373/sjhk.v5i1.8845

Ismail, A. M. (2021). Highlights Of Mufti's Qualifications As Fatwa Guideline: Sorotan Kelayakan Mufti Sebagai Garis Panduan Fatwa. *Journal of Fiqhiyyat*, *1*(1), 68–74.

Kahf, M., & Habbani, E. I. (2016). Tawarruq Potential Risks: The Practices of Islamic Financial Institutions in Qatar. *Journal of Islamic Economics Banking and Finance*, *12*(4), 54–88. https://doi.org/10.12816/0050980

Kermeli, E. (2000). *Islamic Legal Interpretation: Muftis and Their Fatwas*. JSTOR.

KFH. (2011). *Al-Fatāwā al-Shar'iyyah fī al-Masā'il al-Iqtisādiyyah*. Kuwait Finance House. http://www.kfh.com/KFH_Fatawa/Fatawa_Index.aspx

Khan, G. G. (2019). Fatwa Institution and Product Development for Islamic Finance in Pakistan. *Policy Perspectives*, *16*(2). https://doi.org/10.13169/polipers.16.2.0107

Khan, M. F. (2007). Setting standards for Shariah application in the Islamic financial industry. *Thunderbird International Business Review*, *49*(3), 285–307.

Kismawadi, E. R. (2025). *Islamic fintech: Navigating the regulatory framework and promoting financial inclusion in Gulf Cooperation Council (GCC) countries*. *16*(6), 1742–1769.

Kok, S. K., Akwei, C., Giorgioni, G., & Farquhar, S. (2022). On the regulation of the intersection between religion and the provision of financial services: Conversations with market actors within the global Islamic financial services sector. *Research in International Business and Finance*, *59*. Scopus. https://doi.org/10.1016/j.ribaf.2021.101552

Kuwait Financial House. (2011). *Al-Fatāwā al-Shar'iyyah fī al-Masā'il al-Iqti?ādiyyah*. http://www.kfh.com/KFH_Fatāwā/Fatāwā_Index.aspx.

Lahsasna, A. (2010). *Introduction to fatwa, Shariah supervision & governance in Islamic finance*. CERT Publications Sdn. Bhd.

Majma' al-Fiqh al-Islāmī. (1988). *Qarārāt wa al-Tawsiyyāt*. http://www.fiqhacademy.org.sa

Maulani, D., Artasya, A. N., Bimo, W. A., & Aliyah, H. (2023). Islamic Bank: Fatwa Perspective From the National Sharia Council of the Indonesian Ulama Council on Resolving Financing Problems. *Moneter Jurnal Keuangan Dan Perbankan*, *11*(2), 326–335. https://doi.org/10.32832/moneter.v11i2.438

Mukhlisin, M., Hudaib, M., & Azid, T. (2015). *The need for Shariah harmonization in financial reporting standardization: The case of Indonesia*. *8*(4), 455–471.

Mun'im, Z., Astuti, S. D., Riyadi, I., Khabibah, S., & Huda, N. (2025). Harmonisation Between DSN-MUI

Fatwas and OJK Regulations: Towards an Innovative and Inclusive Sharia-Compliant Fintech Ecosystem in Indonesia. *Mazahib Jurnal Pemikiran Hukum Islam*, *24*(1), 182–197. Scopus. https://doi.org/10.21093/mj.v24i1.10032

Musṭafā al-Ruhaybānī. (n.d.). *Maṭālib Uli al-Nuhā fī SharИ Ghāyat al-Muntahā, (MawqiÑ al-Islam), vol. 19, p. 220.* (Vol. 19). MawqiÑ al-Islam.

Oseni, U. A. (2017). *Fatwā shopping and trust: Towards effective consumer protection regulations in Islamic finance*. *12*(3), 340–355.

Oseni, U. A., Ahmad, Abu U. F., & Hassan, M. K. (2016). The Legal Implications of 'Fatwā Shopping' in the Islamic Finance Industry: Problems, Perceptions and Prospects. *Arab Law Quarterly*, *30*(2), 107–137. https://doi.org/10.1163/15730255-12341319

Oseni, U. A., Ahmad, Abu Umar Faruq, & Hassan, M. K. (2016). *The legal implications of 'Fatwā shopping'in the Islamic finance industry: Problems, perceptions and prospects*. *30*(2), 107–137.

Paksi, A. (2022). Legal harmonization of Islamic finance in Indonesia: A critical overview. *Indonesian Journal of Law and Society*, *3*(1), 59–78.

Rabbani, M. R., Khan, S., & Thalassinos, E. I. (2020). *FinTech, blockchain and Islamic finance: An extensive literature review*.

Salleh, M. K. M., Bahor, A., & Yahya, M. A. (2021). *Position of Fatwa in The Constitution: A Legal Analysis. 29*(4). http://www.pertanika2.upm.edu.my/resources/files/Pertanika%20PAPERS/JSSH%20Vol.%2029%20(4)%20Dec.%202021/04%20JSSH-8149-2021.pdf

Setyowati, R., Hussain, M. A., Markom, R., & Arif, M. I. A. M. (2023). The role of shariah authority in enhancing the Islamic financial system in Malaysia and Indonesia. *Akademika*, *93*(1), 251–259.

Shaharuddin, A. (2015). Harmonizing Shariah Rulings in Islamic Finance: Strategies and Challenges. *The Journal of Muamalat and Islamic Finance Research*, *12*(1), 1–12.

Soualhi, Y., & Bouhraoua, S. (2018). Islamic finance regulations in Malaysia: A macro maqasidic approach. *Al-Shajarah*, (Special Issue: Islamic Banking and Finance), 307–336. Scopus.

Suhendar, H., Mukhlas, O. S., & Hakim, A. A. (2023). *Legal Politics of the Existence of Fatwa in Islamic Financial Institutions: Evidence from Indonesia*. *21*(2), 279–308.

Syafril, S. (2025). The Fiqh Divide: Standardization Challenges and the Quest for Regulatory Convergence in Islamic Finance. *Indonesian Journal of Law and Syariah*, *1*(2), 88–99.

Tunnur, L., & Amalia, N. (2024). Mapping and Harmonizing Qanun on Sharia Financial Institutions. *Sriwijaya Law Review*, *8*(1), 20–37. Scopus. https://doi.org/10.28946/slrev.Vol8.Iss1.2513.pp20-37

Ullah, S., Harwood, I., & Jamali, D. (2016). 'Fatwa Repositioning': The Hidden Struggle for Shari'a Compliance Within Islamic Financial Institutions. *Journal of Business Ethics*, *149*(4), 895–917. https://doi.org/10.1007/s10551-016-3090-1

Wahbah, al-Z. (2010). *Al-Fiqh al-Islami wa Adillatuh, (Dar al-Fikr; Damascus, 12th edition)* (12th ed.). Dar al-Fikr.

Yussuf, Y. C., El Amri, M. C. E., & Mohammad, M. O. (2021). Harmonization Of Mainstream Techniques With Maqasid Based Methodology For Islamic Economics And Finance Research (pp. 242–254). Scopus. https://doi.org/10.4324/9781003252764-20

Zaidi, J. A. (2008). Shari'a harmonization, regulation and supervision. *AAOIFI-World Bank Annual Conference on Islamic Banking and Finance, Manama, Bahrain*.

Zaini, F., & Shuib, M. S. B. (2021). Fatwa on Sharia Products and Its Role in The Development of Islamic Finance Industry. *Islamadina: Jurnal Pemikiran Islam*, *22*(2), 189–207.

Zakariyah, L. (2015). Harmonising legality with morality in Islamic banking and finance: A quest for Maqasid al-Shari'ah paradigm. *Intellectual Discourse*, *23*, 355–376. Scopus.

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 92-102
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Enhancing Sukuk Default Remedies: A Shariah and Legal Perspective

Mohd Shahid[a*], Safinar Salleh[b] , Uzaimah Ibrahim[c] , Syed Marwan Mujahid[d]

[a,b,c] *Ahmad Ibrahim Kulliyyah of Laws, International Islamic University Malaysia, Kuala Lumpur, Malaysia.*
[d] *Institute of Islamic Banking and Finance, International Islamic University Malaysia, Kuala Lumpur, Malaysia.*

**Corresponding author: shahidazminadwi@gmail.com*

Abstract

This research evaluates the efficacy of Shariah and legal remedies in resolving Sukuk defaults within the rapidly evolving Islamic finance landscape. Despite the theoretical emphasis on asset ownership and risk-sharing, contemporary default resolution mechanisms remain structurally inadequate. Employing a qualitative methodology comprising doctrinal analysis, comparative legal studies, and case examinations, this research identifies a critical disconnect: the dominance of asset-based Sukuk diminishes investor ownership rights and shifts the risk profile toward unsecured credit risk. Key impediments include legal ambiguities regarding beneficial ownership, an overreliance on purchase undertakings, and a lack of harmonized, Shariah-compliant insolvency regimes, particularly in cross-border contexts. These factors drive protracted litigation, inflate transaction costs, and erode investor confidence. To bridge these gaps, this study proposes a standardized framework that synchronizes legal enforceability with Shariah objectives (Maqasid al-Shariah). The findings advocate for reinforced regulatory coordination, the modernization of contractual structures, and the integration of financial technology to enhance transparency. Such reforms are vital for bolstering investor protection and ensuring the long-term stability of the global Sukuk market.

Keywords: Sukuk default, Islamic finance, Shariah compliance, legal remedies, financial stability

1. Introduction

Sukuk have assumed a pivotal role in the Islamic capital market as a Shariah-compliant alternative to conventional bonds (Afifi, 2024). The global market has experienced exponential growth over the past two decades, driven by a burgeoning demand for ethical finance, increased sovereign and corporate issuances, and the rising prominence of Islamic financial institutions. By 2024, annual Sukuk issuance reached approximately USD 180 billion, propelling the total outstanding market toward the USD 1 trillion milestone. Notable issuances, such as Indonesia's 30-year green Sukuk, Saudi Arabia's USD 5 billion issuance, and the Islamic Development Bank's USD 2.5 billion sustainability Sukuk (Bennett & Coyle, 2025), signal a strategic shift toward utilizing Sukuk for long-term, ESG-aligned financing.

Despite this rapid expansion, the rising prevalence of Sukuk defaults has exposed critical vulnerabilities within existing resolution frameworks. Unlike conventional bonds, which benefit from

Article history
Received: 11 March 2025
Accepted:19 March 2026

established and predictable insolvency regimes, Sukuk defaults are complicated by the intricate interplay of Shariah principles, jurisdictional variations, and the legal enforceability of contractual terms (Busari et al., 2019). A fundamental challenge in resolving these defaults lies in the structural distinction between asset-backed and asset-based Sukuk. While asset-backed structures grant investors a legal claim to the underlying assets, providing a tangible degree of security, asset-based Sukuk merely create a payment obligation. This exposes investors to the same credit risks as traditional unsecured bonds without fulfilling the Shariah ideal of true risk-sharing. This structural dichotomy carries profound implications during default scenarios. Asset-based Sukuk holders often lack direct access to underlying assets due to the legal limitations of nominal or "beneficial" ownership, leading to legal uncertainties and protracted court proceedings (Tasnia et al., 2017). Landmark defaults, such as the East Cameron Sukuk, The Investment Dar Sukuk, and the Dana Gas Sukuk, have starkly illustrated the risks associated with incomplete ownership transfer, the enforceability of purchase undertakings, and the friction of applying conventional insolvency laws to Islamic financial arrangements (Lukonga, 2015).

Furthermore, differing Shariah interpretations across jurisdictions compound these complexities. The Dana Gas dispute, for instance, highlighted the legal paralysis resulting from conflicting interpretations of English common law and UAE domestic law, leading to substantial investor losses and diminished market confidence (Berrahlia & Benseghir, 2025; Busari et al., 2019). This research seeks to critically analyze the efficacy of current Sukuk default remedies from both Shariah and legal perspectives. Specifically, it examines the structural, governance, and jurisdictional impediments that curtail investor protection under modern Sukuk practices. The study aims to assess the extent to which existing resolution tools—particularly those concerning asset ownership, contractual enforceability, and insolvency proceedings—embody the core Islamic finance principles of risk-sharing (*al-ghunm bil ghurm*), true ownership (*milkiyyah*), and fairness.

By employing a triangulated methodology of doctrinal evaluation, comparative legal analysis, and empirical case studies, this article identifies major deficiencies in existing regulatory frameworks, most notably the absence of a harmonized, Shariah-compliant insolvency regime for cross-border settings. Ultimately, the research proposes an integrated framework that aligns legal enforceability with Shariah objectives (*Maqasid al-Shariah*). Through practical recommendations—ranging from regulatory harmonization and enhanced contractual clarity to the integration of financial technology (fintech)—this study aims to foster a more resilient Sukuk market that bolsters investor confidence, minimizes systemic inefficiencies, and ensures the long-term viability of the global Islamic capital market.

2. Literature Review

The exponential growth of Sukuk in the global financial framework has amplified the urgent need for robust, Shariah-compliant frameworks to mitigate default risks. Although Sukuk are theoretically grounded in the principles of asset ownership and risk-sharing, the literature consistently demonstrates that practical default scenarios are marred by severe enforcement hurdles, inadequate investor protection, and jurisdictional friction. In response to these challenges, recent scholarship has coalesced around several major themes: structural vulnerabilities, cross-jurisdictional legal disparities, governance failures, and the critical need for regulatory standardization. Despite ongoing efforts by institutions like AAOIFI to enhance market discipline, the literature reveals that a comprehensive framework capable of balancing Shariah principles with reliable legal enforceability remains conspicuously absent.

Structural Vulnerabilities: The Asset-Backed vs. Asset-Based Dichotomy

A central debate within the literature revolves around the structural classification of Sukuk and its implications for investor recourse. Scholars widely agree that the legal distinction between asset-backed and asset-based structures is the primary determinant of recovery success during a default

(Ali, 2019; Tasnia et al., 2017). True asset-backed Sukuk offer superior default safeguards by utilizing true sale structures that grant investors legal ownership and direct recourse to the underlying assets (Tasnia et al., 2017). Conversely, the majority of modern issuances are asset-based, operating largely as unsecured debt where investors must rely solely on the creditworthiness of the issuer (Zaheer & van Wijnbergen, 2024). Cases such as the East Cameron Partners and Nakheel Sukuk underscore how these asset-based structures often mimic traditional debt instruments, exposing investors to heightened risks and rendering the theoretical promise of "asset ownership" ineffective in practice.

Jurisdictional Conflicts and Legal Ambiguity

The complexity of Sukuk defaults is further exacerbated by the intersection of Islamic jurisprudence and conventional legal systems. The literature extensively documents the hazards of operating under dual legal regimes, with the Dana Gas dispute serving as the paramount case study. In this instance, discrepancies between UAE domestic law (governing the Sukuk structure) and English common law (governing the purchase undertaking) resulted in conflicting judicial decisions and prolonged legal paralysis (Busari et al., 2019; Zada & Muhammad, 2018). Ali (2022) notes that the absence of a standardized, globally accepted legal framework for Islamic finance leaves default resolutions highly vulnerable to jurisdictional arbitrage. Consequently, courts across different regions have demonstrated marked inconsistency in handling disputes, particularly where local Islamic finance legislation remains underdeveloped (Ali, 2019; Zaheer & van Wijnbergen, 2024).

Governance Failures and “Post-Issuance” Shariah Risk

Beyond structural and legal flaws, researchers highlight severe gaps in corporate and Shariah governance as primary catalysts for default. Weak transparency, inadequate disclosure, and conflicts of interest significantly undermine market stability (Adisa, 2022). More critically, the literature points to the weaponization of “Shariah non-compliance” claims by issuers seeking to evade payment obligations. As observed in the Dana Gas and Investment Dar cases, obligors have successfully used retrospective claims of Shariah invalidity to stall enforcement, exposing the limitations of current Shariah regulatory oversight (Zada & Muhammad, 2018; Ali, 2022). Even in equity-based Musharakah models, such as the Villamar Sukuk, operational constraints and the absence of clear buyback guarantees have led to protracted insolvency proceedings, contradicting the inherent risk-sharing ethos of the structure (Ali, 2017; Swandaru & Muneeza, 2024).

The Path Forward and Remaining Research Gaps

To address these pervasive issues, scholars advocate for the implementation of robust contractual tools, such as cross-default clauses, though their strict conformity with Maqasid al-Shariah remains a subject of ongoing debate (Zakariyah & Busari, 2019). Furthermore, while there is a strong consensus on the need for regulatory harmonization and enhanced oversight (Swandaru & Muneeza, 2024), the literature struggles to reconcile these theoretical proposals with practical market behavior and insolvency realities. Crucially, the existing body of research remains fragmented. While governance weaknesses, jurisdictional dispersion, and the debt-like nature of modern Sukuk (Nawaz, 2025) are well-documented as isolated phenomena, there is a distinct lack of empirical analysis connecting these variables. Specifically, empirical data illustrating how differences in asset-backed versus asset-based structures translate into actual recovery rates and enforcement efficacy across various jurisdictions are scarce (Shahid et al., 2025). Therefore, a significant gap exists for a comprehensive, interdisciplinary analytical framework that integrates ownership structures, contractual arrangements, insolvency regulations, and Shariah governance. Addressing this gap is imperative to move beyond the current theoretical discourse and develop actionable, robust default remedies that can stabilize the global Islamic capital market.

3. Research Methodology

This study employs a qualitative research design to evaluate the efficacy of Sukuk default remedies from both Shariah and legal perspectives. The primary objective is to identify structural, legal, and governance inefficiencies, ultimately facilitating the development of a more cohesive, Shariah-compliant resolution model. The research is anchored in foundational Islamic finance principles—specifically risk-sharing (*al-ghunm bil ghurm*) and true asset ownership (*milkiyyah*)—alongside conventional legal theories of enforceability and insolvency. These theoretical foundations are utilized to assess whether contemporary Sukuk practices successfully align with both Shariah objectives and legal certainty. To achieve this, the research triangulates doctrinal, comparative, and multiple case study approaches, enabling a systematic analysis that bridges theory and practice.

Doctrinal Analysis

Doctrinal analysis forms the conceptual and normative foundation of the study. This involves a systematic review of primary and secondary materials, including classical juristic texts, contemporary Shariah standards (such as those issued by AAOIFI), statutory legislation, regulatory frameworks, and legal jurisprudence. This approach is utilized to critically evaluate the legal and Shariah underpinnings of Sukuk structures, with a particular focus on default triggers, enforcement mechanisms, ownership rights, and contractual features like purchase undertakings. Through this analysis, the research delineates the extent to which current frameworks deviate from core Shariah principles and how such deviations contribute to systemic vulnerabilities.

Comparative Legal Analysis

Building upon the doctrinal foundation, a comparative legal analysis is employed to explore how Sukuk defaults and enforcement are navigated across different jurisdictions. The study focuses on Malaysia, the United Arab Emirates (UAE), and the United Kingdom, selected based on three criteria: (i) their status as leading hubs in the global Sukuk market; (ii) their diverse legal traditions (common law, civil law, and hybrid systems); and (iii) their extensive practical experience in adjudicating cross-border Sukuk disputes. By reviewing regulatory frameworks, court decisions, and enforcement practices within these jurisdictions, the study identifies the discrepancies in legal treatment, Shariah governance, and judicial reasoning that drive jurisdictional inconsistency and enforcement uncertainty.

Multiple Case Study Approach

To supplement the normative and comparative elements, the study utilizes a multiple case study approach to provide empirical insight into the practical resolution of Sukuk defaults. The East Cameron Sukuk (US), The Investment Dar Sukuk (Kuwait/UAE), and Dana Gas Sukuk (UAE/UK) were purposively selected based on the following criteria:

1. Their precedential value in the evolution of Sukuk default jurisprudence.
2. Their representation of differing structural models (asset-backed versus asset-based).
3. Their involvement in complex cross-border legal and Shariah disputes.

These cases are evaluated using a systematic analytical framework developed specifically for this research. The framework assesses each case across four dimensions:

1. The nature of asset ownership and investor recourse rights.
2. The enforceability of contractual devices (including purchase undertakings and guarantees).
3. The interaction and friction between the governing law and Shariah compliance.
4. The overall effectiveness of dispute resolution mechanisms and recovery outcomes.

The combination of these three research methods ensures a robust and cohesive research design. The doctrinal analysis sets the theoretical baseline, the comparative analysis contextualizes the jurisdictional friction, and the case studies empirically demonstrate how these challenges manifest in real-world litigation. This triangulated methodology validates the study's central premise that existing Sukuk default remedies are structurally and institutionally deficient, providing a rigorous foundation for proposing a unified, legally viable, and Shariah-compliant resolution model.

4. Results and Discussion

The results of this research highlight the inherent inadequacies of existing solutions to Sukuk defaults based on both Shariah and legal perspectives. The discussion suggests that despite the development of Sukuk structures as Shariah-compliant alternatives to traditional bonds, their default resolution procedures are unsatisfactory and often face challenges in aligning with Islamic financial principles. One of the key problems identified is the reliance on the conventional methods of financial restructuring, such as cash injection, rescheduling, and debt-for-equity swaps, and haircuts, which may face challenge in adhering to Shariah principles of equity, risk-sharing, and ethical financial practices (Abd Hafiz et al., 2017).

The paper suggests that beneficial ownership, which is a common idea in asset-based Sukuk poses significant enforcement challenges, particularly during times of default. Despite nominal ownership rights, Sukuk holders are often faced with barriers to direct access to underlying assets owing to the legal and structural limitations of beneficial ownership (Oseni, 2015). This undermines the underlying concept of asset-backed transactions in Islamic finance and puts investors at risk as financial distress sets in. Empirical data suggest that the majority of Sukuk are still in the form of senior unsecured obligations, and investors have limited or non-exercisable rights to underlying assets, which undermines the realising of ownership and risk-sharing principles (Nawaz, 2025).

The analysis of the purchase undertakings and capital guarantees show that these mechanisms tend to blur the distinction between equity-based risk-sharing instruments and financial guarantees aimed at protecting investors. These tools are a source of concern regarding Shariah non-compliance because they are similar to traditional guarantees that reduce the inherent risk of the Islamic finance investment (Zakariah and Aziz, 2013; Sawari et al., 2018; Busari et al., 2024; Muneeza & Mustapha, 2020; Laldin, 2012; Muhammad et al., 2011; Lahsasna, 2014). This paper shows that such mechanisms result in the false portrayal of Sukuk as risk-free investments; a claim that goes against the fundamental tenets of Islamic finance that emphasise the importance of sharing profits and losses. Empirical studies have long pointed out that fixed repurchase obligations and capital guarantees were found in a significant percentage of Sukuk issues, effectively converting them into instruments that provide bond-like assurance of returns (Usmani, 2008; Godlewski et al., 2013). This market-driven structural design is indicative of a deeper preference for predictability and protection of investors even in situations where it contravenes the underlying Shariah principle of *al-ghunm bil ghurm* (entitlement to gain contingent upon risk).

The complexity of Sukuk structures makes it harder to introduce default remedies. The involvement of different stakeholders, including issuers, investors, trustees, Shariah boards, and regulatory authorities, and differing interpretations of Shariah across jurisdictions lead to a fragmented and inconsistent system of default resolution. The lack of legal and regulatory standards exacerbates the issue, as it leads to prolonged court cases and increased investor risk (Busari et al., 2019; Jobst et al., 2008). This disintegration is also enhanced by the unavailability of binding judicial precedent in most Sukuk-issuing jurisdictions, which reduces the predictability of legal outcomes and investor confidence in enforcement mechanisms (Nagano, 2017).

The study highlights the inadequacy of the existing insolvency laws in dealing with Sukuk defaults. The classical Islamic jurisprudence focuses mainly on individual insolvency, creating gap between the classical Islamic principles and the modern financial conditions. The absence of Shariah-compliant insolvency legislation that specifically address corporate parties limits the recourse of Sukuk investors and results in delays and inefficient resolution of defaults (Van Wijnbergen & Zaheer, 2013; Zaheer & Van Wijnbergen, 2024; Al-Ali, 2019). This is supported by quantitative data, which shows that recovery performance in most Organisation of Islamic Cooperation (OIC) jurisdictions ranges from average to poor, due to weak creditor protection systems and lack of enforcement capacity (Fitch Ratings, 2024). In addition, the absence of clear court-based resolutions, as most defaults are resolved through out-of-court settlements, further restricts the development of jurisprudence and limits the development of reliable guidelines on future cases.

The fragmented nature of Shariah governance, where different interpretations of Islamic financial principles are applied across jurisdictions complicates the enforcement of Sukuk default remedies. This difference leads to non-uniform legal treatment of cross-border Sukuk dealings, and it undermines investor trust in the dependability of such instruments (Busari et al., 2019). The Dana Gas case offers a critical example of such problems, with contradictory interpretations between the UAE and English courts on the compliance with Shariah and contractual enforceability exposing the limitations of legal certainty and the jurisdictional breakdown (Ercanbrack, 2019).

East Cameron Partners (ECP) failed to meet its payment obligations under the Sukuk and went into Chapter 11 bankruptcy in the United States. The case highlighted the pitfalls of having two different interpretations of the law as the court had to determine whether the Sukuk was a true sale of property or a secured loan. These examples demonstrate the challenges of adopting Sukuk default solutions in different jurisdictions (Lukonga, 2015). It is interesting to note that, despite these high-profile defaults, the overall default rates of Sukuk are incredibly low at less than 0.25% globally, and about 81% of rated Sukuk are investment-grade (Fitch Ratings, 2024). This paradox indicates that the perceived stability of the Sukuk market is not necessarily related to strong legal protections but to structural conservatism, sovereign backing, and low exposure to defaults.

The changes proposed by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) that require the issuers to transfer the legal ownership of underlying assets to investors aim to standardise issuance across jurisdictions and enhance Shariah authenticity. Nevertheless, analysts warn that the changes could create legal complexity, increase transaction costs and also lead to a decline in investor appetite. Empirical evidence based on scenarios indicates that extreme enforcement of such standards might result in a lower volume of issuance, wider pricing spreads and may even fragment the global Sukuk market, but a gradual and coordinated approach would help balance between authenticity and competitiveness (Nawaz, 2025).

These instances show how different interpretations of Shariah rules and legal systems across jurisdictions can lead to different legal consequences in cross-border transactions involving Sukuk and thus reducing investor confidence in such instruments. One of the most notable outcomes of the research is the necessity of a more comprehensive, standardised and Shariah-compliant insolvency regime on Sukuk defaults. This framework should address the inadequacies of the existing solutions including explicit enforcement mechanisms, enhanced legal protection for investors, and ensuring that the strategies of default resolution are aligned with the Shariah principles of justice, transparency, and equitable risk-sharing.

The research suggests the need to improve the harmonisation of regulations to resolve the inconsistency in Shariah interpretations and legal requirements across different jurisdictions. The development of clear rules concerning ownership rights and protection of investors and dispute resolution tools will be crucial in enhancing resilience and the credibility of the Sukuk market. This is particularly relevant given the ongoing growth of the Sukuk market, where the overall amount of outstanding Sukuk is over USD 850 billion as of 2023 and the annual issuance is approaching USD 180 billion as of 2024, with the market expected to reach USD 1 trillion in the coming years. This continuous rise, combined with the evidence that yield spreads generally move in the same direction as traditional bond markets, underlines the increasing role of Sukuk in the global financial market and suggests that any structural changes should be made cautiously, taking into account the overall financial market trends (Fitch Ratings, 2024; Bennett and Coyle, 2025). The results of this research show that the current system of dealing with the default of Sukuk is inadequate from both Shariah and legal perspectives. Sukuk have become a vital component of Islamic finance, but their default resolution processes are not sufficiently developed, thereby exposing investors to significant risks and to undermine market confidence. To ensure Sukuk as a financial instrument are sustainable over time, a multi-faceted, Shariah-compliant legal and regulatory structure is necessary to address the risks of default, which sufficiently reduce default risk without contravening the ethical and financial principles of Islamic finance. The strengthening of these structures will not only increase the level of protection for investors but also strengthen the position of Sukuk as a viable alternative in the global capital markets to traditional financial instruments.

The findings of this research highlight the inherent inadequacies of existing Sukuk default resolution frameworks from both Shariah and legal perspectives. Despite the evolution of Sukuk as a Shariah-compliant alternative to conventional bonds, current default procedures routinely fail to align with foundational Islamic financial principles. A primary issue identified is the over-reliance on conventional financial restructuring methods—such as cash injections, rescheduling, debt-for-equity swaps, and haircuts—which often contravene Shariah principles of equity, ethical practice, and true risk-sharing (Abd Hafiz et al., 2017).

Structural Contradictions: Beneficial Ownership and Guarantees: A significant enforcement barrier lies in the concept of "beneficial ownership," a hallmark of asset-based Sukuk. During a default, despite holding nominal ownership rights, investors face severe legal and structural limitations in accessing the underlying assets (Oseni, 2015). This reality undermines the concept of asset-backed transactions and severely disadvantages investors during financial distress. Empirical data supports this, demonstrating that the majority of modern Sukuk function as senior unsecured obligations, granting investors limited or non-exercisable rights and completely bypassing the principle of risk-sharing (Nawaz, 2025).

Furthermore, the prevalent use of purchase undertakings and capital guarantees blurs the line between equity-based risk-sharing and conventional debt protection. These mechanisms essentially guarantee the return of principal, raising profound Shariah compliance concerns because they eliminate the inherent risk required in Islamic investments (Zakariah and Aziz, 2013; Sawari et al., 2018; Busari et al., 2024; Muneeza & Mustapha, 2020; Laldin, 2012; Muhammad et al., 2011; Lahsasna, 2014). Consequently, Sukuk are often falsely marketed as risk-free investments, contradicting the Shariah maxim of *al-ghunm bil ghurm* (entitlement to gain is contingent upon risk). Studies confirm that fixed repurchase obligations effectively convert these instruments into bond-like assurances of returns (Usmani, 2008; Godlewski et al., 2013), reflecting a market-driven preference for investor protection over Shariah authenticity.

Jurisdictional Fragmentation and Insolvency Gaps: The complexity of Sukuk structures, combined with the involvement of diverse stakeholders (issuers, trustees, Shariah boards) and varying regional Shariah interpretations, creates a highly fragmented resolution landscape. The absence of harmonized legal standards exacerbates this, leading to prolonged litigation and heightened investor risk (Busari et al., 2019; Jobst et al., 2008). This unpredictability is compounded by a lack of binding judicial precedent in most Sukuk-issuing jurisdictions (Nagano, 2017). Crucially, existing conventional insolvency laws are ill-equipped to handle Sukuk defaults. Classical Islamic jurisprudence focuses primarily on individual insolvency, leaving a gap when applied to modern corporate entities. The absence of Shariah-compliant corporate insolvency legislation limits investor recourse and delays resolution (Van Wijnbergen & Zaheer, 2013; Zaheer & Van Wijnbergen, 2024; Al-Ali, 2019). Quantitative data reinforces this: recovery performance in most Organisation of Islamic Cooperation (OIC) jurisdictions ranges from average to poor due to weak creditor protection and enforcement capacity (Fitch Ratings, 2024). Consequently, most defaults are resolved via opaque out-of-court settlements, stunting the development of reliable legal guidelines.

Cross-Border Enforcement and the Low Default Paradox: Fragmented Shariah governance severely complicate cross-border enforcement. The *Dana Gas* case serves as a critical example, where contradictory interpretations between UAE and English courts regarding Shariah compliance and contractual enforceability exposed deep jurisdictional rifts (Ercanbrack, 2019). Similarly, the

East Cameron Partners (ECP) Chapter 11 bankruptcy in the United States highlighted the legal friction of determining whether a Sukuk constitutes a "true sale" of property or a secured loan under conventional bankruptcy law (Lukonga, 2015).

Interestingly, despite these high-profile structural vulnerabilities, global Sukuk default rates remain incredibly low at less than 0.25%, with approximately 81% of rated Sukuk achieving investment-grade status (Fitch Ratings, 2024). This paradox indicates that the market's perceived stability stems not from robust legal protections, but from structural conservatism, heavy sovereign backing, and an overall low exposure environment.

Regulatory Reforms: The AAOIFI Mandate To address these gaps, the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) has proposed sweeping changes requiring issuers to transfer true legal ownership of underlying assets to investors. While these standards aim to restore Shariah authenticity, analysts caution that aggressive enforcement could trigger legal complexities, inflate transaction costs, and cool investor appetite. Scenario-based evidence suggests that abrupt shifts could widen pricing spreads and fragment the market, necessitating a gradual, coordinated transition (Nawaz, 2025).

Towards a Harmonized Resolution Framework: Ultimately, this research underscores the urgent need for a standardized, Shariah-compliant insolvency regime. With the total outstanding Sukuk market surpassing USD 850 billion in 2023 and annual issuances approaching USD 180 billion in 2024, the stakes are exceptionally high (Fitch Ratings, 2024; Bennett and Coyle, 2025). To ensure long-term sustainability, a multi-faceted regulatory structure must be implemented. By establishing explicit enforcement mechanisms, harmonizing cross-border legal requirements, and aligning default strategies with the ethical principles of *Maqasid al-Shariah*, the industry can protect investors and solidify Sukuk as a resilient alternative in global capital markets.

5. Conclusion and Recommendations

This article set out to critically evaluate the Shariah and legal deficiencies inherent in current Sukuk default resolution frameworks and to propose a more cohesive, enforceable model. The findings substantiate the hypothesis that, despite the robust expansion of the global Sukuk market, existing default mechanisms remain highly fragmented and frequently incongruent with the foundational principles of Islamic finance. Complex structural designs, jurisdictional disparities, and divergent Shariah interpretations continue to obstruct investor protection, ultimately undermining broader market confidence.

A primary conclusion of this study is the critical impact of the structural dichotomy between asset-backed and asset-based Sukuk on default outcomes. While asset-backed structures offer superior legal recourse through enforceable ownership rights, the market's overwhelming reliance on asset-based structures subjects' investors to heightened credit and legal risks. The prevalent use of purchase undertakings and debt-like capital guarantees blurs the distinction between risk-sharing and risk transfer, eroding Shariah authenticity and reinforcing the conventional bond-like nature of modern Sukuk. Furthermore, the absence of a harmonized, Shariah-compliant insolvency framework represents a profound structural defect. Discrepancies in legal systems and Shariah governance across jurisdictions yield inconsistent judicial outcomes and protracted litigation. These regulatory gaps generate quantifiable economic friction, including inflated transaction costs, higher risk premiums, and a potential reduction in the competitiveness of Sukuk relative to conventional instruments.

Policy and Regulatory Recommendations

To address these systemic vulnerabilities, this study advocates for a coordinated, transnational reform agenda. Regulators and standard-setting bodies, such as AAOIFI, must collaborate to synchronize Shariah principles with modern insolvency legislation. Practical steps should include:

Standardization: Adopting universal Sukuk documentation with explicit legal recognition of both beneficial and legal ownership rights.

Dispute Resolution: Establishing cross-border resolution protocols, including the creation of specialized international arbitration centers dedicated to Islamic finance disputes.

Phased Implementation: Employing a gradual approach to regulatory overhauls to carefully balance Shariah authenticity with market viability.

Implications for Industry

Participants and Investors For industry practitioners—issuers, arrangers, and legal advisors—this study underscores the necessity of designing Sukuk that feature genuine asset ownership, unambiguous contractual terms, and explicit risk allocation. Strengthening disclosure standards and due diligence protocols will organically enhance resilience to default risks. Consequently, improved structural transparency will empower investors to conduct more accurate risk assessments and achieve better portfolio diversification, thereby optimizing capital allocation within the Islamic financial markets.

Technological Innovations

This research also highlights the transformative potential of financial technology in mitigating structural inefficiencies. The integration of blockchain and smart contracts can automate Shariah compliance, enhance transparency in asset ownership, and streamline the monitoring of underlying assets. By reducing information asymmetry and transaction costs, these technological tools directly address the enforcement limitations identified in this study.

Avenues for Future Research

Methodologically, this article bridges the gap between conceptual Shariah principles and practical legal enforcement. However, there remains a pressing need for interdisciplinary research that integrates doctrinal legal analysis with quantitative empirical data. Future studies should focus on quantifying recovery rates across varying Sukuk structures, testing the real-world efficiency of cross-border insolvency regimes, and evaluating the market impact of new regulatory guidelines, such as AAOIFI Shariah Standard No. 62.

Broader Socio-Economic Impact

Ultimately, refining Sukuk default frameworks is not merely a legal or financial imperative; it is essential for preserving the social validity of Islamic finance. Ensuring that Sukuk structures genuinely reflect the ethical philosophies of justice, transparency, and risk-sharing (al-ghunm bil ghurm) will bolster public trust. By implementing the holistic, technology-enhanced, and standardized framework proposed in this study, the global Sukuk market can achieve long-term sustainability, safeguard investor rights, and effectively contribute to broader economic development and ethical financial inclusion.

References

Abd Hafiz, R., Samah, Z. A., & Hassan, R. (2017). Challenges of Islamic debt restructuring in a multi creditor environment. Journal of Islamic Finance, 6, 054-072.

Adisa, M. K. (2022). Sukuk default/near default and governance failure: The need for a strong and sound governance framework (the role of Securities Commissions and other regulatory authorities) [Doctoral dissertation]. (International Centre for Education in Islamic Finance).

Afifi, Z. K. (2024). Financial sukuk: Concept, legal principles, and types. Asian Journal of Economics, Business and Accounting, 24(2), 98-106.

Ahmed, E. R., Islam, M. A., Alabdullah, T. T. Y., & Amran, A. B. (2019). A qualitative analysis on the determinants of legitimacy of sukuk. Journal of Islamic Accounting and Business Research, 10(3), 342-368.

Al-Ali, S. (2019). Raising capital on ṣukūk markets: structural, legal and regulatory issues. Springer.

Ali, M. I., Hasan, A., & Sharofiddin, A. (2022). Evaluating sukuk default factors: a case study on dana gas sukuk in the UAE. Journal of Islamic Finance, 11(1), 33-40.

Ali, S. S. (2017). Ṣukūk Default and Issues in Their Resolution: The Case of Villamar Ṣukūk. Developments in Islamic finance: challenges and initiatives, 65-88.

Askari, H., Iqbal, Z., Krichne, N. and Mirakhor, A. (2015), "Risk sharing in finance: the Islamic finance alternative", Risk Shar. In Financ.: The Islam. Financ. Altern, p. 285, doi: 10.1002/9781119199328.

Bennett, M., & Coyle, H. (2025). State of the sukuk market and prospects for growth. World Bank. https://blogs.worldbank.org/en/allaboutfinance/state-of-the-sukuk-market-and-prospects-for-growth?utm.

Berrahlia, B., & Benseghir, M. (2025). Limits of Legal Certainty: A Commentary on the "Dana Gas" Case. Laws, 14(2), 22.

Busari, S. A., AbdulAziz, A., Zakariyah, L., & Amanullah, M. (2019). Dana Gas Sukuk default: a juristic analysis of court judgement. International Journal of Islamic and Middle Eastern Finance and Management, 12(4), 569-585.

Busari, S. A., Zakariyah, L., & Aziz, A. B. A. (2019). Sukuk default regulation in Malaysia and United Arab Emirates: Comparative analysis. International Journal of Fiqh and Usul al-Fiqh Studies, 3(1), 90–102.

Busari, S., Suleiman, H., & Salhab, B. (2024). Application of Guarantee contracts in Islamic Financial Transaction: Analysis of BNM and AAIOFI. Journal of Fatwa Management and Research, 29(3), 46-62.

Chapra, M. U. (2008). The Islamic vision of development in the light of Maqāsid al-sharī ʻah. Islamic Research and Training Institute Islamic Development Bank Jeddah, DOI, 10.

Ercanbrack, J. (2015). The transformation of Islamic law in global financial markets. Cambridge University Press.

Fitch Ratings. (2024). Global sukuk outlook dashboard 2024. https://www.fitchratings.com/research/islamic-finance/global-sukuk-outlook-dashboard-2024-10-01-2024.

Godlewski, C. J., Turk-Ariss, R., & Weill, L. (2013). Sukuk vs. conventional bonds: A stock market perspective. Journal of Comparative Economics, 41(3), 745-761.

Jobst, A., Kunzel, P., Mills, P., & Sy, A. (2008). Islamic bond issuance: what sovereign debt managers need to know. International Journal of Islamic and Middle Eastern Finance and Management, 1(4), 330-344.

Lahsasna, A. (2014). Shari'ah non-compliance risk management and legal documentations in Islamic finance. John Wiley & Sons.

Laldin, M. A. (2012). Sukuk in Various Jurisdictions: Sharī´ ah and Legal Issues. Journal of Islamic Business and Management, 2, no. 1 (2012). 22.

Lukonga, I. (2015). Islamic finance, consumer protection, and financial stability (IMF Working Paper No. WP/15/107). International Monetary Fund.

Muhammad, M., Yaacob, H., & Hasan, S. (2011). The bindingness and enforceability of a unilateral promise (wa ‘d): an analysis from Islamic law and legal perspectives. ISRA Research Paper, 30, 2011.

Muneeza, A., & Mustapha, Z. (2020). Practical application of Kafalah in Islamic banking in Malaysia. PSU Research Review, 4(3), 173-187.

Nagano, M. (2017). Sukuk issuance and information asymmetry: why do firms' issue sukuk? Pacific-Basin Finance Journal, 42, 142-157.

Nawaz, T. (2025). Balancing Shariah Authenticity and Market Stability: A Scenario-Based Framework for Implementing AAOIFI Shariah Standard No. 62 in the Global Sukuk Market. Journal of Risk and Financial Management, 18(11), 604.

Oseni, U. A. (2015). The Legal and Beneficial Ownership Conundrum in Sovereign Ṣukuk Structuring. Al-Shajarah: Journal of the International Institute of Islamic Thought & Civilization, 20.

Oseni, U. A., & Ahmad, A. U. F. (2015). Dispute resolution in Islamic finance: A case analysis of Malaysia. Ethics, governance and regulation in Islamic finance, 127.

Sawari, M. F. M., Abdullah, N. A. N., Shamsuddin, M. M. J., & Aziz, A. A. (2018). The Enforceability of Wa ‘d Mulzim (Binding Promise) from a Fiqh Perspective: A Critical Analysis of Wa ‘d Application in Sukūk Contracts: قابلية التنفيذ للوعد الملزم في ضوء الفقه الإسلامي: دراسة تحليلية نقدية لتطبيقات الوعد في عقود الصكوك. International Journal of Fiqh and Usul Al-Fiqh Studies, 2(1), 119-131.

Shahid, M., Salleh, S., Omoola, S., & Hassan, R. (2025). Analysing Sukuk Default Cases: Causes, Remedies and Regulatory Implications. IIUMLJ, 33, 241

Swandaru, R., & Muneeza, A. (2024). Causes for Near Default Sukuk Cases in the 21st Century and Their Rescue Mechanisms. Jihbiz: Jurnal Ekonomi, Keuangan dan Perbankan Syariah, 8(1), 1-13.

Tasnia, M., Mustapha, I. M., & Shakil, M. H. (2017). Critical assessment of the legal recourse for the case of Sukuk default for the asset-backed and asset-based Sukuk structures. European Journal of Islamic Finance, Special Issue: Islamic Banking & Finance, (7), 1-6.

Uddin, R., & Cotterill, J. (2025). Rule change threatens to throw Islamic debt market into turmoil.

Usmani, M. T. (2007, February). Sukuk and their contemporary applications. In Translated from the original Arabic by Sheikh Yusuf Talal DeLorenzo, AAOIFI Shari'a Council meeting, Saudi Arabia.

Van Wijnbergen, S., & Zaheer, S. (2013). Sukuk defaults: On distress resolution in Islamic finance (Tinbergen Institute Discussion Paper No. TI 13-087/VI/DSF 57). Tinbergen Institute. https://ssrn.com/abstract=2293938.

Zada, N., & Muhammad, M. (2018). The intricacies of default in Islamic finance: a case study of dana gas sukuk litigation. Journal of Islamic Business and Management, 8(S).

Zaheer, S., & Van Wijnbergen, S. (2024). Sukuk defaults: On distress resolution in Islamic finance. Qualitative Research in Financial Markets, 17(2), 292-311.

Zakaria, M. Z., & Aziz, A. A. (2013). Purchase Undertaking in Equity-Based Sukuk: Does It Amount to Guarantee. The Journal of Muamalat and Islamic Finance Research, 43-68.

Zakariyah, H., & Busari, S. A. (2019). Analysis of sukuk cross-default clause: a fiqh perspective. Journal of Islamic Finance, 8(2), 50-57.

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 103-128
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Application of Blockchain Technology in Islamic Social Finance: A Scientometric Analysis

Mohammad Enayet Hossain[a], Nur Farhah Binti Mahadi[b*], Razali Haron[c], Rizal Mohd Nor[d], Md. Abu Yousuf[e]

[a,b,c,e] *Institute of Islamic Banking and Finance, International Islamic University Malaysia, Kuala Lumpur, Malaysia.*
[d] *Kuliyyah of Information and Technology, International Islamic University Malaysia, Kuala Lumpur, Malaysia*

**Corresponding Author: farhahmahadi@iium.edu.my*

Abstract

The integration of blockchain technology within Islamic Social Finance (ISF) has emerged as a transformative approach to enhancing transparency, operational efficiency, and accountability in socio-economic development. Despite growing scholarly interest, the existing literature remains fragmented and lacks a cohesive analytical framework that reconciles technological capabilities with Islamic ethical principles. This study synthesizes the current state of research through a hybrid methodology, integrating bibliometric analysis with a Systematic Literature Review (SLR) in accordance with PRISMA guidelines. Utilizing data from the Scopus and Web of Science databases (2018–2024), the research is theoretically grounded in a synthesis of the Technology Acceptance Model (TAM) and the *Maqāṣid al-Sharīʿah* framework. This dual-lens approach offers a novel perspective on the adoption and theological relevance of blockchain within Islamic social finance institutions. The findings demonstrate that blockchain significantly improves governance and efficiency in the management of *Zakāt* and *Waqf*. Scientometric results identify key contributors, noting A. Muneeza as the most prolific author, the University of Malaya as the leading institution, and the *ISRA International Journal of Islamic Finance* as the primary publication outlet. However, the analysis suggests the field is still in its nascent stages, characterized by a dearth of empirical and cross-country investigations. This study contributes the first integrated scientometric synthesis of blockchain in ISF, offering critical insights for regulators and practitioners while outlining a future research agenda focused on empirical validation and technological convergence

Keywords: Blockchain Technology, Islamic Social Finance, Zakāt, Waqf, Bibliometric Analysis, Systematic Literature Review

1. Introduction

Islamic finance has emerged as a dynamic and rapidly expanding segment of the global financial industry, maintaining a robust presence in diverse international markets. In recent years, the sector has sustained an impressive annual growth rate of approximately 20%, a testament to its institutional resilience and increasing global acceptance. This popularity is primarily driven by a steadfast adherence to Shari'ah principles, which govern all financial activities. These core tenets—encompassing equity, risk-sharing, and asset-backed ownership—ensure a transparent, fair, and equitable financial ecosystem for all stakeholders (Khera et al., 2021). Islamic Social Finance (ISF), a specialized sub-sector formally conceptualized by the IRTI-IDB in 2013, represents a contemporary paradigm for addressing global economic challenges. ISF leverages traditional Islamic instruments, such as Zakāt (obligatory alms), Infaq (voluntary spending), Sadaqah (charity), Waqf

Article history
Received: 10 January 2026
Accepted: 14 March 2026

(endowments), Qardh al-Hasan (benevolent loans), and Islamic micro-insurance/microfinance. These mechanisms facilitate the stra tegic allocation of capital toward social and humanitarian initiatives, offering viable solutions for multifaceted socio-economic disparities (Ismail & Aisyah, 2022). Consequently, ISF plays a pivotal role in socio-economic empowerment by mobilizing these redistributive instruments to foster financial inclusion (Hossain & Mahadi, 2022). Through the institutionalization of Zakāt and Waqf, ISF has become instrumental in enhancing the collective well-being of society. The integration of these frameworks across various jurisdictions has accelerated socio-economic development by directing financial resources toward poverty alleviation and social welfare programs (Billah et al., 2024).

Concurrently, the convergence of blockchain technology and Artificial Intelligence (AI) is redefining fintech innovation. Blockchain's utility is derived from its decentralized architectural characteristics. Within this framework, blocks are interlinked via cryptographic hashes across a peer-to-peer network, effectively eliminating single points of failure. This decentralized structure ensures that the system remains resilient and operational even if individual nodes fail (Shahnawaz & Astya, 2017; Khan Shahnawaz, 2020). Furthermore, blockchain offers unparalleled transparency, as the distributed ledger allows stakeholders to trace and audit transactions in real-time. Another defining feature is immutability; once a transaction is recorded, it becomes computationally prohibitive to alter, thereby ensuring data integrity. While rare instances of chain modifications have been documented in specific contexts, the inherent security of blockchain remains a cornerstone of its value proposition for financial systems (Rabbani et al., 2020).

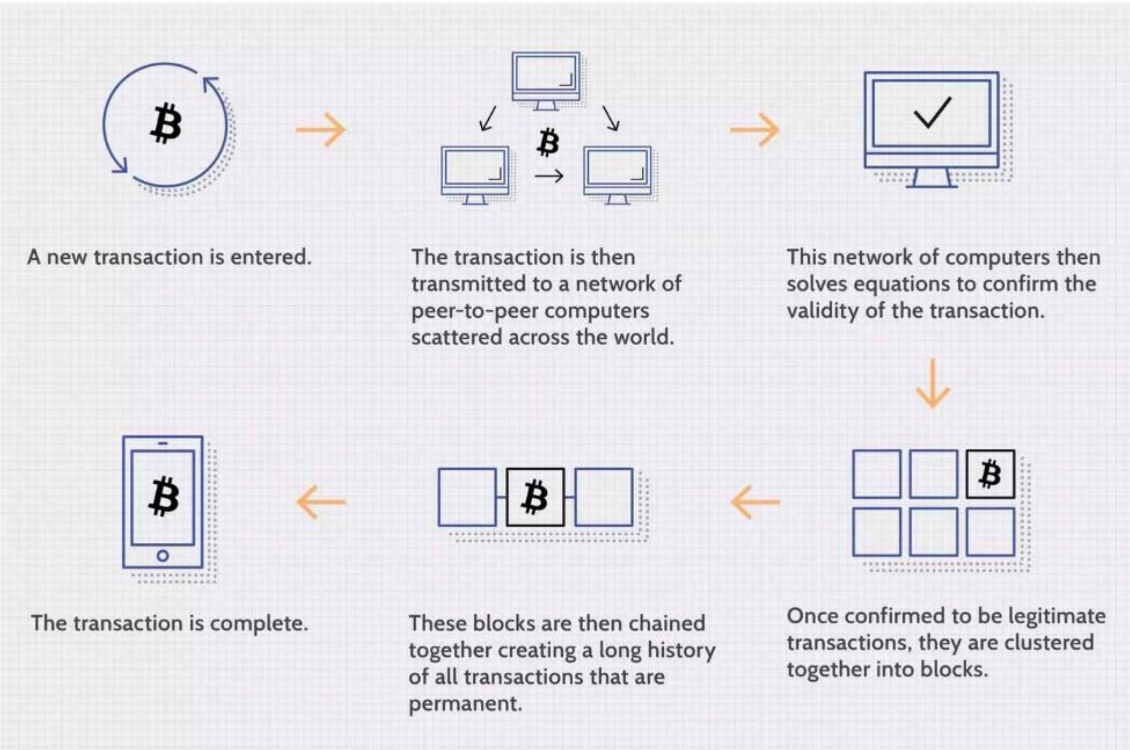


Figure 1: Blockchain technology characteristics, (Casino et al., 2019)

Blockchain technology has undergone several transformative phases, each representing a significant technological advancement. As illustrated in Figure 2, the evolution of blockchain from its inception to its current state reflects a paradigm shift, expanding its functionality and applicability across diverse industries.

Blockchain 1.0: In its initial development phase, blockchain technology was predominantly associated with Bitcoin and other cryptocurrencies. This first iteration enabled decentralized, peer-to-peer financial transfers, focusing primarily on monetary transactions. Consequently, it became widely known as the "Internet of Money" (Lutfiani et al., 2022).

Blockchain 2.0: The progression to Blockchain 2.0 introduced the concept of "smart contracts"—autonomous, transparent computer programs executed directly on the blockchain. These self-executing contracts significantly reduce the costs associated with execution, verification, and fraud prevention. Furthermore, smart contracts deployed on decentralized ledgers are inherently secure and resilient to unauthorized tampering. A prominent example of this generation is the Ethereum network, which facilitates the seamless integration of smart contracts to manage the registration, confirmation, and transfer of digital properties and contractual agreements (Apriani et al., 2021).

Blockchain 3.0: Current advancements focus on overcoming the limitations of Blockchain 2.0, particularly real-world implementation challenges such as low transaction throughput and prohibitive gas fees. Blockchain 3.0 aims to enhance scalability through interoperability and optimized network performance. For example, platforms like Vexanium offer reduced transaction costs and accelerated processing speeds compared to Ethereum, making them highly suitable for high-frequency retail applications. The utility of Blockchain 3.0 extends beyond financial and commodity exchanges to encompass diverse sectors, including governance, healthcare, scientific research, and education. This third generation fosters global, trustless value exchanges between individuals, machines, and enterprises, effectively eliminating the need for traditional intermediaries (Djatmiko et al., 2018).

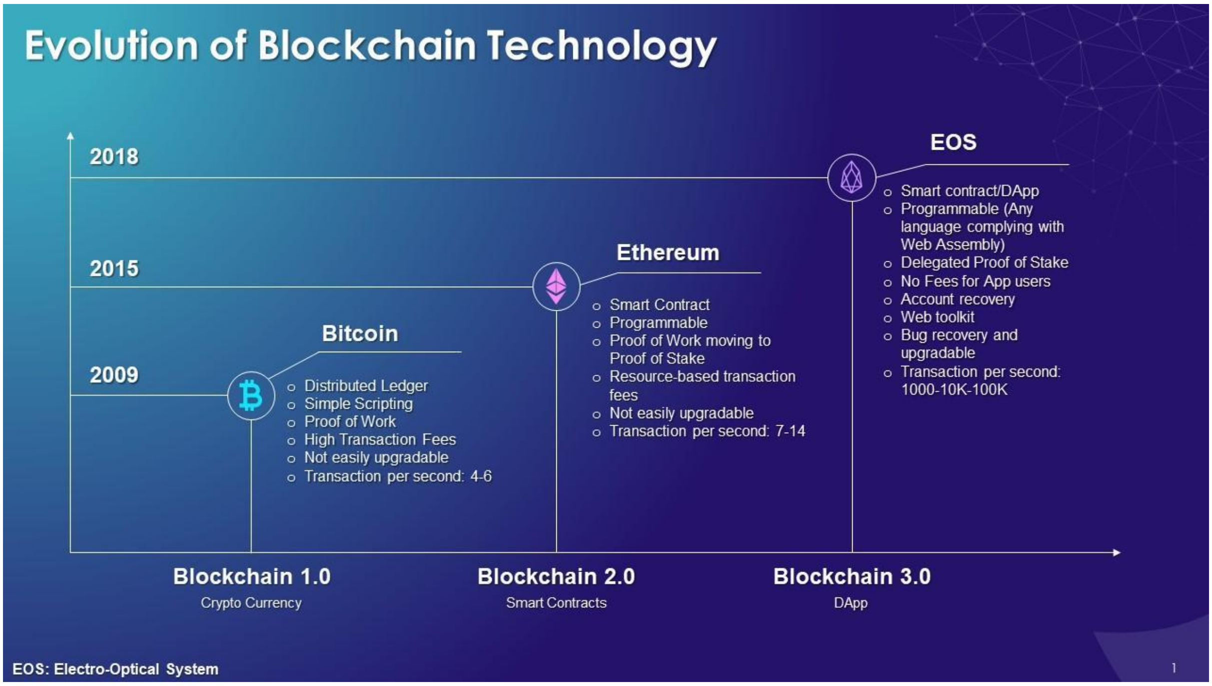


Figure 2: The Evolution of Blockchain, According to Purnama (Purnama et al., 2022)

The effective utilization of blockchain technology is increasingly critical to the advancement of Islamic social finance (ISF). However, realizing this potential requires a comprehensive understanding of the technology's functional complexities and the socio-technical challenges impeding its widespread acceptance. Despite a growing body of literature situated at the intersection of blockchain and Islamic finance, existing research remains highly fragmented and predominantly domain-specific. Prior bibliometric studies have typically examined either Islamic social finance or blockchain applications in conventional finance in isolation, failing to integrate these two disciplines into a cohesive analytical framework. To address this critical gap, this study contributes a hybrid scientometric and systematic synthesis that maps the intellectual structure of blockchain-enabled ISF and explicitly delineates emerging research gaps, governance challenges, and future academic trajectories. Unlike preceding scholarship, this paper converges quantitative bibliometric insights with a critical qualitative literature synthesis, thereby delivering robust descriptive and analytical contributions to the evolving discourse on Islamic financial technology. Specifically, this research aims to evaluate the functional role of blockchain technology in accelerating Islamic social finance activities for socio-economic development, while simultaneously analyzing the current research output and intellectual structure of the field through a comprehensive scientometric lens.

2. Theoretical Framework

This study is theoretically grounded in the synthesis of Technology Adoption Theory and the Maqāṣid al-Sharīʿah framework. This dual-lens approach is essential for explaining the multi-dimensional relevance and adoption of blockchain technology within the Islamic social finance (ISF) ecosystem. From a technological perspective, the Technology Acceptance Model (TAM) and its subsequent extensions provide a robust basis for understanding how user perceptions—specifically perceived usefulness and perceived ease of use—determine the adoption of blockchain systems within financial institutions (Davis, 1989; Venkatesh et al., 2022). In the specialized context of Zakāt and Waqf management, blockchain serves as a catalyst for institutional trust. By inherently enhancing transparency, accountability, and operational efficiency, the technology addresses the specific functional requirements that drive the likelihood of adoption among Shari'ah-compliant organizations (Aysan et al., 2021; Rabbani et al., 2020).

Complementing this technological view, Maqāṣid al-Sharīʿah (the higher objectives of Shari'ah) provides a normative and ethical framework that prioritizes the protection of wealth (ḥifẓ al-māl), the promotion of social justice, and the maximization of communal welfare (Chapra, 2008; Hasan et al., 2021). Blockchain-enabled ISF directly aligns with these teleological objectives. By ensuring the integrity of fund allocation, mitigating the risk of fraud, and optimizing social redistribution mechanisms, the technology serves as a digital manifestation of Maqāṣid principles (Alam et al., 2022). Ultimately, the integration of these two frameworks allows this study to transcend descriptive analysis. It provides a theoretically grounded explanation of blockchain adoption, bridging the gap between technological feasibility and the socio-ethical mandates of Islamic finance.finance.

3. Research Design

The research design is structured into two primary phases: the methodological framework and the systematic data collection process. This structured approach ensures a rigorous and reproducible analysis of the literature.

3.1 Research Method

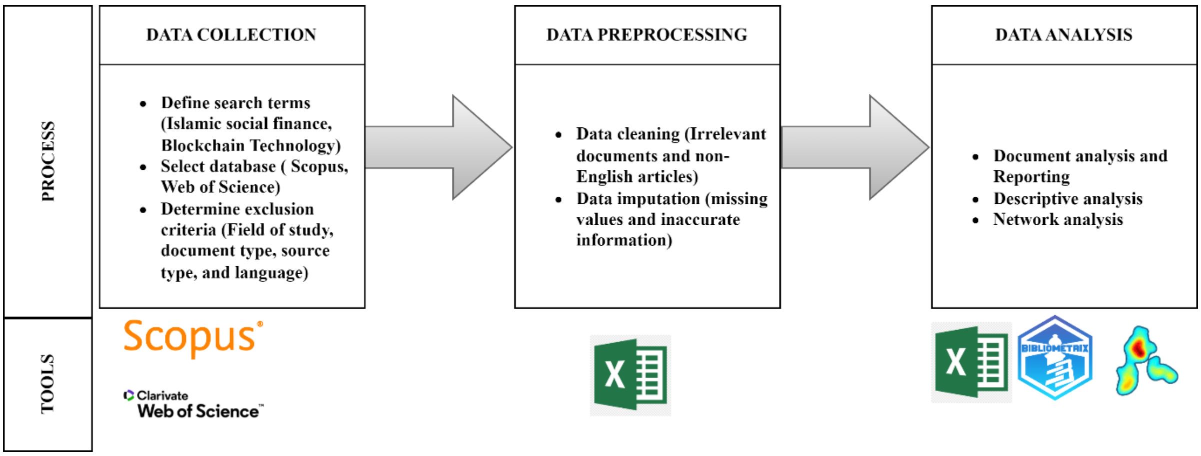
To comprehensively address the research objectives, this study employs a hybrid methodological approach, integrating a Systematic Literature Review (SLR) with bibliometric analysis. The SLR was utilized to fulfill the first research objective (RO1). Conducting an SLR ensures that the review process is transparent, reproducible, and unambiguous. A well-constructed search protocol enhances the efficacy of the review and accurately captures the evolving nature of academic discourse surrounding blockchain technology (Salleh et al., 2023). To ensure methodological rigor, the SLR was executed in strict adherence to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This framework is highly effective for synthesizing critical findings within a research domain (Moher et al., 2009) and consists of four primary phases: identification, screening, eligibility assessment, and synthesis. To address the second research objective (RO2), bibliometric analysis was employed. This quantitative method systematically examines publication metadata derived from established academic databases. It facilitates the mapping of research trends, influential publications, and the intellectual structure of a specific academic field. By analyzing underlying data patterns, bibliometrics provides valuable insights into the impact of scientific outputs and the collaborative networks between authors, institutions, and disciplines (Hakim & Bahari, 2021). Ultimately, it serves as a robust approach for collecting, organizing, and evaluating data to inform evidence-based conclusions (Nasir et al., 2021). The quantitative data visualization and bibliometric mapping for this study were conducted utilizing RStudio and VOSviewer.

3.2 Data Collection Process

Data were sourced from Scopus and Web of Science (WoS), two of the most prominent bibliographic databases recognized for providing high-quality publication metadata and reliable bibliometric indicators (Pranckutė, 2021). Because the validity of bibliometric research is contingent upon the quality of the data source, these databases were deliberately selected. Scopus was chosen for its comprehensive coverage of peer-reviewed literature in economics, Islamic finance, and emerging financial technologies, consistent with prior systematic reviews in this domain (Paltrinieri et al., 2023). WoS was utilized as a complementary database to ensure data accuracy and methodological robustness, given its stringent indexing standards and quality control (Pech & Delgado, 2020). The data collection protocol commenced with the identification of core keywords. Guided by established literature (Akhter et al., 2023; Hakim & Bahari, 2021; Ismail & Aisyah, 2022; Kuanova et al., 2021; Tandon et al., 2021), the search query integrated terms related to Islamic social finance (e.g., "Zakāt," "Waqf," "Islamic Microfinance," "Islamic Social Finance") with technological terminology (e.g., "Blockchain," "Blockchain Technology," "Distributed Ledger Technology"). The initial database search yielded 193 documents (128 from Scopus and 65 from WoS) published between 2018 and 2024. A structured screening protocol was subsequently applied in accordance with PRISMA guidelines. In the first stage, duplicate and irrelevant records were eliminated based on an evaluation of titles and abstracts, resulting in the exclusion of 103 documents.

In the second stage, a full-text screening was conducted applying predefined inclusion and exclusion criteria. Studies were included only if they explicitly examined the application of blockchain technology within an ISF context, specifically regarding Zakāt, Waqf, or allied social finance mechanisms. Conversely, articles focusing broadly on conventional Islamic finance without a distinct technological focus on blockchain were excluded. This rigorous screening aligns with established precedents in the literature (Akhter et al., 2023; Castro et al., 2024; Chandel et al., 2024; Maulina et al., 2023).

Following the eligibility assessment, a final corpus of 78 documents was retained. These selected studies were subsequently subjected to systematic synthesis and bibliometric analysis to delineate key themes, research trajectories, and emerging insights within the field.



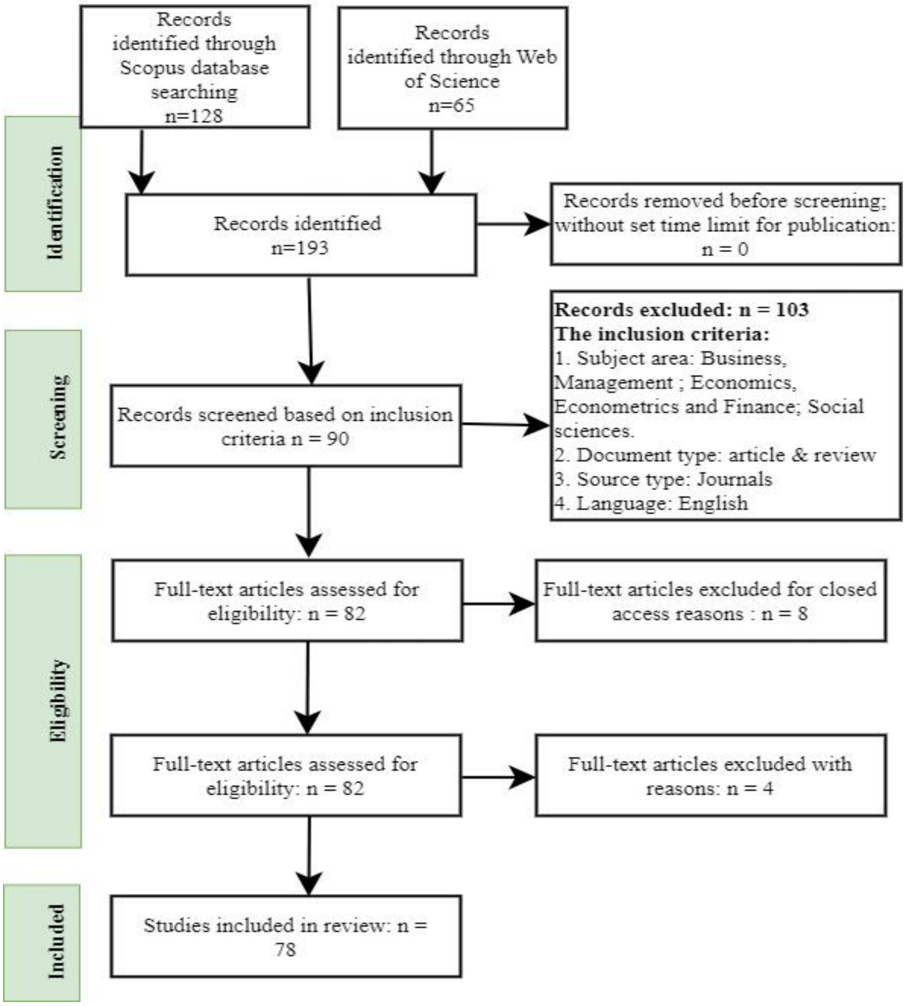


Figure 4: PRISMA Flow Diagram Showing the Article Selection Process, drawn by authors based on David Moher (Moher et al., 2009)

4. Results And Discussion

4.1 Systematic Literature Review (SLR)

The Systematic Literature Review addresses Research Objective One (RO_1). According to data from Scopus and Web of Science, Figure 5 shows 78 scholarly papers related to the application of blockchain technology in Islamic social finance.

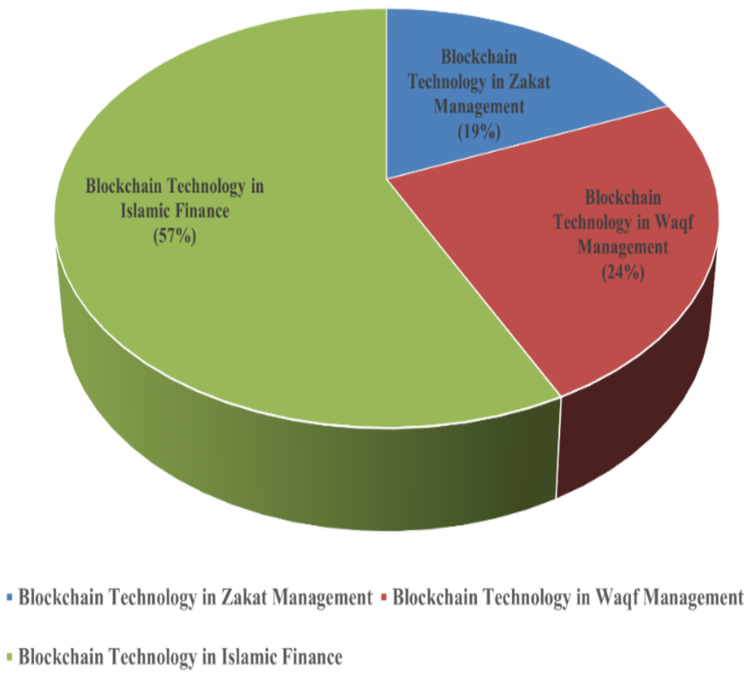


Figure 5: Blockchain Technology in ISF, Source: Authors' compilation

Among the 78 selected articles, three key applications of blockchain technology in Islamic social finance were identified. First, blockchain applications in zakat management account for 19% of the reviewed studies. Second, blockchain applications in Waqf management represent 24% of the literature. Third, a larger proportion, 57% of the studies, focus on the broader application of blockchain technology in Islamic finance. The analysis primarily focuses on blockchain applications in zakat and Waqf management, as these areas align closely with the objectives of Islamic social finance.

4.1.1 Blockchain Technology in Zakat Management

Establishing public trust in Zakat institutions significantly depends on transparency. Numerous studies have emphasized the importance of transparency in effective organizational governance and the functionality of financial markets. It entails the timely and precise disclosure of information that the public can independently verify, acting as a communication link between the institution and the community. Transparency enhances management effectiveness through information sharing, clarity, and accuracy, ultimately building public trust. Furthermore, it supports good governance by equipping stakeholders with clear insights into their activities, which fosters greater trust and strengthens the institution's reputation (Bloomfield & O'Hara, 1999; Carroll & Shabana, 2010; Nicolaou & McKnight, 2006; Potosky, 2008; Schnackenberg & Tomlinson, 2016).

Blockchain technology, functioning as a public distributed ledger, may facilitate transparency through its concepts of transparency, immutability, and traceability. Moreover, decentralization and the removal of third-party intervention in blockchain technology will be crucial for achieving transparency; they may also indirectly reduce the risks of human error, fraud, and data management concerns. Blockchain technology provides real-time transaction updates, thereby eliminating human error, ensuring dependable operations, and guaranteeing correct information (Fischer, 2018; Hambiralovic & Karlsson, 2018). This procedure is particularly essential in the zakat collection and distribution processes to bolster societal confidence. Zakat institutions that oversee public contributions to sustenance are urgently needed. The distributed ledger, powered by blockchain technology and a consensus process, will ensure that each transaction is accountable and visible, as it is constructed and aggregated into a block. Consequently, the likelihood of manipulation and concealment is negligible, thereby protecting the contributions of the zakat payers. Moreover, blockchain technology can ensure that zakat contributors allocate money for the benefit of asnaf (Nazeri et al., 2023). Smart contracts and blockchains will transform several sectors and organizations by enabling electronic transactions without human intervention. An algorithm governs an electronically executed agreement known as a smart contract. A smart contract is a blockchain-recorded agreement or rule automatically executed during specific blockchain transactions (Dutta, 2020).

Blockchain technology fosters zakat institutions through its peer-to-peer transaction procedure, which is primarily facilitated by the adoption of smart contracts. Additionally, its end-to-end transaction characteristics facilitate data dissemination and serve as a gatekeeper for automated data access, particularly when using the intelligent contract approach. This approach may address the need for confidence in Islamic social finance by offering greater transparency, reliability, and credibility. The smart contract associated with zakat transactions ensures efficiency, traceability, and confidence; hence, it enhances the collection of zakat money (Khairi et al., 2023). The use of blockchain will improve the governance framework of zakat organizations. Contributors to Zakat will receive information about Zakat allocations and their utilization. Effective governance enhances accountability for zakat payments. Consequently, this has resulted in enhanced collection and improved economic conditions for Muslims in Malaysia. Blockchain positively influences zakat distribution by improving its efficiency, usability, and speed. Prospective beneficiaries would benefit from a streamlined zakat application procedure, which could potentially disseminate information on potential zakat recipients(Mohd Nor et al., 2021).

Despite the advantages of blockchain in enhancing transparency and efficiency in zakat management, several limitations should be acknowledged. The effectiveness of blockchain largely depends on the accuracy of input data, as errors cannot be corrected once the data is immutable. Additionally, adopting blockchain requires significant technological infrastructure, financial resources, and skilled personnel, which may limit its applicability in resource-constrained zakat institutions. Furthermore, while smart contracts improve automation, they may introduce challenges related to coding errors, legal enforceability, and Shariah compliance, as zakat distribution often requires contextual human judgment. From a theoretical perspective, although blockchain aligns with the Technology Acceptance Model (TAM) and supports the objectives of Maqaṣid al-Shariah, its practical implementation depends on institutional readiness, regulatory support, and integration with governance frameworks. Therefore, while blockchain presents a promising solution, its successful adoption requires a balanced approach that integrates technological innovation with human oversight and supportive regulatory frameworks.

Table 1: Influential Article on Blockchain Technology in Zakāt Management, Source: Authors' Compilation

SL	Authors name	Title	Journal name	Country (S) Context	Databas e
1	Nazeri (Nazeri et al., 2023)	Exploration of a New Zakāt Management System Empowered by Blockchain Technology in Malaysia	ISRA International Journal of Islamic Finance	Malaysia	Wos
2	Muneeza (Muneeza et al., 2022)	Zakāt Payment from Cryptocurrencies and Crypto Assets	International Journal of Islamic and Middle Eastern Finance and Management	Not specific	Wos
3	Khairi (Khairi et al., 2023)	The Development and Application of the Zakāt Collection Blockchain System	Journal of Governance and Regulation	Malaysia	Scopus
4	Ghofar (Ghofar et al., 2024)	Young Muslim Generation's Preferences for Using Digital Platforms for Zakāt Payments: A Cross-Country Study of Indonesia and Malaysia	Journal of Infrastructure, Policy and Development	Indonesia and Malaysia	Scopus
5	Abdul-Rahman (Abdul-Rahman et al., 2023)	Technological Integration within Zakāt Institutions: A Comprehensive Review and Prospective Research Directions	International Journal of Islamic Thought	Not specific	Scopus
6	Rahmatullah (Rahmatullah et al., 2024)	Legal Reform of Zakāt Management Based on Personal Data Protection Law in Indonesia	Mazahib Jurnal Pemikiran Hukum Islam	Indonesia	Scopus
7	Hadi (Hadi et al., 2024)	Digital Zakāt Management, Transparency in Zakāt Reporting, and The Zakāt Payroll System Toward Zakāt Management Accountability and Its Implications on Zakāt Growth Acceleration	International Journal of Data and Network Science	Not specific	Scopus
8	Syed (Syed et al., 2020)	An Artificial Intelligence and NLP-Based Islamic Fintech Model Combining Zakāt and Qardh-Al-Hasan for Countering the Adverse Impact of Covid-19 on SMEs and Individuals	International Journal of Economics and Business Administration	Not specific	Scopus
9	Razzak (Razzak et al., 2024)	The Effect of Digital Zakāt and Accounting on Corporate Sustainability through Financial Transparency	Asian Economic and Financial Review	Malaysia	Scopus
10	Basarud-Din & Abdullah (Basarud-Din & Abdullah, 2023)	Can bitcoin be used for zakāt payment?	International Journal of Economics and Management	Not specific	Scopus

11	Alam (Alam et al., 2022b)	Generation Z Perceptions in Paying Zakāt, Infaq, and Sadaqah Using Fintech: A Comparative Study of Indonesia and Malaysia	Investment Management and Financial Innovations	Indonesia and Malaysia	Scopus
12	Bashori (Bashori et al., 2024)	The Transformation of Zakāt Law: An Analysis of Ijtihād Maqāṣidī in The Modernization of Zakāt Practices in Indonesia	Jurisdictie: Jurnal Hukum Dan Syariah	Indonesia	Scopus
13	Al-Taani (Al-Taani et al., 2024)	Exploring the Impact of Digital Accounting and Digital Zakāt on Improving Business Sustainability in The Middle East and Malaysia	International Journal of Advanced and Applied Sciences	Malaysia	Scopus
14	Rosele (Rosele et al., 2022)	The Digitalized Zakāt Management System in Malaysia and The Way Forward	Al-Ihkam: Jurnal Hukum Dan Pranata Sosial	Malaysia	Scopus

4.1.2 Blockchain Technology in Waqf Management

The management of endowment funds serves as a critical function for non-profit organizations seeking to mitigate income volatility associated with fluctuating donations and grants. Effective management ensures a stable flow of resources necessary to sustain institutional missions and finance administrative and operational activities. Islamic endowments (Waqf) present a significant opportunity for the application of blockchain technology to oversee and administer substantial asset portfolios. Historically, Waqf has been a cornerstone of socio-economic development, facilitating the provision of education, healthcare, and public goods. However, institutional neglect and underdeveloped property management have historically diminished this role, adversely affecting the ongoing contribution of Waqf to community welfare. Blockchain technology possesses the potential to address these structural challenges, particularly in asset development, making it a valuable instrument for modernized Waqf wealth management. Beyond introducing a novel array of investable assets, blockchain transforms the processes of registration, aggregation, monitoring, and institutional organization. The integration of a decentralized ledger significantly improves the efficiency of Waqf asset management. By enhancing transparency within the portfolio's structure and dynamics, blockchain strengthens auditing and oversight mechanisms. This, in turn, restores public confidence in Waqf management and re-establishes the institution as a fundamental pillar of socio-economic welfare within the Muslim community (Al-Saudi, 2024; Aysan et al., 2021). The convergence of blockchain technology and crowdsourcing further facilitates Waqf expansion. Recent trends indicate that Islamic crowdfunding can effectively promote Waqf initiatives. Specifically, a donation-based crowdfunding approach—or direct scheme—can be utilized to rehabilitate abandoned Waqf assets. This involves leveraging accumulated funds to construct essential infrastructure, such as mosques, schools, and hospitals, on endowment sites (Kasmon et al., 2023). This digital revolution fundamentally alters institutional behaviors, necessitating a state of readiness for technological change. Such a paradigm shift enhances the management of Waqf, promoting optimal welfare and sustainability, particularly during global emergencies where alternative funding sources beyond government budgets—such as public contributions through Islamic financial channels—are urgently required (Vidiati et al., 2021).

Furthermore, blockchain addresses the significant risks associated with property transfers. In many jurisdictions, existing records consist of manual, paper-based documents that are difficult to organize and vulnerable to loss. Blockchain facilitates the maintenance of immutable transactional records, ensuring that Waqf assets are managed in strict accordance with the founder's original stipulations. This level of transparency precludes the potential for the exploitation of families and vulnerable populations (Alharthi, 2021). Consequently, the primary utility of blockchain in this context is its ability to address financial constraints sustainably, reinforcing the Waqf institution's historical role in facilitating economic growth (Laili, 2022). Despite this significant potential, several limitations and practical challenges remain. The efficacy of blockchain-based systems is fundamentally dependent on the accuracy and digitization of legacy records; however, many institutions still rely on fragmented, manually maintained documentation. This poses a significant hurdle for the initial stages of blockchain integration. Moreover, implementation requires substantial financial capital, technical infrastructure, and skilled personnel—resources that may be limited in developing countries. While blockchain-enabled crowdfunding and smart contracts enhance operational efficiency, they also introduce complexities regarding legal enforceability, governance, and Shari'ah compliance, particularly when managing diverse beneficiary structures. Theoretically, while blockchain supports transparency and aligns with the objectives of Maqāṣid al-Sharīʿah in promoting equitable distribution, its successful adoption is constrained by institutional readiness and regulatory uncertainty. Therefore, the implementation of blockchain in Waqf management requires an integrated approach that harmonizes technological innovation with robust regulatory frameworks and human oversight to ensure sustainable, Shari'ah-compliant outcomes.

Table 2: Influential Article on Blockchain Technology in Waqf Management, Source: Authors' Compilation

SL	Authors Name	Title	Journal name	Country (S) Context	Database
1	Kasmon (Kasmon et al., 2023)	Potential blockchain applications in Waqf for sustainability: a Middle East and Asia perspective	Islamiyyat-the International Journal of Islamic Studies	Middle East and Asia perspective	Wos
2	Mohaiyadin (Mohaiyadin, 2022)	Addressing accountability and transparency challenges in Waqf management using blockchain technology	Journal of Islamic Monetary Economics and Finance	Malaysia	Scopus
3	Mohaiyadin (Mohaiyadin, 2021)	Understanding the issues of Waqf at public universities: Preliminary findings	International Journal of Islamic Thought	Malaysia	Scopus
4	Laallam (Laallam et al., 2020)	Intellectual capital in non-profit organizations: lessons learnt for Waqf institutions	ISRA International Journal of Islamic Finance	Not specific	Scopus
5	Listana (Listana et al., 2024)	Issues on Waqf and roles of Waqf authorities: Evidence from Indonesia and Singapore	Hamdard Islamic	Indonesia and Singapore	Scopus
6	Hapsari (Hapsari et al., 2024)	Managing Waqf land in Indonesia: ANP-driven strategies	Pertanika Journal of social sciences and humanities	Indonesia	Scopus
7	Rashid (Rashid, 2018)	Potential of Waqf in contemporary World	Journal of king Abdulaziz university, Islamic economics	Not specific	Scopus
8	Qurrata (Qurrata et al., 2024)	Waqf sustainability or sustainable Waqf? A Bibliometric Analysis	Millah: Journal of Religious Studies	Not specific	Scopus
9	Meskini & Aboulaich (Meskini & Aboulaich, 2024)	Insurance based on Waqf and blockchain technology: a strong social impact & efficiency	Wseas transactions on business and economics	Morocco	Scopus
10	Febriandika (Febriandika et al., 2023)	An empirical study on the Muslims' intention to use digital Waqf innovation	Journal of system and management sciences	Not specific	Scopus
11	Syarifuddin (Syarifuddin, 2024)	Productive Waqf business models through the integration of Islamic social and commercial finance	Edelweiss applied science and technology	Indonesia	Scopus

12	Salleh, Kassim, Muhammad (Salleh, Kassim, Muhammad, Mohd Yusoff, et al., 2023)	Application of blockchain technology in the management of Waqf institutions: concepts, challenges, and recommendations	2023 IEEE International Conference on Computing, ICOCO 2023	Malaysia	Scopus
13	Hasibuan & Lubis (Hasibuan & Lubis, 2024)	Halal value chain integration in food court establishment through cash Waqf-linked Sukuk: evidence from Indonesia	Cogent Business and Management	Indonesia	Scopus
14	Yusuf & Maulana (Yusuf & Maulana, 2023)	Waqf core principles for the economic recovery of covid 19 in Indonesia	Quality - Access to Success	Indonesia	Scopus
15	Zakariyah (Zakariyah et al., 2023)	The determinants of financial technology adoption amongst Malaysian Waqf institutions	International Journal of Social Economics	Malaysia	Scopus
16	Nour Aldeen (Nour Aldeen et al., 2022)	Cash Waqf from the millennials' perspective: a case of Indonesia	ISRA International Journal of Islamic Finance	Indonesia	Scopus
17	Bintarto (Bintarto et al., 2022)	Zakah and Waqf for cryptocurrency in Islamic law	Al-Istinbath: Jurnal Hukum Islam	Not specific	Scopus

5.1 Bibliometric Analysis

The bibliometric analysis sections address Research Objective Two (RO_2). A Bibliographic analysis elucidates the contributions of the top journals, authors, papers, institutions, and countries (Zeng et al., 2018). Bibliometric analysis creates a map based on bibliographic data, text data, and thematic evolution.

5.1.1 Descriptive Analysis

Table 3 presents an exhaustive synopsis of the key aspects of the concepts under investigation. Understanding the particulars of the selected documents is essential before proceeding with the analysis. This study selected 78 documents for analysis, which used 4593 references. These documents used 265 author keywords (DE) and 1311 keywords plus (ID) during the analysis period, spanning 2018 to 2024. The average number of citations per document was 6.184. Furthermore, 250 authors have contributed to this emerging field. Figure 6 shows the annual publication output. There were 78 publications on Islamic Social Finance and Blockchain Technology from 2018 to 2024, with the highest number in 2023.

Table 3: Descriptive characteristics of blockchain Technology and Islamic Social Finance
Source: Authors' Compilation through RStudio Software

Description	Criteria	Results
Main Information about the Data	Timespan	2018:2024
	Sources (Journals, Books, etc.)	59
	Documents	78
	Annual Growth Rate %	61.89
	Document Average Age	1.61
	Average citations per doc	6.184
	References	4593
Document Contents	Keywords Plus (ID)	86
	Author's Keywords (DE)	265
Authors information	Authors	250
	Authors of single-authored docs	11
	Single-authored docs	12
	Co-Authors per Doc	3.67
	International co-authorships %	15.79
Document Types	article	62
	article; book chapter	3
	article; early access	3
	conference paper	1
	review	7

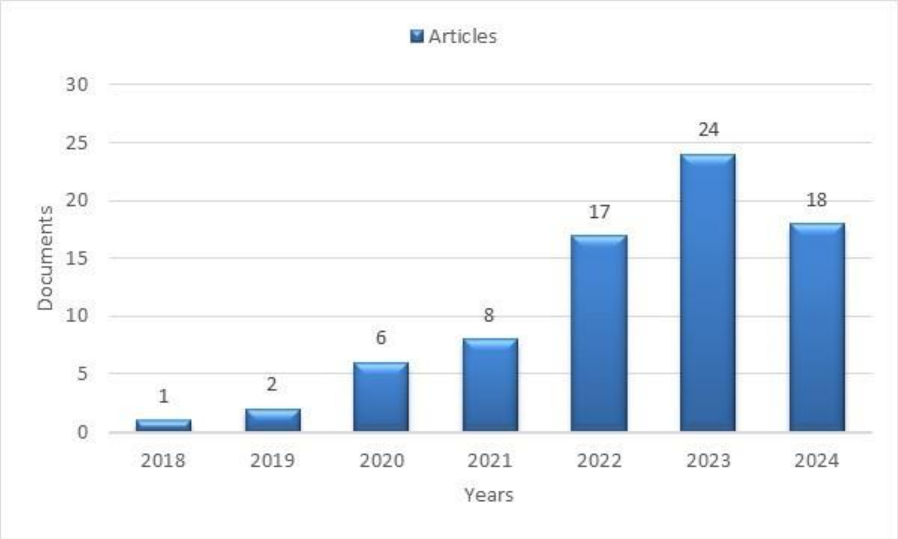


Figure 6: Annual publication of Islamic Social Finance Blockchain Technology
Source: Authors' Compilation through RStudio Software

5.1.2 Leading Authors, Institutions, Countries, and Journals

Table 4 provides an overview of the foremost contributors to this field between 2018 and 2024. Muneeza A is the leading author, with 4 published articles, followed by Hassan M and Herianingrum S, each with 3. Other authors who have significantly impacted this area include Ratnasari, Abd, Al-Zaqeba, Alam, Aman, Hapsari, and Ishak; based on the impact factor, Alam A is the top author, followed by Aman A, Hassan M, Herianingrum S, Ishak M, Mohaiyadin N, Muneeza A, Ratnasari R, Widiastuti T, and Ab A, as shown in Table 5.

Table 6 shows the top institutions that contributed to blockchain technology and Islamic social finance. As expected, the University of Malaya, followed by Universitas Airlangga, University Utara Malaysia, Universiti Kebangsaan Malaysia, INCEIF University, University of New Orleans, Ahmadu Bello University, Bahcesehir University, the Institute of Management Science, and the International Islamic University Malaysia. According to Table 7, the publisher with the most ISRA International Journal of Islamic Finance publications is Edelweiss Applied Science and Technology, with six titles. This is followed by the International Journal of Islamic Thought, Journal of Islamic Monetary Economics and Finance, Qualitative Research in Financial Markets, Hamdard Islamicus, Heliyon, Journal of Islamic Accounting and Business Research, Journal of Risk and Financial Management, and Kocatepe Islami Ilimler Dergisi.

Table 4: Top ten authors in ISF and Blockchain Technology

SL	Authors	Articles
1	Muneeza A	4
2	Hassan M	3
3	Herianingrum S	3
4	Ratnasari R	3
5	Abd W N	2
6	Al-Zaqeba M	2
7	Alam A	2
8	Aman A	2
9	Hapsari M	2
10	Ishak M	2

Source: Authors' Compilation through RStudio Software

Table 5: Top ten authors' impact on ISF and Blockchain technology

Author	*H_index*	*G_index*	*M_index*	*Total Citations*	*No. of publications*	*Publication year start*
Alam A	*2*	*2*	0.	14	2	2022
Aman A	*2*	*2*	0.	8	2	2021
Hassan M	*2*	*3*	0.	20	3	2019
Herianingrum S	*2*	*3*	0.	15	3	2022
Ishak M	*2*	*2*	1	14	2	2023
Mohaiyadin N	*2*	*2*	0.	8	2	2021
Muneeza A	*2*	*4*	0.	22	4	2021
Ratnasari R	*2*	*3*	0.	21	3	2022
Widiastuti T	*2*	*2*	0.	15	2	2022
Ab A	1	1	0.	1	1	2023

Source: Authors' Compilation through RStudio Software

Table 6: Most relevant institutions

Rank	**Affiliation**	**Articles**
1	University Malaya	8
2	Universitas Airlangga	7
3	University Utara Malaysia	6
4	Universiti kebangsaan Malaysia	5
5	INCEIF University	4
6	University New Orleans	4
7	Ahmadu Bello University	3
8	Bahcesehir university	3
9	Institute of Management Science	3
10	International Islamic University Malaysia	3

Source: Authors' Compilation through RStudio Software

Table 7: Top ten journals, according to production

Rank	Sources	Articles
1	ISRA International Journal of Islamic Finance	6
2	International Journal of Islamic Thought	3
3	Journal of Islamic Monetary Economics and Finance	3
4	Qualitative Research in Financial Markets	3
5	Edelweiss Applied Science and Technology	2
6	Hamdard Islamicus	2
7	Heliyon	2
8	Journal of Islamic Accounting and Business Research	2
9	Journal of Risk and Financial Management	2
10	Kocatepe Islami Ilimler Dergisi	2

Source: Authors' Compilation through RStudio Software

Figure 7 presents the analysis of countries with the highest number of citations. Malaysia ranks as the leading country in terms of citations, with 146, followed by Indonesia and Australia, with 42 and 36, respectively.

This dominance of Malaysia can be attributed to its strong institutional infrastructure in Islamic finance, including organizations such as ISRA and INCEIF, as well as proactive regulatory support for fintech innovation. Furthermore, the concentration of research in specific regions indicates a geographical imbalance, suggesting that blockchain applications in Islamic social finance remain underexplored in other regions such as Africa and the Middle East. The relatively low average citation per document indicates that this field is still emerging and has not yet reached maturity in terms of academic impact.

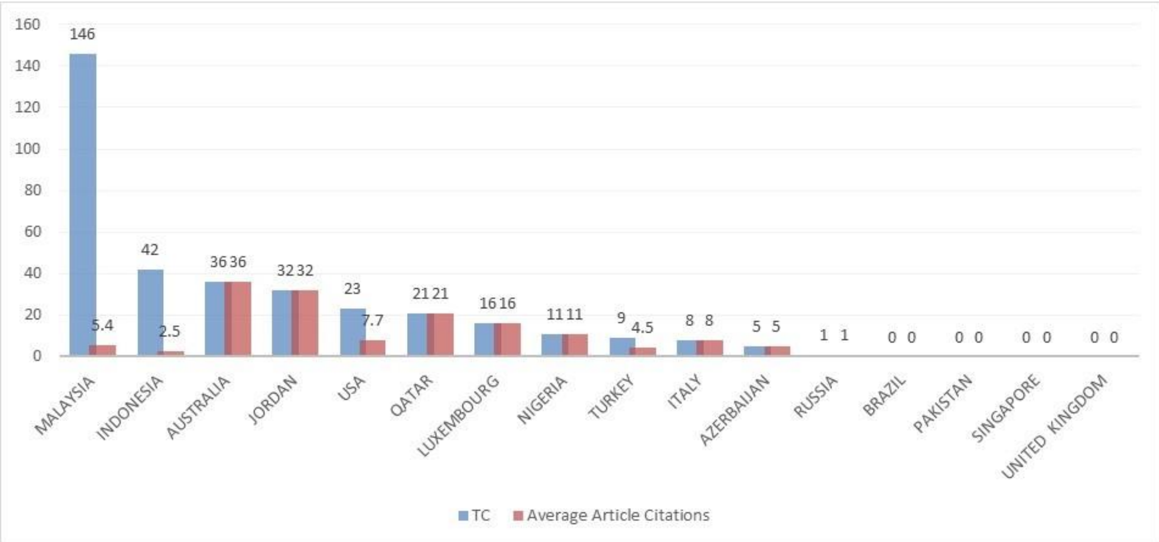


Figure 7: Most cited countries, Source: Authors' Compilation through RStudio Software

5.1.3 Keywords analysis

The keyword analysis identifies the principal themes of the documents, including the title, abstract, keywords, and author (Nasir et al., 2021). Table 8 presents details on the keywords used in Blockchain technology and Islamic Social Finance in the social sciences from 2018 to 2024. This table presents keywords in four segments: author keywords, keyword plus, title, and abstract. In all categories, the most frequently occurring keyword is "Blockchain," which appears the most, while "Islamic social finance" ranks second. Figure 8 shows a word cloud image.

Table 8: Keyword Analysis

Author Keyword		**Keyword Plus**	
Words	**Frequency**	**Words**	**Frequency**
Blockchain	27	Blockchain	7
Islamic social finance	15	Islamic social finance	3
Waqf	12	Indonesia	3
Cryptocurrency	9	Finance	3
Bitcoin	8	Islamic fintech	2
Zakāt	7	Banking	2
Cryptocurrencies	5	Challenges	2
Fintech	5	Cryptocurrency	2
Cash Waqf	4	Economics	2
Digitalization	4	Hedge	2
Title		**Abstract**	
Words	**Frequency**	**Words**	**Frequency**
Blockchain	9	Blockchain	35
Islamic social finance	7	Islamic social finance	30
Islamic finance	6	Blockchain technology	25
Bibliometric analysis	5	Waqf institutions	25
Social finance	5	Zakāt management	24
Zakāt management	5	Social finance	21
Islamic financial	4	Cash Waqf	20
Digital zakāt	3	Islamic social	20
Waqf institutions	3	Islamic financial	19
Blockchain applications	2	Crypto assets	18

Source: Authors’ Compilation through RStudio Software

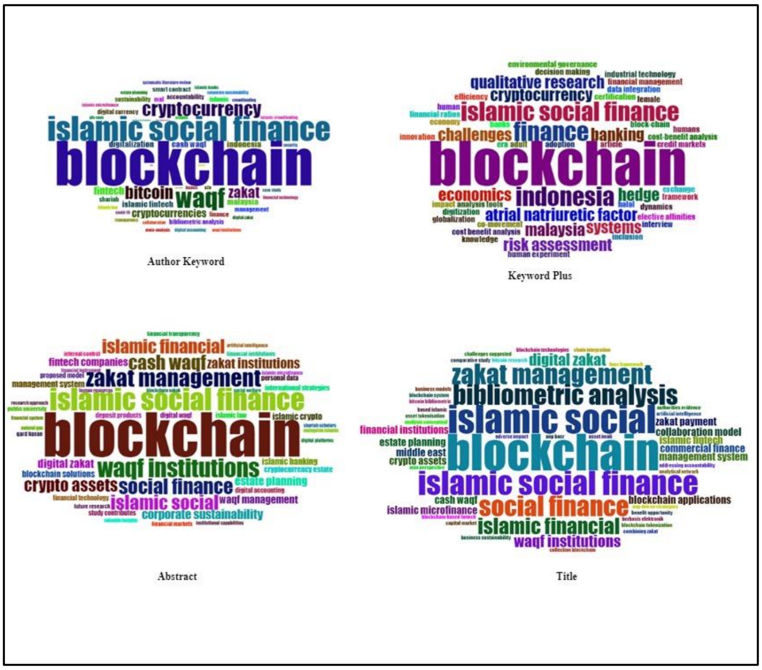


Figure 8: Word Cloud
Source: Authors’ Compilation through RStudio Software

5.1.4 Co-authorship analysis

In the context of academic research, co-authorship refers to the designation of an individual who has made a significant contribution to a journal article and thus shares both responsibility and accountability for the research outcomes published in the article (Ullah et al., 2022).

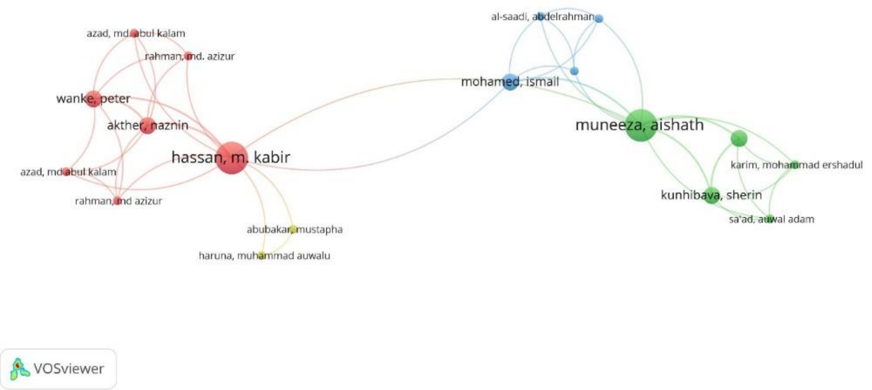


Figure 9: Co-authorship Analysis (Network Visualization)
Source: Authors’ Compilation through VOSviewer

This study set a minimum citation threshold of 1, resulting in the identification of 18 source documents and 42 links, and achieving a total link strength of 49. According to (Van Eck & Waltman, 2010). A higher link strength score indicates a stronger interconnection between documents. In this instance, the overall link strength was considered moderate. Figure 9 illustrates the four co-authorship clusters identified in the VOSviewer analysis. There are red, green, blue, and yellow clusters. Hassan and Kabir lead the red cluster, which comprises seven co-authors linked together. Muneeza Aishath, Mohamed Ismail, and Haruna Muhammad Auwalu, representing the green, blue, and yellow clusters, respectively, demonstrated co-authorship links within their respective groups. The moderate link strength within these clusters indicates the need for combined efforts among authors from various areas to investigate the different aspects of blockchain and Islamic social finance.

5.1.5 Co-citation analysis

Co-citation analysis is a research method that examines how often pairs of articles are cited together (Shiau et al., 2017). This study identified three distinct clusters, shown in Figure 10. The red cluster exhibits strong connections with the green and blue clusters, with an overall link strength of 30. In contrast, the green and blue clusters demonstrated moderate interconnections, with link strengths of 28 and 24, respectively.

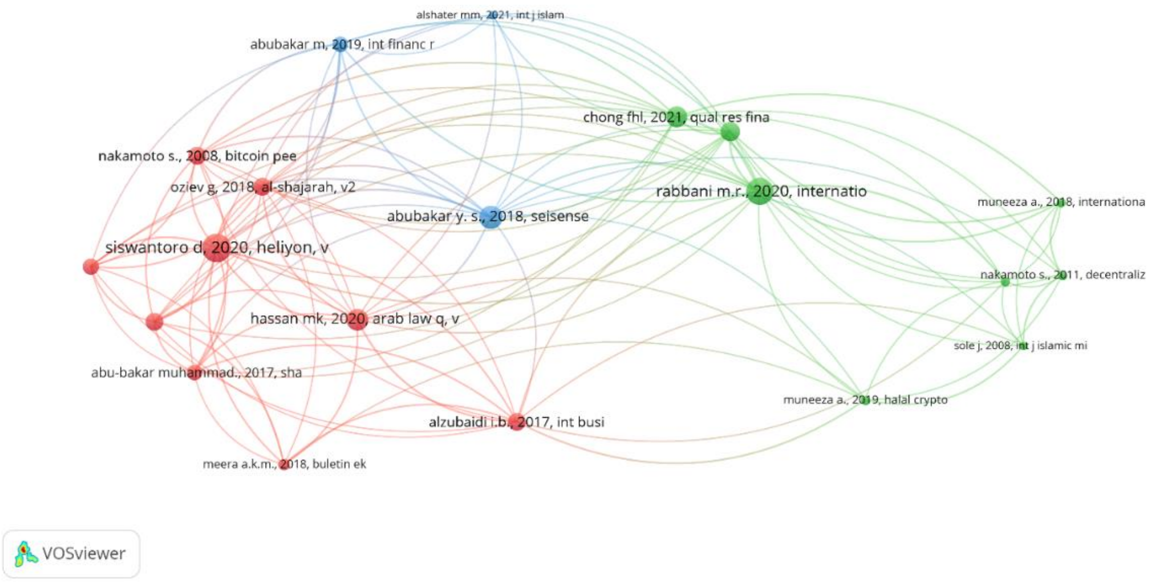


Figure 10: Co-citation Analysis of references (Network Visualization)
Source: Authors' Compilation through VOSviewer Software

5.1.6 Thematic evolution

Thematic To enhance the precision and robustness of the research findings, a thematic analysis was conducted using the Bibliometrix R-package (Musa & Musa, 2022). Figure 11 presents a thematic map based on two fundamental dimensions: centrality (the degree of relevance) and density (the degree of internal development). These dimensions categorize research topics into four distinct quadrants: Motor Themes, Niche Themes, Emerging/Declining Themes, and Basic Themes. The analysis reveals that "blockchain technology" is situated within the Motor Themes quadrant, characterized by high centrality and moderate density. This positioning suggests that blockchain plays a pivotal and increasingly influential role in shaping the field's intellectual structure. This finding is consistent with the Technology Acceptance Model (TAM), as the perceived utility and efficiency of blockchain in enhancing institutional transparency and accountability drive its adoption within Islamic financial systems.

In contrast, “Islamic social finance” is located in the Basic Themes quadrant (high centrality but low density). This indicates that while the concept is foundational and widely relevant to the discourse, it remains theoretically and empirically underdeveloped. From the perspective of Maqaṣid al-Shariah, this underscores a critical need to strengthen the role of ISF in achieving socio-economic justice through more structured, technology-driven frameworks. Furthermore, “Zakat” is positioned near the Niche Themes quadrant, reflecting a specialized yet moderately developed research area that remains somewhat isolated from the broader thematic structure. Similarly, the term “analysis” appears in the Niche Themes quadrant, suggesting the existence of methodologically rigorous yet relatively fragmented research streams that have yet to be fully integrated into the core nexus of blockchain and ISF. Significantly, the absence of dominant themes in the Emerging or Declining quadrant suggests that the field is in a state of maturation rather than transition. This provides substantial opportunities for future scholarship, particularly in developing empirical models, conducting cross-country comparative analyses, and fostering deeper integration between blockchain technology and traditional ISF instruments such as Zakat and Waqf.

In summary, the thematic structure highlights that while blockchain technology is the primary driver of innovation in this space, the core components of Islamic social finance require more profound theoretical integration and empirical validation to realize their potential for sustainable socio-economic development.

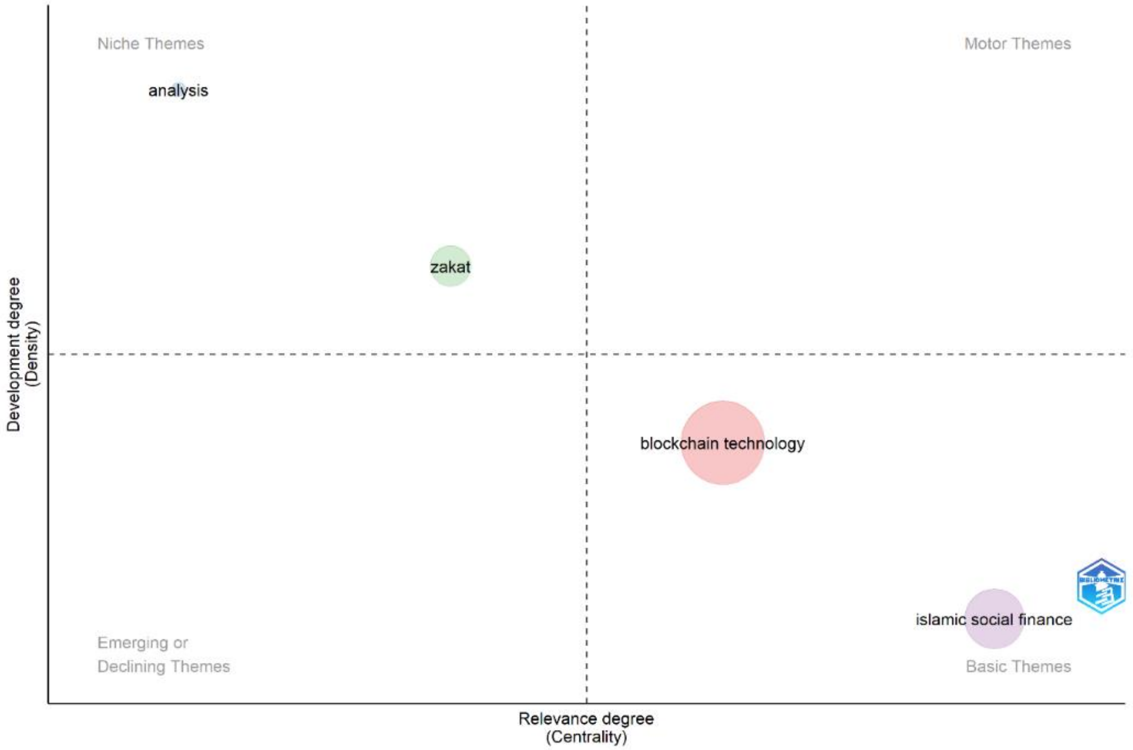


Figure 11: Thematic evolution, Source: Authors’ Compilation through RStudio Software

6. Conclusion

This study presented an integrated systematic literature review and bibliometric analysis to evaluate the implementation of blockchain technology within the Islamic social finance (ISF) sector. The findings underscore the transformative potential of blockchain for Zakat and Waqf institutions, particularly in augmenting transparency, operational efficiency, and institutional accountability. By decentralizing the governance of fund collection and distribution, blockchain technology offers a robust mechanism to enhance social welfare and bolster the socio-economic resilience of Muslim communities globally. The research further demonstrates that blockchain serves as a primary driver of digital transformation, reshaping traditional financial systems and institutional practices. Within Waqf management, the technology provides a viable pathway to institutional sustainability and optimized resource allocation, which is particularly critical in jurisdictions where alternative funding mechanisms are required to supplement state support.

Despite its contributions, this study is subject to several limitations. First, the search protocol relied exclusively on the Scopus and Web of Science databases; consequently, relevant studies indexed in alternative or regional databases may have been excluded. Second, the relatively small sample size of 78 documents reflects the nascent nature of the field, which may limit the generalizability of the findings. Third, the exclusion of non-English publications introduces a potential language bias, particularly given the significance of Islamic finance research in non-English speaking jurisdictions. Finally, while bibliometric analysis offers powerful descriptive and structural insights, it may not fully capture the qualitative depth or nuanced theoretical contributions present in the individual texts.

To advance the field, future scholarship must move beyond conceptual frameworks toward the development of rigorous empirical and theoretical models. Specifically, the following research trajectories are recommended: first, quantitative inquiries utilizing panel data and longitudinal case studies are essential to evaluate the real-world impact of blockchain adoption on institutional performance. Second, cross-jurisdictional studies are needed to identify how differing regulatory environments and Shariah governance structures act as either barriers or enablers to technological adoption. Furthermore, future research should investigate technological convergence by exploring the synergy between blockchain and other Fourth Industrial Revolution (4IR) technologies—such as Artificial Intelligence (AI) and Big Data analytics—to improve the scalability and predictive capabilities of ISF systems. From a policy perspective, the successful institutionalization of blockchain requires a balanced approach that addresses regulatory frameworks, Shariah compliance nuances, and technical risk management. While the transformative potential of the technology is evident, its realization is contingent upon institutional readiness and the establishment of supportive, harmonized regulatory environments. Ultimately, this study serves as a foundational roadmap for researchers and practitioners aiming to modernize Islamic social finance through digital innovation.

References

Abdul-Rahman, A., Nor, S. M., & Yaacob, S. E. (2023). Technological Integration within Zakāt Institutions: A Comprehensive Review and Prospective Research Directions. *International Journal of Islamic Thought*, *24*, 31–43.

Alam, A., Ratnasari, R. T., Mua'awanah, C., & Hamidah, R. A. (2022a). Generation Z perceptions in paying zakāt, infaq, and sadaqah using fintech: A comparative study of Indonesia and Malaysia. *Investment Management and Financial Innovations*, *19*(2), 320–330. https://doi.org/10.21511/imfi.19(2).2022.28

Alam, A., Ratnasari, R. T., Mua'awanah, C., & Hamidah, R. A. (2022b). Generation Z perceptions in paying Zakāt, Infaq, and Sadaqah using Fintech: A comparative study of Indonesia and Malaysia. *Investment Management and Financial Innovations*, *19*(2), 320–330. https://doi.org/10.21511/imfi.19(2).2022.28

Alharthi, W. J. (2021). Using Blockchain in WAQF, Wills and Inheritance Solutions in the Islamic System. *International Journal of Economics & Business Administration (IJEBA)*, *9*(2), 101–116.

Al-Saudi, H. A. A. (2024). *Blockchain Technology and the Potential of Waqf Revival*. Hamad Bin Khalifa University (Qatar).

Al-Taani, A. H. M., Al-Zaqeba, M. A. A., Maabreh, H. M. A., & Jarah, B. A. F. (2024). Exploring the impact of digital accounting and digital zakāt on improving business sustainability in the Middle East and Malaysia. *International Journal of Advanced and Applied Sciences*, *11*(1), 56–67.

Apriani, D., Williams, A., Rahardja, U., Khoirunisa, A., & Avionita, S. (2021). The Use of Science Technology In Islamic Practices and Rules In The Past Now and The Future. *International Journal of Cyber and IT Service Management*, *1*(1), 48–64.

Aysan, A. F., Bergigui, F., & Disli, M. (2021). Using blockchain-enabled solutions as SDG accelerators in the international development space. *Sustainability*, *13*(7), 4025.

Basarud-Din, S. K., & Abdullah, N. S. N. (2023). Can Bitcoin be used for Zakāt Payment? *International Journal of Economics and Management*, *17*(2), 273–285. https://doi.org/10.47836/ijeam.17.2.09

Bashori, A., Arianti, F., Kumala, I. N., Nurviani, E., & Mukarromah, F. L. (2024). THE TRANSFORMATION OF ZAKĀT LAW: An Analysis of Ijtihād Maqāṣidī in the Modernisation of Zakāt Practices in Indonesia. *Jurisdictie: Jurnal Hukum Dan Syariah*, *15*(1), 34–72.

Billah, M. M., Hassan, R., Haron, R., & Zain, N. R. M. (2024). *Islamic sustainable finance: Policy, risk and regulation*. Routledge. https://www.routledge.com/Islamic-Sustainable-Finance-Policy-Risk-and-Regulation/Billah-Hassan-Haron-Zain/p/book/9781032497853

Bintarto, M. al I., Setiawan, Y., Alqarni, M. U., & Hilmi, F. (2022). Zakah and Waqf for Cryptocurrency in Islamic Law. *Al-Istinbath: Jurnal Hukum Islam*, *7*(1 May), 21–38.

Bloomfield, R., & O'Hara, M. (1999). Market transparency: who wins and who loses? *The Review of Financial Studies*, *12*(1), 5–35.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews*, *12*(1), 85–105.

Casino, F., Dasaklis, T. K., & Patsakis, C. (2019). A systematic literature review of blockchain-based applications: Current status, classification and open issues. *Telematics and Informatics*, *36*, 55–81. https://doi.org/10.1016/J.TELE.2018.11.006

Chapra, M. U. (2008). *The Islamic vision of development in the light of Maqāṣid al-Sharīʿah*. Islamic Research and Training Institute.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Djatmiko, B., Galinium, M., & Lutfiani, N. (2018). The Role of a Variety of Research Studies on Problem Management. *Aptisi Transactions On Management*, *2*(1), 9–19.

Dutta, S. K. (2020). *The definitive guide to blockchain for accounting and business: Understanding the revolutionary technology*. Emerald Publishing Limited.

Febriandika, N. R., Rosyadi, I., & Raihanita. (2023). An Empirical Study on the Muslims' Intention to Use Digital Waqf Innovation. *J. Syst. Manag. Sci.*, *13*(6), 127–143.

Fischer, D. (2018). Ethical and professional implications of blockchain accounting ledgers. *Available at SSRN 3331009*.

Ghofar, A., Fawwaz, M., Prestianawati, S. A., Mubarak, M. F., Manzilati, A., & Imamia, T. L. (2024). Young muslim generation's preferences for using digital platforms for Zakāt payments: A cross-country study of Indonesia and Malaysia. *Journal of Infrastructure, Policy and Development*, *8*(6), 3249.

Hadi, R., Shafrani, Y., Hilyatin, D., Riyadi, S., & Basrowi, B. (2024). Digital zakāt management, transparency in zakāt reporting, and the zakāt payroll system toward zakāt management accountability and its implications on zakāt growth acceleration. *International Journal of Data and Network Science*, *8*(1), 597–608.

Hakim, T., & Bahari, M. (2021). Blockchain Technology Research in Business, Management and Accounting Field: A Bibliometric Analysis. *International Conference on Research and Innovation in Information Systems, ICRIIS*, 1–7. https://doi.org/10.1109/ICRIIS53035.2021.9616980

Hambiralovic, M., & Karlsson, R. (2018). *Blockchain accounting in a tripple-entry system*.

Hapsari, M. I., Arifin, S. R., Herianingrum, S., Zaki, I., Thas Thaker, M. A. M., Duasa, J., Fathurrohman, M. S., & Salma, J. R. (2024). Managing Waqf Land in Indonesia: ANP-Driven Strategies. *Pertanika Journal of Social Sciences & Humanities*, *32*(1).

Hasan, M., Hassan, M. K., & Aliyu, S. (2021). *Islamic social finance: Theory and practice*. Routledge.

Hasibuan, W. S., & Lubis, I. (2024). Halal value chain integration in food court establishment through Cash Waqf Linked Sukuk: evidence from Indonesia. *Cogent Business & Management*, *11*(1), 2385075.

Hossain, M. E., & Mahadi, N. F. (2022). Examine The Awareness and Knowledge on Public Perception Towards Zakāt Management During the Post-Pandemic Period in Bangladesh. *Doi: 10.5281/Zenodo.6770260*, *17*(06), 1622–1629. Seybold Report

Hossain, M. E., Mahadi, N. F. B., Haron, R., Tareq, M. A., Nor, R. M., Sohel, R., Martoza, M. G., & Kamrunnaher, M. (2023). Exploring Green Human Resource Management to Achieve Sustainability in the Banking Industry of Bangladesh. *International Conference on Business and Technology*, 169–182.

Ismail, N., & Aisyah, S. (2022). Islamic Social Finance: A Bibliometric Analysis. *Global Review of Islamic Economics and Business*, *9*(2), 019. https://doi.org/10.14421/grieb.2021.092-02

Kasmon, B., Ibrahim, S. S., Sharif, S. M., Ab Rahman, A., & Habidin, N. F. (2023). Potential Blockchain Applications in Waqf for Sustainability: A Middle East and Asia Perspective. *Islamiyyat*, *45*(2), 47–64.

Khairi, K. F., Laili, N. H., Sabri, H., Ahmad, A., Pham, V. H., & Tran, M. D. (2023). THE DEVELOPMENT AND APPLICATION OF THE ZAKĀT COLLECTION BLOCKCHAIN SYSTEM. *Journal of Governance and Regulation*, *12*(1 special), 294–306. https://doi.org/10.22495/jgrv12i1siart9

Khan Shahnawaz, R. M. R. (2020). *Artificial Intelligence and NLP -Based Chatbot for Islamic Banking and Finance*. https://www.igi-global.com/gateway/article/280527

Khera, P., Ng, S., Ogawa, S., Sahay, R., Adrian, T., Čihák, M., Eriksson Von Allmen, U., Lahreche, A., Beaton, K., Bazarbash, M., Alonso-Gamo, P., Berkmen, P., Blancher, N., Dabla-Norris, E., Das, B., Elliot, J., Grinberg, F., Dirk, J., Grolleman, F., … Carcel Vilanova, H. (2021). Measuring Digital Financial Inclusion in Emerging Market and Developing Economies: A New Index IMF Working Paper Monetary and Capital Markets Department Measuring Digital Financial Inclusion in Emerging Market and Developing Economies: A New Index The aut. In *Wiley Online Library*. https://onlinelibrary.wiley.com/doi/abs/10.1111/aepr.12377

Laallam, A., Kassim, S., Engku Ali, E. R. A., & Saiti, B. (2020). Intellectual capital in non-profit organisations: lessons learnt for Waqf institutions. *ISRA International Journal of Islamic Finance*, *12*(1), 27–48. https://doi.org/10.1108/IJIF-10-2018-0111

Laili, N. H. (2022). The Role of Blockchain Technology in the Management of Waqf. *Digitalisation: Opportunities and Challenges for Business*, 72.

Listana, D. R. L., MUSA, A. D. R. S., & OSMAN, D. R. Z. (2024). ISSUES ON WAQF AND ROLES OF WAQF AUTHORITIES: EVIDENCE FROM INDONESIA AND SINGAPORE. *Hamdard Islamicus*, *47*(1).

Lutfiani, N., Rahardja, U., & Khasanah, K. T. (2022). The development viewboard as an information media at official site asosiation. *APTISI Transactions on Management*, *6*(1), 10–18.

Meskini, F. Z., & Aboulaich, R. (2024). Insurance Based on Waqf and Blockchain Technology: A Strong Social Impact & Efficiency. *WSEAS Transactions on Business and Economics*, *21*, 741–752. https://doi.org/10.37394/23207.2024.21.62

Mohaiyadin. (2021). Understanding the issues of Waqf at public university: Preliminary findings. *International Journal of Islamic Thought*, *20*, 95–108.

Mohaiyadin. (2022). ADDRESSING ACCOUNTABILITY AND TRANSPARENCY CHALLENGES IN WAQF MANAGEMENT USING BLOCKCHAIN TECHNOLOGY. *Journal of Islamic Monetary Economics and Finance*, *8*, 53–80. https://doi.org/10.21098/jimf.v8i0.1413

Mohd Nor, S., Abdul-Majid, M., & Esrati, S. N. (2021). The role of blockchain technology in enhancing Islamic social finance: the case of Zakah management in Malaysia. *Foresight*, *23*(5), 509–527. https://doi.org/10.1108/FS-06-2020-0058

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group*, t. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of Internal Medicine*, *151*(4), 264–269.

Muneeza, A., Bin-Nashwan, S. A., Moshin, M. I. A., Mohamed, I., & Al-Saadi, A. (2022). Zakāt payment from cryptocurrencies and crypto assets. *International Journal of Islamic and Middle Eastern Finance and Management*, *16*(3), 482–497.

Musa, H. H., & Musa, T. H. (2022). A systematic and thematic analysis of the top 100 cited articles on mRNA vaccine indexed in Scopus database. *Human Vaccines & Immunotherapeutics*, *18*(6), 2135927.

Nasir, A., Shaukat, K., Khan, K. I., Hameed, I. A., Alam, T. M., & Luo, S. (2021). What is Core and What Future Holds for Blockchain Technologies and Cryptocurrencies: A Bibliometric Analysis. *IEEE Access*, *9*, 989–1004. https://doi.org/10.1109/ACCESS.2020.3046931

Nazeri, A. N. N., Nor, S. M., Abdul-Rahman, A., Abdul-Majid, M., & Hamid, S. N. A. (2023). EXPLORATION OF A NEW ZAKĀT MANAGEMENT SYSTEM EMPOWERED BY BLOCKCHAIN TECHNOLOGY IN MALAYSIA. *ISRA International Journal of Islamic Finance*, *15*(4), 127–147. https://doi.org/10.55188/ijif.v15i4.568

Nicolaou, A. I., & McKnight, D. H. (2006). Perceived information quality in data exchanges: Effects on risk, trust, and intention to use. *Information Systems Research*, *17*(4), 332–351.

Nour Aldeen, K., Ratih, I. S., & Sari Pertiwi, R. (2022). Cash Waqf from the millennials' perspective: a case of Indonesia. *ISRA International Journal of Islamic Finance*, *14*(1), 20–37. https://doi.org/10.1108/IJIF-10-2020-0223

Potosky, D. (2008). A conceptual framework for the role of the administration medium in the personnel assessment process. *Academy of Management Review*, *33*(3), 629–648.

Purnama, S., Ahmad, D., Lutfiani, N., Darmawan, A., Mardiana, Terah, Y. A., & Azizah, N. N. (2022). A Bibliometric Study for Blockchain Technology in Academic Journals. *2022 IEEE Creative Communication and Innovative Technology, ICCIT 2022*, 1–6. https://doi.org/10.1109/ICCIT55355.2022.10118640

Qurrata, V. A., Shafiai, M. H. M., Alma'amun, S., Wahid, H., & Ismail, A. G. (2024). Waqf Sustainability or Sustainable Waqf? A Bibliometric Analysis. *Millah: Journal of Religious Studies*, 103–148.

Rabbani, M. R., Khan, S., & Thalassinos, E. I. (2020). FinTech, Blockchain and Islamic Finance: An Extensive Literature Review. In *International Journal of Economics and Business Administration: VIII* (Number 2).

Rahmatullah, I., Suwadi, P., & Purwadi, H. (2024). Legal Reform of Zakāt Management Based on Personal Data Protection Law in Indonesia. *Mazahib*, *23*(1), 199–236.

Rashid, S. K. (2018). Potential of Waqf in contemporary world. *Journal of King Abdulaziz University, Islamic Economics*, *31*(2), 53–69. https://doi.org/10.4197/Islec.31-2.4

Razzak, A., Ahmad, M. A., Awad, G., & Mohammad, N. (2024). The effect of digital zakāt and accounting on corporate sustainability through financial transparency. *Asian Economic and Financial Review*, *14*(3), 228–249.

Rosele, M. I., Muneem, A., Rahman, N. N. B. A., & Ali, A. K. (2022). The digitalized zakāt management system in Malaysia and the way forward. *AL-IHKAM: Jurnal Hukum & Pranata Sosial*, *17*(1), 242–272.

Salleh, N., Kassim, S., Muhammad, N. M., Mohd Yusoff, S. S., Mahadi, N. F., & Ariffin, K. M. (2023). Application of Blockchain Technology in the Management of Waqf Institutions: Concepts, Challenges and Recommendations. *2023 IEEE International Conference on Computing, ICOCO 2023*, 369–374. https://doi.org/10.1109/ICOCO59262.2023.10397676

Salleh, N., Kassim, S., Muhammad, N. M., Yusoff, S. S. M., Mahadi, N. F., & Ariffin, K. M. (2023). Application of Blockchain Technology in the Management of Waqf Institutions: Concepts, Challenges and Recommendations. *2023 IEEE International Conference on Computing (ICOCO)*, 369–374.

Schnackenberg, A. K., & Tomlinson, E. C. (2016). Organizational transparency: A new perspective on managing trust in organization-stakeholder relationships. *Journal of Management*, *42*(7), 1784–1810.

Shahnawaz, S., & Astya, P. (2017). Sentiment analysis: Approaches and open issues. *Proceeding - IEEE International Conference on Computing, Communication and Automation, ICCCA 2017*, *2017-Janua*, 154–158. https://doi.org/10.1109/CCAA.2017.8229791

Shiau, W.-L., Dwivedi, Y. K., & Yang, H. S. (2017). Co-citation and cluster analyses of extant literature on social networks. *International Journal of Information Management*, *37*(5), 390–399.

Syarifuddin, F. (2024). Productive WAQF business models through the integration of Islamic social and commercial finance. *Edelweiss Applied Science and Technology*, *8*(4), 620–655.

Syed, M. H., Khan, S., Rabbani, M. R., & Thalassinos, Y. E. (2020). An Artificial Intelligence and NLP based Islamic FinTech Model Combining Zakāt and Qardh-Al-Hasan for Countering the Adverse Impact of COVID 19 on SMEs and Individuals. In *International Journal of Economics and Business Administration: VIII* (Number 2).

Ullah, M., Shahid, A., Din, I. U., Roman, M., Assam, M., Fayaz, M., Ghadi, Y., & Aljuaid, H. (2022). Analyzing Interdisciplinary Research Using Co-Authorship Networks. *Complexity*, *2022*(1), 2524491.

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, *84*(2), 523–538.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2022). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*, *23*(1), 1–26. https://doi.org/10.17705/1jais.00740

Vidiati, C., Hendra, E., Santoso, S., & Faturrizky, I. (2021). What blockchain technology can do to contribute to Waqf. *Al-Afkar, Journal For Islamic Studies*, 53–71.

Yusuf, M. Y., & Maulana, H. (2023). Waqf Core Principles for The Economic Recovery of Covid 19 In Indonesia. *Calitatea*, *24*(195), 106–114.

Zakariyah, H., Salaudeen, A. O., Othman, A. H. A., & Rosman, R. (2023). The determinants of financial technology adoption amongst Malaysian Waqf institutions. *INTERNATIONAL JOURNAL OF SOCIAL ECONOMICS*, *50*(9), 1302–1322. https://doi.org/10.1108/IJSE-04-2022-0264

Zeng, S., Ni, X., Yuan, Y., & Wang, F.-Y. (2018). A bibliometric analysis of blockchain research. *2018 IEEE Intelligent Vehicles Symposium (IV)*, 102–107.

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 129-143
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Bridging the Conceptual-Practice Divide: Does A Cloud-Based Accounting Information System Drive the Integration and Accountability of Islamic Philanthropy Institution?

Alfin Rochman Wicaksono[a*], Muhamad Wahyudi[b]
Siti Rokhaniyah[c]

[a,b,c] *Accounting Department, Faculty of Economics Tidar University, Magelang City, Indonesia*

**Corresponding author: alfinrochman@students.untidar.ac.id*

Abstract

Inefficiencies in financial management processes remain a persistent challenge for zakat institutions, typically characterized by fragmented systems, data redundancies, and non-compliance with the accountability mandates of the Indonesian Zakat Management Law. This study develops a cloud-based accounting information system for a municipal-level zakat institution in Indonesia—the National Zakat Management Board (BAZNAS) of Magelang City—utilizing the ADDIE framework (Analysis, Design, Development, Implementation, and Evaluation). Data were collected through interviews, field observations, and documentary analysis. System usability and user experience were validated using the System Usability Scale (SUS) and the User Experience Questionnaire (UEQ). The developed system yielded 21 integrated components that synchronize daily transactions, data recapitulations, executive dashboards, and formal financial reporting. SUS results confirmed high levels of usability regarding task completion, internal consistency, and user trust; concurrently, UEQ findings indicated strong performance in learnability, creative utility, and user comfort. However, limitations were identified concerning visual design, feature complexity, and an ongoing dependency on technical assistance. Future research should investigate the incorporation of automated validation features, evaluate system scalability across multiple institutions, and conduct longitudinal usability assessments. This study contributes a replicable framework for modernizing financial governance within Islamic philanthropic institutions.

Keywords: ADDIE Model; Cloud-Based Accounting Information System; Islamic Philanthropy, System Usability, User Experience.

1. Introduction

The global potential of zakat, estimated between $200 billion and $1 trillion annually (World Bank and Islamic Development Bank, 2016), represents one of the most significant yet chronically underutilized instruments of Islamic socio-economic governance. Despite this latent potential, empirical data consistently reveal a profound mobilization gap: global zakat collection reached merely $13.9 million in 2024 (UNHCR, 2024). Similarly, Indonesia, home to the world's largest Muslim population, collected only IDR 9 trillion against a projected potential of IDR 327 trillion—representing less than 5% of total capacity (BAZNAS, 2024). This systemic underperformance is not solely attributable to theological ambivalence or donor reluctance; rather, it is a governance failure rooted in institutional deficiencies regarding accountability, transparency, and the integration of financial management (Febriandika et al., 2023; Nasution et al., 2024). The scholarly response to these governance failures has followed three broad trajectories. The first focuses on Sharia governance

Article history
Received: 11 March 2026
Accepted: 28 March 2026

frameworks, arguing that the application of *tauhid*-based governance principles can strengthen institutional trust and public accountability (Zakiy et al., 2025; Zakiy & Falikhatun, 2024). The second emphasizes policy design, particularly through Zakat Core Principles (ZCP), as a normative foundation for governance reform (Wahyudi, 2022). The third, and most operationally actionable, advocates for information technology transformation as a systemic enabler of efficiency, transparency, and accountability across zakat collection, monitoring, and reporting (Hadi et al., 2024; Nashirudin et al., 2025; Rahman et al., 2025). Within this third trajectory, cloud-based accounting information systems (AIS) have emerged as particularly promising due to their capacity for real-time data access, minimal infrastructure requirements, and scalable deployment across institutional hierarchies (Utama et al., 2025; Zhang, 2025).

However, a critical gap persists at the intersection of these trajectories: there is a notable absence of empirical, practice-oriented studies that develop and validate a cloud-based AIS specifically designed for the operational realities of zakat institutions. While existing literature addresses cloud computing adoption in Islamic finance broadly (Sikka & Ojha, 2021), digital zakat management conceptually (Amilahaq et al., 2021; Beik et al., 2021), and AIS design in general organizational contexts (Hastuty Hs et al., 2023; Rashad Gahramanov, 2022), no prior study has integrated these streams into a structured, field-validated system development process specifically for a zakat institution.

Three specific gaps motivate this study. First, while prior research acknowledges the necessity of digital transformation in zakat governance, empirical studies that develop and validate a functional cloud-based AIS—rather than merely proposing its adoption—remain absent from the literature. Second, the ADDIE model, though widely applied in educational technology and instructional design, has not been systematically applied to AIS development within Islamic philanthropy institutions, representing an unexplored methodological intersection. Third, usability and user experience evaluations of zakat management systems using internationally standardized instruments, such as the System Usability Scale (SUS) and User Experience Questionnaire (UEQ), have not been reported in the zakat management literature. This leaves a significant empirical void in the human-computer interaction dimension of Islamic fintech governance. This study addresses these gaps by: (1) developing a cloud-based AIS comprising 21 integrated components through the ADDIE model; (2) implementing and validating the system within a municipal zakat institution in Central Java, Indonesia; and (3) evaluating system quality through SUS and UEQ instruments administered to operational users. In doing so, this study makes a dual contribution: practically, it delivers a replicable, field-tested governance tool for zakat institutions; theoretically, it extends the application of the ADDIE model and usability theory into the specialized domain of Islamic philanthropy governance.

2. Literature Review

2.1 Zakat, Infaq, and Sadaqah (ZIS) as A Theological Mandate to Institutional Imperative

The scholarly treatment of *Zakat*, *Infaq*, and *Sadaqah* (ZIS) has evolved considerably from classical theological exegesis toward contemporary institutional analysis, a trajectory that carries direct implications for how zakat management systems ought to be designed and evaluated. Linguistically, *zakat* (زكو) denotes purification and growth; *infaq* (نفق) signifies voluntary expenditure in the path of Allah; and *sadaqah* (صدق) reflects sincerity and moral truthfulness (Nugraha & Wanto, 2025). Classical scholars including Umar Az-Zamakhsyari (1998) and Umar Ibn Katsir (1997) established that zakat encompasses both a material obligation, as a the discharge of a quantifiable portion of wealth upon reaching *nisab* and *haul*, and a spiritual act of self-purification (*tazkiyah*), as mandated in Q.S. At-Taubah (9:103) and operationalised through the eight-category beneficiary framework (*asnaf*) of Q.S. At-Taubah (9:60).

Contemporary scholarship has productively reframed ZIS beyond its theological origins, positioning it as a structured socio-economic instrument with measurable welfare implications. Daud et al. (2025), Mongkito & Samdin (2025), and Mutmainah (2023) empirically demonstrate zakat's capacity for poverty reduction and income equalisation, while Mubarrak et al. (2023) and Siregar et al. (2024) confirm significant welfare improvements among recipient populations. This empirical body of work establishes a critical implication, if ZIS is to fulfil its socio-economic mandate at scale, the institutions responsible for its management must be governed with the rigour applied to any public welfare mechanism. The theological imperative and the institutional accountability imperative are therefore inseparable.

It is precisely at this juncture that Islamic Philanthropy Governance Theory becomes analytically indispensable. As Ghani et al. (2024) and Nordin et al. (2020) argue, conventional corporate governance frameworks that designed around shareholder primacy and secular accountability logic, are structurally inadequate for zakat institutions whose accountability obligations extend vertically to Allah and horizontally to *muzakki*, *mustahiq*, regulators, and the public simultaneously. Islamic Philanthropy Governance Theory resolves this inadequacy by synthesising corporate governance, philanthropy governance, and Sharia governance into a unified architecture anchored by five Islamic principles: *tauhid* (divine unity), *khilafah* (stewardship), *amanah* (trust), *adl* (justice), and *ihsan* (excellence). Within this framework, transparency and accountability are not regulatory compliance mechanisms, they are theological obligations that constitute the institutional expression of *amanah* (Ghani et al., 2024; Rejosumarto & Bulut, 2024).

This reframing has a profound implication for system design, a cloud-based AIS developed for a zakat institution must not merely achieve technical efficiency but must operationalise *amanah* through every functional layer. The seven governance design principles of the theory, such as Sharia compliance, transparency and accountability, integrity and trust, justice, excellence, partnership, and visionary leadership, therefore serve not as abstract ideals but as design criteria against which the system developed in this study is benchmarked.

2.2 Governance Failures and the Conceptual-Practice Divide

The literature on zakat governance failures converges around three interrelated deficiencies, such as accountability, transparency, and institutional trust, whose structural causes are well-documented but whose practical remediation remains empirically underexplored. Febriandika et al. (2023) and Nasution et al. (2024) establish a robust empirical relationship between accountability quality and *muzakki* participation rates, confirming that governance failures directly suppress *zakat* mobilisation. Al-Fatih (2020) and Evriyenni et al. (2025) extend this finding by demonstrating that accountability deficits systematically generate preference for informal, direct-transfer zakat payment, effectively bypassing formal institutions and undermining the coordinated redistribution function that zakat instituion is mandated to provide.

Indonesia's Zakat Management Law (Law No. 23 of 2011) normatively mandates that Indonesian National Zakat Management Board (BAZNAS), at all levels adhere to principles of *amanah* (trust), integration, and accountability across all management functions (Articles 2, 3, 7, and 26). Yet the empirical literature consistently documents a profound gap between this normative mandate and operational reality, particularly in municipal-level institutions where human resource constraints, fragmented manual processes, and the absence of integrated financial management systems impede compliance (Amilahaq et al., 2021; Anami, 2024). This conceptual-practice divide, between what the law mandates and what institutions actually deliver are constitutes the central problematic of the present study.

What the existing literature has not adequately addressed is the intersection between this governance gap and the Maqashid Shari'ah framework as an operational evaluation standard for remediation strategies. Al-Syatibi's five essential objectives, such as preservation of religion (*hifz al-din*), life (*hifz al-nafs*), intellect (*hifz al-aql*), lineage (*hifz al-nasl*), and wealth (*hifz al-mal*), have been applied in Islamic finance literature primarily as macro-level policy benchmarks (Alfaatih et al., 2024; Ma'mun, 2020). This study advances a more granular application, that each feature of the cloud-based AIS is evaluated for its direct contribution to one or more Maqashid objectives. The automated transaction validation mechanism serves *hifz al-mal* by preventing fund misappropriation and calculation errors; automated financial reporting serves *hifz al-din* by ensuring the proper and timely discharge of zakat obligations; and ergonomic, learnable system design serves *hifz al-nafs* by minimising cognitive burden on *amil* users whose welfare is integral to institutional sustainability. Zakiy et al. (2025) and Zakiy and Falikhatun (2024) further affirm that Sharia-grounded governance mechanisms of this kind demonstrably strengthen institutional accountability and public trust.

Critically, however, prior scholarship on zakat governance remediation has remained predominantly conceptual or policy-oriented, stopping short of producing and empirically validating an actual technological solution within a specific institutional context. Wahyudi (2022) designs a ZCP-based governance policy framework; Nashirudin et al. (2025) advocate technology adoption as a governance catalyst; and Hadi et al. (2024), Muharromi et al. (2025), and Wahyudi et al. (2023) provide empirical evidence of digital zakat system benefits at the system level. Yet none of these studies develops, deploys, and evaluates a complete cloud-based AIS through a structured development methodology.

2.3 Cloud-Based Accounting Information Systems as Governance Infrastructure

Cloud computing, defined by Jadhav (2024), Mell & Grance (2011), and Sikka & Ojha (2021) as the on-demand delivery of computing resources via the internet, offers five characteristics of direct institutional relevance, such as on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service. For zakat institutions constrained by limited budgets and geographically dispersed operations, these characteristics translate into substantive governance advantages, such as zero physical infrastructure investment, real-time multi-location data accessibility, and scalable capacity for transaction volume growth. Utama et al. (2025) and Zhang (2025) further demonstrate that cloud-based implementations outperform manual and locally-hosted systems on data accuracy, reporting timeliness, and audit traceability.

An Accounting Information System (AIS) is defined as a structured system for collecting, processing, and reporting financial data in support of accurate decision-making and organisational accountability (Hastuty Hs et al., 2023; Rashad Gahramanov, 2022). When combined with cloud architecture, AIS produces a governance infrastructure capable of systematic transaction recording, automated financial statement generation, and real-time accountability documentation. From a Technology Acceptance Model perspective (Davis, 1989; Venkatesh et al., 2003), sustained adoption is contingent upon the system achieving high perceived usefulness and ease of use. This is why usability evaluation (SUS) and user experience evaluation (UEQ) are not peripheral validity checks in this study but are theoretically gives a stance that users find difficult, unreliable, or unpleasant will not drive accountability regardless of its technical sophistication.

The synthesis across these frameworks produces the study's core theoretical proposition, which is the conceptual-practice divide in zakat governance is structurally bridgeable through a cloud-based AIS that simultaneously satisfies three conditions. First, it must be theologically grounded, designed in accordance with Islamic Philanthropy Governance principles and Maqashid Shari'ah objectives, so that its outputs constitute authentic expressions of *amanah* rather than mere bureaucratic compliance. Second, it must be technically integrated, connecting transaction inputs, recapitulations, dashboards, and financial reports within a single automated architecture, directly operationalising the integration mandate of Law No. 23 of 2011. Third, it must be institutionally viable, achieving sufficient usability and user experience quality to sustain adoption among *amil* users with diverse technical competencies, as validated through internationally standardised instruments. Prior literature satisfies none of these three conditions simultaneously. This study is the first to test all three empirically within a structured development framework, thereby occupying a distinct and novel position in the intersection of Islamic finance, *zakat* governance, and information systems research.

3. Research Methodology

3.1 Philosophical Methodology

This study employs a Research and Development (R&D) methodology, a scientifically rigorous approach oriented toward the systematic creation, testing, and validation of a functional product through iterative developmental stages (Sugiyono, 2023). R&D is epistemologically positioned within the pragmatist paradigm, wherein knowledge is generated through problem-solving practice and validated through real-world (Creswell, 2018). Within the R&D framework, this study adopts the ADDIE model as its operational development architecture, comprising five sequential yet iteratively interconnected stages, namely, Analyze, Design, Development, Implementation, and Evaluation.

3.2 Research Design

The ADDIE model originated from a US military training project and the Center for Educational Technology at Florida State University (Branson et al., 1975) and was subsequently formalised and disseminated by Molenda (2003). Its selection for this study is justified on three grounds. First, the model's iterative structure permits continuous formative evaluation at each developmental phase, enabling responsive revision based on user and expert feedback (Nuntawisuttiwong & Dejdumrong, 2024). Second, the ADDIE model has demonstrated robust adaptability across domains beyond its educational technology origins, including information system development, institutional capacity building, and organisational process design (Mulyasari et al., 2023). Third, its five-stage architecture maps directly onto the governance development challenge of this study, such as normative needs analysis (Analyze), system blueprint construction (Design), functional prototype realisation (Development), institutional deployment (Implementation), and multi-instrument validity assessment (Evaluation). The five stages and their operational parameters are presented in Figure 1 and Figure 2.

3.3 Epistemic

The study was conducted at a municipal-level zakat institution in Indonesian National Zakat Management Board (BAZNAS) in Magelang City, Central Java, Indonesia. Site selection was purposive, justified by three criteria: (1) the institution exhibited documented financial management fragmentation; (2) the institution's existing technological infrastructure was assessed as sufficient to support cloud-based system adoption; and (3) the researcher's direct access through a 54-day affiliated period enabled first-hand observation, institutional documentation access, and sustained stakeholder engagement necessary for a contextually valid development process.

3.4 Research Sample

The study sample comprised six *amil*. All six respondents held direct operational roles in the institution's ZIS, such as transaction recording, fund recapitulation, or financial reporting functions, to ensure that validity assessments reflected authentic user experience rather than peripheral familiarity. This approach is consistent with practice in usability research and with SUS and UEQ validation studies that routinely employ small expert user samples (Brooke, 1996; Laugwitz et al., 2008).

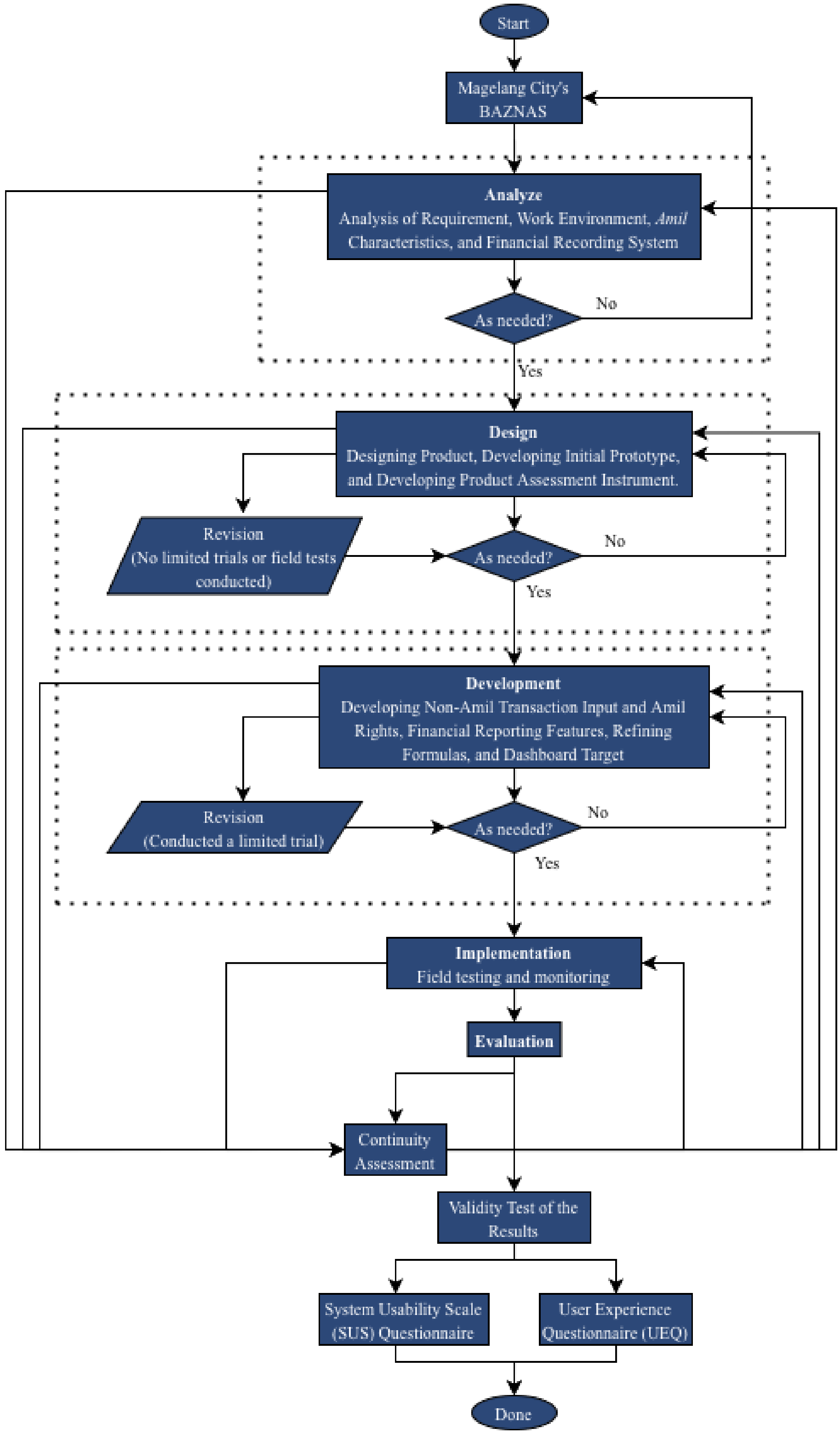


Figure 1. Conceptual Framework of the Study

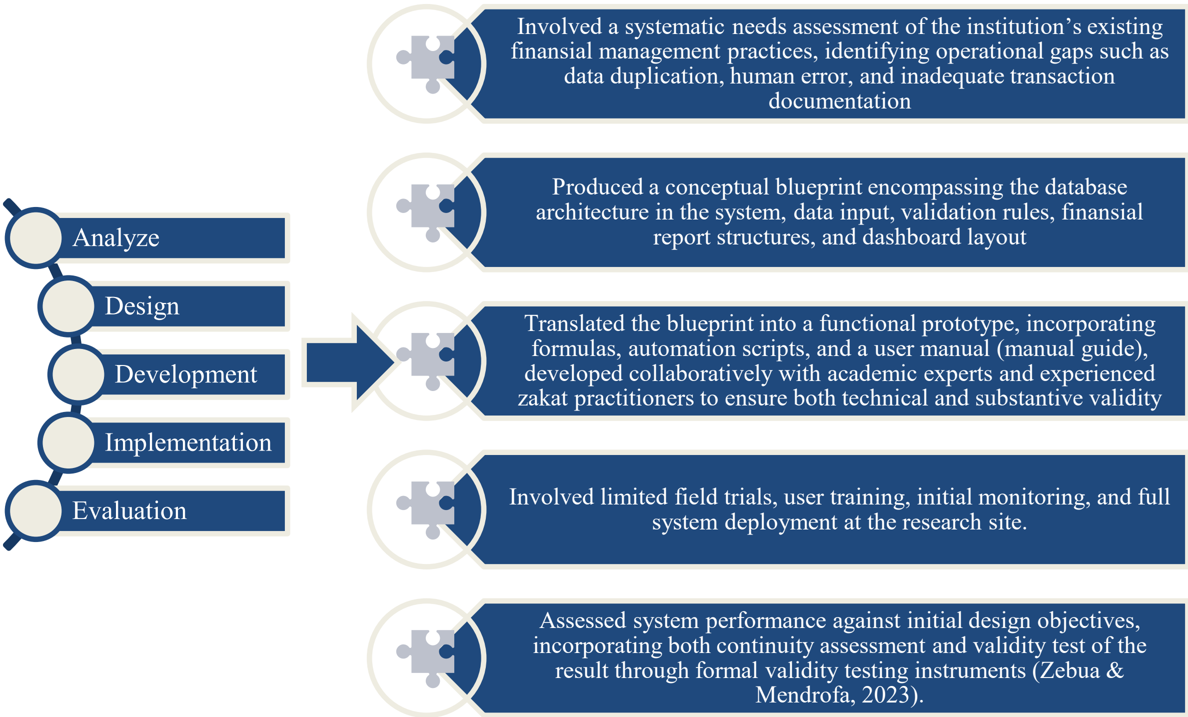


Figure 2. ADDIE Model of the Study

3.5 Data Collection

This study employed a data collection with three complementary methods, operationalised through unstructured interviews, participatory observation, and documentation analysis. The three complementary methods were operationalised as follows.

Table 1. Data Collection of the Study Approach

Data Collection of the Study	Description
Unstructured Interviews	Conducted with six *amil* involved in the institution's accounting and financial reporting process, covering system integration needs, operational challenges, and the urgency of cloud-based adoption (Patton, 2002).
Participatory Observation	Positioning the researcher as a participant-observer to obtain insider perspective while maintaining analytical objectivity (Creswell, 2015).
Documentation Analysis	Conducted on institutional records including annual financial reports, standard operating procedures, transaction receipts, accountability reports, and management meeting minutes (Marlina et al., 2024).

Source: Author Documentation

3.6 Validity Test of The Result

This study assessed a system validity with two internationally recognised instruments, operationalised through System Usability Scale (SUS) Questionnaire and User Experience Questionnaire (UEQ). The two recognised instrumens were operationalised as follows.

Table 2. Approaches of Validity Test of the System

Validity Test Instruments	Description
System Usability Scale (SUS) Questionnaire	Aims to measure usability of the system. This instrument was originally developed by Brooke (1996), that consisting of ten items adapted to the cloud-based system context and administrated to six *amil* as a respondents.
User Experience Questionnaire (UEQ)	Aims to measure user experience in terms of expectations, feelings, and attitude before, during, and fater using the system (Prasetya et al., 2023). This instrument was originally developed by Laugwitz et al. (2008), that comprising 26 items across six scales, such as attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty which rated on a seven-point semantic differential scale (Melissourgos & Katsanos, 2025).

Source: (Brooke, 1996; Laugwitz et al., 2008).

4. Results and Discussion

4.1 System Development

Prior to validity assessment, it is necessary to establish the developmental context within which the system was produced. The cloud-based accounting information system was developed through five sequential ADDIE stages at a municipal-level zakat institution in Magelang City, Central Java, Indonesia. The system architecture comprises 21 integrated components organised across four functional clusters, namely daily transaction input (non-*amil* and *amil* fund streams), annual recapitulation, target dashboard (Annual Work Plan and Budget/RKAT), and automated financial reporting, including the Statement of Financial Position, Statement of Fund Changes, Cash Flow Statement, Collection Report, Distribution Report by Programme, Distribution Report by *Asnaf*, *Amil* Rights Report, and Regional Budget Fund Report.

A design innovation embedded in the system is the validation status mechanism, such as transactions without a completed validation entry are automatically excluded from financial calculations, institutionalising an internal control checkpoint at the point of data entry. This directly addresses the human error and data integrity deficiencies identified during the analysis stage, and operationalises the integration mandate of Article 2, Indonesian Law No. 23 of 2011. System implementation was conducted across three iterative sessions (24 December 2025, 2 January 2026, and 5 January 2026), with revisions made at each session based on *amil* and supervisory feedback.

4.2 System Usability: SUS Result and Analysis

Usability was assessed using the System Usability Scale (SUS), administered to six *amil* respondents following full system deployment. SUS scores were calculated using Brooke's (1996) standard formula, producing individual scores and a composite mean, presented in Table 3.

Table 3. SUS Scores per Respondent

Respondent	SUS Score	Acceptability Category
A	67.5	Marginal
B	77.5	Acceptable
C	55.0	Marginal
D	60.0	Marginal
E	67.5	Marginal
F	57.5	Marginal
Mean (M)	**64.17**	**Marginal**
Standard Deviation (SD)	**8.32**	

Source: Primary data processed by authors.

Acceptability classification follows Bangor et al. (2008) and Brooke (1996)

The composite SUS mean (M) of 64.17 (SD = 8.32) falls within the Marginal acceptability range (50–70) and corresponds to the adjective rating of "OK" on the Bangor et al. (2008) adjective scale. Individual scores ranged from 55.0 (Respondent C) to 77.5 (Respondent B), with only one respondent achieving an "Acceptable" threshold (≥70). This score distribution reflects meaningful variance in user experience across the *amil* population, consistent with the diverse digital literacy profiles identified during the analysis stage.

Per-item contribution analysis illuminates the specific usability strengths and weaknesses underlying the composite score. Item 6 (system consistency) generated the highest contribution (9.2 points out of a possible 10), confirming that the system behaves reliably and predictably (Lewis, 2018). Items 1, 3, 5, and 7 (behavioural intention to reuse, task completion ease, navigational integration, and new-user learnability) each contributed 6.2 points, indicating uniformly solid performance on functional usability dimensions. Conversely, Item 4 (technical dependency) generated the lowest positive contribution (4.2 points), with 67% of respondents reporting that they had sought technical assistance during system use. Item 8 (errors and obstacles) similarly produced moderate scores, with 67% of respondents encountering operational errors or difficulties during use.

These findings present a differentiated usability profile, likely the system achieves strong functional consistency and task-enabling capability, but falls short of intuitive, self-sufficient operation (Venkatesh et al., 2003). The Marginal composite score, while below the "Good" threshold, is theoretically and contextually significant for two reasons. First, the six-respondent represents an expert user population with direct institutional domain knowledge. Second, Marginal-range SUS scores contexts are well-precedented in organisational system implementations, particularly where users have transitioned from manual to digital workflows (Bangor et al., 2008).

4.3 User Experience: UEQ Result and Analysis

User experience was evaluated using the User Experience Questionnaire (UEQ), comprising 26 items across six sub-scales rated on a seven-point semantic differential scale. Scale scores were computed as mean ratings converted to the −3 to +3 UEQ range, and interpreted against the UEQ benchmark dataset (Laugwitz et al., 2008; Schrepp et al., 2017). Results are presented in Table 4.

Table 4. UEQ Scale Scores and Benchmark Classification

Respondent	Items	SUS Score	Acceptability Category
Attractiveness	1, 12, 14, 16, 24, 25	+1.694	Outstanding
Perspicuity	2, 4, 13, 21	+1.541	Outstanding
Efficiency	9, 20, 22, 23	+1.583	Outstanding
Dependability	8, 11, 17, 19	+1.583	Outstanding
Stimulation	3, 6, 15, 18	+1.833	Outstanding
Novelty	5, 7, 10, 26	+1.208	Excellent
Overall Mean (OM)		**+1.574**	**Outstanding**

Source: Primary data processed by authors.
Benchmark classification follows Schrepp et al. (2017):
Below Average (<0.5), Above Average (0.5-0.8), Good (0.8-1.0), Excellent (1.0-1.5), Oustanding (>1.5).

The overall UEQ mean of +1.574 classifies the system as Outstanding, with five of six sub-scales achieving the Outstanding threshold and only Novelty classified as Excellent. These results, interpreted individually, reveal a nuanced and data-grounded picture of the system's experiential quality.

Table 5. User Experience Results

UEQ Scale	Score	Results
Attractiveness	OM: +1.694 (Oustanding)	Encompasses that the items assessing whether the system is enjoyable, good, likeable, pleasant, attractive, and user-friendly (items 1, 12, 14, 16, 24, 25). The highest-scoring items were "good" (item 12: +2.667), "friendly" (item 25: +2.500), and "attractive" (item 24: +2.333), indicating that users hold strongly positive overall impressions of the

		system. The lowest-scoring item was "enjoyable" (item 1: +1.000) and "not annoying" (item 16: +0.833), suggesting that while the system is broadly well-regarded, its hedonic appeal remains moderate.
Perspicuity	OM: +1.541 (Oustanding)	Measures the system's clarity, learnability, ease of understanding, and freedom from complexity (items 2, 4, 13, 21). Item 4 ("easy to learn") scored the highest within this scale (+2.833), corroborating the SUS finding that 100% of respondents confirmed task completion capability and strong confidence in new-user learnability. Item 13 ("not complicated"/ simplicity), however, scored the lowest within the scale (+0.166), indicating that while the system is learnable, certain modules are perceived as moderately complex, a finding consistent with the SUS Item 2 result showing that 50% of respondents experienced some degree of feature-related confusion.
Efficiency	OM: +1.583 (Oustanding)	Captures the system's operational speed, practicality, efficiency, and organisational quality (items 9, 20, 22, 23). Item 9 ("fast") and item 23 ("organised") both scored strongly (+2.500), confirming that the system's automated calculation and integrated architecture deliver tangible time savings relative to the pre-existing fragmented workflow. Items 20 ("efficient") and 22 ("practical"), however, scored lower (+0.667 each), reflecting residual friction in certain operational.
Dependability	OM: +1.583 (Oustanding)	Assesses the system's predictability, supportiveness, security, and expectation-meeting quality (items 8, 11, 17, 19). Items 17 ("secure") and 19 ("meets expectations") scored identically at +2.500, indicating strong user confidence in system reliability and output accuracy. Notably, item 11 ("supportive" rather than obstructive) scored the lowest within the scale (+0.499), with 17% of respondents perceiving the system as occasionally obstructive. This finding warrants contextual interpretation, given that the system introduced mandatory validation steps and structured data entry constraints that did not exist in the previous workflow, a degree of perceived obstruction is theoretically expected during the initial adoption phase and is anticipated to diminish with continued use (Davis, 1989). The security item's strong score (+2.500) is particularly significant given that the system handles public trust funds, where perceived data security is directly linked to institutional *amanah* (Ghani et al., 2024).
Stimulation	OM: +1.833 (Oustanding)	Measures the system's motivating, creative, engaging, and exciting qualities (items 3, 6, 15, 18). Item 3 ("creative") scored +2.833, and item 18 ("motivating") scored +2.500, reflecting strong user recognition that the system introduces a genuinely novel and capability-enhancing solution to the institution's financial management challenges. Item 6 ("not boring") scored −0.168, indicating that a minority of respondents found the system's repetitive data entry tasks somewhat monotonous. This is an expected characteristic of transaction-recording systems rather than a design failure, but it nonetheless identifies an opportunity for automation enhancement in future iterations.
Novelty	OM: +1.208 (Excellent)	Assesses the system's inventiveness, interest, leading-edge quality, and innovativeness (items 5, 7, 10, 26). Items 5 ("valuable") and 10 ("inventive") scored strongly (+2.833 and +2.667 respectively), confirming that users recognise the system as a meaningful technological advancement over previous practice. Item 26

	("innovative" vs. "conservative"), however, scored −1.168, indicating that a substantial portion of respondents perceive the system's interface and interaction paradigm as relatively conventional. This finding is theoretically coherent, while the deployment of a cloud-based AIS in a previously manual institution is institutionally innovative, its operational interface does not radiate technological novelty to users. Item 7 ("interesting") scored +0.500, reflecting moderate but not exceptional visual engagement.

Source: Primary data processed by authors.

4.4 Discussion

The The empirical evidence for system integration is the most robust finding of this study. Data from SUS Item 5, where 100% of respondents confirmed navigational ease between functions, and the UEQ Efficiency scale mean of +1.583 (Outstanding) jointly confirm that the 21-component architecture successfully delivers the integrated financial management infrastructure mandated by Article 2 of Indonesian Law No. 23 of 2011. The validation status mechanism operationalizes the integration principle at the transactional level, ensuring that the chain of evidence—from individual transactions to consolidated financial reports—is internally consistent and traceable. This directly addresses the audit trail deficiencies that rendered pre-existing systems unfit for regulatory compliance (Amilahaq et al., 2021). Furthermore, the UEQ Efficiency scores for items 9 and 23 (both +2.500) confirm that users perceive the integrated architecture as genuinely time-saving and organizationally superior to the fragmented baseline. These findings align with Hadi et al. (2024) and Wahyudi et al. (2023), who document significant efficiency gains resulting from digital zakat system adoption. The findings regarding accountability are more nuanced. The SUS Item 6 contribution of 9.2/10 (the highest single-item score) and the UEQ Dependability scale mean of +1.583 (Outstanding) establish that the system provides the foundational conditions for accountable reporting: consistent behavior, predictable outputs, and high user trust in calculation accuracy. While these conditions are theoretically necessary, they are not sufficient for full accountability. True accountability requires not only capable system outputs but also confident, independent users who can produce, interpret, and endorse those outputs without external mediation (Nordin et al., 2020). The marginal SUS composite score of 64.17 and the findings from Item 4 indicate that full user autonomy has not yet been achieved. This introduces a significant dependency risk: should key technical personnel be unavailable, the system's accountability function may be interrupted. This reinforces the arguments of Febriandika et al. (2023) and Nasution et al. (2024), who demonstrate that accountability failures in zakat institutions often stem from human capital constraints rather than mere technical inadequacy.

Interpreted through the lens of Islamic Philanthropy Governance Theory (Ghani et al., 2024; Nordin et al., 2020), the system's UEQ profile maps directly onto core governance design principles. The Outstanding scores for Attractiveness (+1.694) and Stimulation (+1.833) reflect a user experience aligned with the pursuit of ihsan (excellence in institutional service). Similarly, the Outstanding Dependability score (+1.583), particularly regarding the security item (+2.500), demonstrates that users perceive the system as a trustworthy custodian of public funds (amanah). The Efficiency score (+1.583) further validates that the system advances the operational effectiveness central to Islamic governance frameworks. Conversely, the system's shortcomings—specifically the low score for Novelty (Item 26: −1.168) and the moderate score for Perspicuity (Item 13: +0.166)—correspond to a gap in the principle of justice in access; the system does not yet serve all user competency levels with equal facility. From a Maqashid Shari'ah perspective, the quantitative evidence supports contributions to three of the five primary objectives. The validation mechanism and audit-trail architecture directly serve hifz al-mal (preservation of wealth) by preventing fund misappropriation and calculation errors, as validated by the SUS Item 6 consistency data (83% reporting zero inconsistencies). The system's role in facilitating the orderly discharge of zakat obligations serves hifz al-din (preservation of religion), supported by the UEQ Stimulation scale's high creativity and value scores (both +2.833). Additionally, the UEQ Dependability item 16 (+0.833, "comfortable") and the SUS Item 5 navigational ease data collectively serve hifz al-nafs (preservation of wellbeing) by reducing the cognitive burden on amil users. However, the contribution to hifz al-'aql (preservation of intellect) is less established; the marginal SUS score and the technical dependency suggest that the system does not yet fully empower the intellectual autonomy of amil users in financial management.

The overarching argument of this study is supported but contextualized by the data. The conceptual-practice divide is bridged at the architectural level (integration achieved) and at the governance quality level (dependability and efficiency are Outstanding), but it is only partially bridged at the human capital level, where usability remains marginal and technical dependency persists. This finding advances the literature by challenging the framing of IT adoption as a binary governance solution (Nashirudin et al., 2025; Rahman et al., 2025). Instead, it highlights the critical role of sustained capacity building and iterative refinement in realizing the full potential of digital tools. The divergence between SUS and UEQ scores is theoretically significant: users find the system experientially valuable and organizationally beneficial, yet not fully ergonomically accessible. This suggests that the system's current governance contribution operates primarily through structural outputs (automated reports) rather than user empowerment—a distinction with important implications for future implementation strategies.

4. Conclusion and Recommendation

This study provides empirical evidence that a cloud-based accounting information system, developed through the ADDIE model, can substantively bridge the conceptual-practice divide in zakat governance, but with important qualifications. At the architectural level, the 21-component integrated system successfully operationalises the integration and accountability mandates of Indonesian Law No. 23 of 2011, as confirmed by the UEQ overall mean of +1.574 (Outstanding), with Stimulation (+1.833), Attractiveness (+1.694), Efficiency (+1.583), Dependability (+1.583), and Perspicuity (+1.541) all classified as Outstanding, and Novelty (+1.208) as Excellent. At the human capital level, however, the SUS composite score of 64.17 (SD = 8.32, Marginal), with 67% of respondents requiring technical assistance and 67% encountering operational errors, so these findings indicates that self-sufficient usability has not yet been fully achieved across the *amil* user. This SUS–UEQ divergence is itself a substantive finding, the system delivers outstanding governance value through its structural outputs, but has not yet sufficiently reduced the interaction barrier for users with heterogeneous digital competencies. Practically, the system provides a replicable governance infrastructure for zakat institutions seeking to operationalise *amanah* and accountability through digital means. Theoretically, this study extends the ADDIE model into Islamic philanthropy governance and advances the operationalisation of Islamic Philanthropy Governance Theory as an empirically testable framework. Future research should prioritise multi-institutional deployment to test scalability, interface redesign to address the Marginal SUS score, and longitudinal assessment to establish whether system adoption demonstrably improves zakat mobilisation outcomes.

References

Alfaatih, R. R., Br. Ginting, M. G., Br. Margolang, D. A., & Nofriadi, G. (2024). Konsep Maqashid Al-Syar'i Imam Al-Syathibi Dalam Studi Hermeneutika Al-Qur'an. *TAFAKKUR : Jurnal Ilmu Al-Qur'an Dan Tafsir*, *4*(2), 152–160. https://doi.org/10.62359/tafakkur.v4i2.229

Al-Fatih, S. (2020). Strengthening Baznas as The Society's Trusted Zakat Agency to Increase the Welfare of Ummah. *JURISDICTIE*, *11*(1), 106. https://doi.org/10.18860/j.v11i1.7841

Amilahaq, F., Wijayanti, P., Mohd Nasir, N. E., & Ahmad, S. (2021). Digital Platform of Zakat Management Organization for Young Adults in Indonesia. In L. Barolli, A. Poniszewska-Maranda, & T. Enokido (Eds.), *Complex, Intelligent and Software Intensive Systems* (Vol. 1194, pp. 454–462). Springer International Publishing. https://doi.org/10.1007/978-3-030-50454-0_46

Anami, A. K. (2024). Zakah as a social responsibility for small and medium enterprises (SMEs). *International Journal of Scholarly Research and Reviews*, *4*(1), 009–016. https://doi.org/10.56781/ijsrr.2024.4.1.0022

Bangor, A., Kortum, P. T., & Miller, J. T. (2008). An Empirical Evaluation of the System Usability Scale. *International Journal of Human–Computer Interaction*, *24*(6), 574–594. https://doi.org/10.1080/10447310802205776

BAZNAS. (2024). *Kajian Lanjutan: 37 Triliun Daftar Sasaran Prioritas Potensi Zakat On Balance Sheet 2025* (ON/12/DKPN/X/2024). Pusat Kajian dan Strategis (PUSKAS) Badan Amil Zakat Nasional (BAZNAS). https://www.puskasbaznas.com/publications/officialnews/1950-kajian-lanjutan-37-triliun-daftar-sasaran-prioritas-potensi-zakat-on-balance-sheet-2025

Beik, I. S., Swandaru, R., & Rizkiningsih, P. (2021). Utilization of Digital Technology for Zakat Development. In M. M. Billah (Ed.), *Islamic FinTech* (pp. 231–248). Springer International Publishing.

https://doi.org/10.1007/978-3-030-45827-0_13
Branson, R. K., Rayner, G. T., Cox, J. L., Furman, J. P., & King, F. J. (1975). *Interservice Procedures for Instructional Systems Development. Executive Summary and Model*.
Brooke, J. (1996). *SUS: A "quick and dirty" Usability Scale*. Taylor & Francis Ltd.
Creswell, J. W. (2015). *Penelitian Kualitatif dan Desain Riset* (3rd ed.). Pustaka Pelajar. (Original work published 2013, SAGE Publications Inc)
Creswell, J. W. (2018). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications.
Daud, M. Z., Mohd Noh, M. S., Fidhayanti, D., & Mat Hussin, M. N. (2025). Empowering Futures: Unveiling Zakat's Vital Role Economic Development and Legal Framework in Malaysia's. *Jurisdictie: Jurnal Hukum Dan Syariah*, *16*(1), 235–274. https://doi.org/10.18860/j.v16i1.31424
Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008
Evriyenni, E., Fahlevi, H., Indriani, M., & Yusuf, M. Y. (2025). Exploring Factors Influencing Zakat Compliance in Aceh: The Role of Institutional Trust and Religious Commitment. *Jurnal Ilmiah Peuradeun*, *13*(2), 1123–1152. https://doi.org/10.26811/peuradeun.v13i2.1478
Febriandika, N. R., Kusuma, D. G., & Yayuli, Y. (2023). Zakat compliance behavior in formal zakat institutions: An integration model of religiosity, trust, credibility, and accountability. *International Journal of ADVANCED AND APPLIED SCIENCES*, *10*(6), 187–194. https://doi.org/10.21833/ijaas.2023.06.022
Ghani, N. A. R. N. A., Alias, M. N., Alazemi, M. S. G. O., & Kamis, M. S. (2024). Implementation of Shariah Governance in the Charitable Sector: Challenges and Importance from an Islamic Perspective. *Pakistan Journal of Life and Social Sciences (PJLSS)*, *22*(1). https://doi.org/10.57239/PJLSS-2024-22.1.00503
Hadi, R., Shafrani, Y. S., Hilyatin, D. L., Riyadi, S., & Basrowi, B. (2024). Digital zakat management, transparency in zakat reporting, and the zakat payroll system toward zakat management accountability and its implications on zakat growth acceleration. *International Journal of Data and Network Science*, *8*(1), 597–608. https://doi.org/10.5267/j.ijdns.2023.8.025
Hastuty Hs, W., Agus, Salsabila, M., & Harahap, N. (2023). Penerapan Sistem Informasi Akuntansi. *Jurnal EMT KITA*, *7*(2), 317–324. https://doi.org/10.35870/emt.v7i2.891
Jadhav, N. P. (2024). Comparative Study: Cloud Computing. *International Journal of Advanced Research in Science, Communication and Technology*, 145–150. https://doi.org/10.48175/IJARSCT-15224
Laugwitz, B., Held, T., & Schrepp, M. (2008). Construction and Evaluation of a User Experience Questionnaire. In A. Holzinger (Ed.), *HCI and Usability for Education and Work* (Vol. 5298, pp. 63–76). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-89350-9_6
Lewis, J. R. (2018). Measuring Perceived Usability: The CSUQ, SUS, and UMUX. *International Journal of Human–Computer Interaction*, *34*(12), 1148–1156. https://doi.org/10.1080/10447318.2017.1418805
Ma'mun, M. (2020). Maqasid Al-Shari'ah Perspektif Abu Ishaq Al-Shatibi. *El-Faqih : Jurnal Pemikiran Dan Hukum Islam*, *6*(2), 1–17. https://doi.org/doi.org/10.58401/faqih.v6i2.178
Marlina, E., Purwaningsih, M., Siagian, A. H. A. M., Al Hakim, S., & Maryati, I. (2024). Ensuring Trustworthiness in Qualitative Research: The Role of Triangulation Techniques. In R. Throne (Ed.), *Advances in Library and Information Science* (pp. 347–376). IGI Global. https://doi.org/10.4018/979-8-3693-3069-2.ch012
Melissourgos, G., & Katsanos, C. (2025). UEQ-GR and UEQ-S-GR: Towards a Greek Adaptation of the User Experience Questionnaire and its Short Version. *Proceedings of the 3rd International Conference of the ACM Greek SIGCHI Chapter*, 203–211. https://doi.org/10.1145/3749012.3749059
Mell, P., & Grance, T. (2011). The NIST Definition of Cloud Computing. *U.S. Department of Commerce*.
Molenda, M. (2003). In search of the elusive ADDIE model. *Performance Improvement*, *42*(5), 34–36. https://doi.org/10.1002/pfi.4930420508
Mongkito, A. W., & Samdin, S. (2025). The Role of Zakat in Poverty Alleviation and Farmer Welfare; the Theoretical Review. *Journal of Global Innovations in Agricultural Sciences*, 285–296. https://doi.org/10.22194/JGIAS/25.1427
Mubarrak, H., Munir, B., & Achyar, G. (2023). Enhancing Productive Zakat Programs in Light of Maqasid Syariah: Chance and Challenge in Contemporary Aceh. *El Barka: Journal of Islamic Economics and*

Business, *6*(1), 1–25. https://doi.org/10.21154/elbarka.v6i1.6140

Muharromi, M., Basori, Moch., & Zahid, M. (2025). Digitalisasi Pengelolaan Zakat: Penguatan Transparansi dan Efisiensi dalam Keuangan Publik Islam. *JIESP: Journal of Islamic Economics Studies and Practices*, *4*(2). https://doi.org/10.54180/jiesp.2025.4.2.256-266

Mulyasari, R., Irvan, I., & Doly, M. (2023). *Pengembangan Bahan Ajar Bangun Ruang Sisi Datar dengan Model Addie (Sekolah Dasar)*. *14*(1). https://doi.org/10.61290/gm.v14i1.698

Mutmainah, S. (2023). Optimization Of Productive Zakat As An Effort To Empower The Economy Of The People. *EMPOWERING HUMANITY*, *1*(1), 38–53. https://doi.org/10.58765/emhum.v1i1.107

Nashirudin, Muh., Razali, R., & Ulfah, A. K. (2025). Modernizing Zakat and Waqf Management in Indonesia: A Legal And Governance Perspective. *Mazahib*, *24*(1), 198–220. https://doi.org/10.21093/mj.v24i1.9419

Nasution, A. A., Risanty, Kesuma, S. A., Agustrisna, J., Rangkuti, M. H. B., & Aziz, N. M. A. (2024). The Implementation of the Islamic Accounting Standard for Zakah, Infaq, and Shadaqah (ZIS) in Indonesia. In B. Alareeni & A. Hamdan (Eds.), *Navigating the Technological Tide: The Evolution and Challenges of Business Model Innovation* (Vol. 1083, pp. 444–456). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-67431-0_43

Nordin, N., Embong, R., Daud, N., Aziz, S. A., Salleh, S. F., Ismail, S. K., & Arifin, S. R. M. (2020). *Model of Shariah Governance for Empowering Islamic Non-Governmental Organisations in Humanitarian Mission*. *43*.

Nugraha, B. P., & Wanto, S. (2025). Transformation of the Meaning of Zakat, Infaq and Sadaqah: Contextualisation of the Quranic Semantic Approach. *Management of Zakat and Waqf Journal (MAZAWA)*, *7*(1), 72–97. https://doi.org/10.15642/mzw.2025.7.1.72-97

Nuntawisuttiwong, T., & Dejdumrong, N. (2024). Digital Educational Game for Learning Genetic Algorithm Using ADDIE Model. *2024 28th International Conference Information Visualisation (IV)*, 344–349. https://doi.org/10.1109/IV64223.2024.00066

Patton, M. Q. (2002). Two Decades of Developments in Qualitative Inquiry: A Personal, Experiential Perspective. *Qualitative Social Work*, *1*(3), 261–283. https://doi.org/10.1177/1473325002001003636

Prasetya, D. D., Fuady, M. J., Irianto, W. S. G., & Pratama, W. S. (2023). Perception Analysis of Web-based Thesis Management System using Short-User Experience Questionnaire (UEQ-S). *2023 9th International Conference on Education and Technology (ICET)*, 137–141. https://doi.org/10.1109/ICET59790.2023.10435202

Rahman, R. A., Sari, E. N., Radzi, S. H. M., Saragih, F., & Zakaria, N. B. (2025). Drivers Influencing the Usage Intention Towards Online Zakat Payment System: Evidence from Malaysia. *Bangladesh Journal of Multidisciplinary Scientific Research*, *10*(1), 1–10. https://doi.org/10.46281/bjmsr.v10i1.2280

Rashad Gahramanov, R. G. (2022). Implementation of Accounting Information Systems. *PAHTEI-Procedings of Azerbaijan High Technical Educational Institutions*, *18*(07), 103–111. https://doi.org/10.36962/PAHTEI18072022-103

Rejosumarto, M. A., & Bulut, M. (2024). Philanthropy: A Customary Practice to Meet Donor Expectations Lesson from Islamic NPOs in Indonesia. *European Scientific Journal, ESJ*, *20*(25), 58. https://doi.org/10.19044/esj.2024.v20n25p58

Schrepp, M., Hinderks, A., & Thomaschewski, J. (2017). Design and Evaluation of a Short Version of the User Experience Questionnaire (UEQ-S). *International Journal of Interactive Multimedia and Artificial Intelligence*, *4*(6), 103–108. https://doi.org/10.9781/ijimai.2017.09.001

Sikka, R., & Ojha, M. (2021). An Overview of Cloud Computing. *International Journal of Innovative Research in Computer Science & Technology*, 135–138. https://doi.org/10.55524/ijircst.2021.9.6.31

Siregar, F. R., Syahbudi, M., & Ilhamy Nasution, M. L. (2024). The Impact of Zakat Utilization and Business Financing on Welfare with Business Sustainability as a Moderating Variable (Case Study of BAZNAS Labuhanbatu Utara). *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi Dan Keagamaan*, *11*(2), 363. https://doi.org/10.29300/mzn.v11i2.4444

Sugiyono. (2023). *Penelitian Kualitatif, Kuantitatif, dan Mixed Method*. Alfabeta.

Umar Az-Zamakhsyari, A. A.-Q. M. ibn. (1998). *Al-Kassyaf 'an Haqaiq Ghawamidh At- Tanzil wa 'Uyun Al-Aqowil fi Wujuh At-Ta'wil (Tafsir Terjemahan)* (Vol. 4). Maktabah Al-'Abikan.

Umar Ibn Katsir, I. ibn. (1997). *Tafsir Al-Qur'an Al-Adzim (Tafsir Terjemahan)* (Vol. 1). Daar Thayyibah Li An-Nasyir wa At-Tauzi'.

UNHCR. (2024). *Islamic Philanthropy Annual Report Impact 2024*. United Nations High Commissioner for Refugees (UNHCR). https://zakat.unhcr.org/annualreport/annual-2024/

Utama, A. N. B., Hidayat, I., Mutia, R. D., Rasna, R., & Judijanto, L. (2025). Evaluation of Cloud-Based Financial Information System in Overcoming Company Liquidity Crisis. *International Journal of Engineering, Science and Information Technology*, *5*(2), 297–303. https://doi.org/10.52088/ijesty.v5i2.831

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward A Unified View1. *MIS Quarterly*, *27*(3), 425–478. https://doi.org/10.2307/30036540

Wahyudi, M. (2022). *Desain Kebijakan Tata Kelola Organisasi LAZ berbasis Zakat Core Principles: Studi pada LAZ di Jawa Tengah*. Universitas Airlangga.

Wahyudi, M., Iswanaji, C., & Nilasari, A. P. (2023). *Transformation of Zakat Management via Financial Technology: A Review of Fintech Implementation in Indonesian Zakat Institutions*. *10*(11).

World Bank and Islamic Development Bank. (2016). *Global Report on Islamic Finance: Islamic Finance: A Catalyst for Shared Prosperity?* World Bank. https://openknowledge.worldbank.org/handle/10986/25738

Zakiy, F. S., & Falikhatun, F. (2024). The role of intellectual capital on zakat performance: Insight from Indonesia. *Journal of Intellectual Capital*, *25*(5/6), 1006–1025. https://doi.org/10.1108/JIC-12-2023-0280

Zakiy, F. S., Falikhatun, F., & Fauziah, N. N. (2025). Sharia governance and organizational performance in zakat management organization: Evidence from Indonesia. *Journal of Islamic Accounting and Business Research*, *16*(6), 1034–1057. https://doi.org/10.1108/JIABR-06-2023-0188

Zhang, G. (2025). Cloud computing convergence: Integrating computer applications and information management for enhanced efficiency. *Frontiers in Big Data*, *8*, 1508087. https://doi.org/10.3389/fdata.2025.1508087

Journal of Islamic Finance, Vol. 15 No. 1 (2026) 144-161
IIUM Institute of Islamic Banking and Finance
ISSN 2289-2117 (O) / 2289-2109 (P)

Islamic Green Retail Investment in the Maldives: A Conceptual Integration of Behavioral and Institutional Perspectives

Ghifary Duyufur Rohman[a*], Salina Kassim[b]

[a,b] *Institute of Islamic Banking and Finance, International Islamic University Malaysia, Kuala Lumpur, Malaysia*

**Corresponding author: ridhoghifarydr@gmail.com*

Abstract

The Maldives faces a dual challenge of severe environmental vulnerability and limited financial market depth, making the development of Islamic green investment particularly critical. Despite rising awareness of sustainability and Islamic finance, existing green initiatives remain largely concentrated in the business and resort sectors, while retail investor participation requires significant enhancement. This study develops a conceptual framework that integrates institutional theory with the theory of planned behavior (TPB) to explain retail investors' intentions toward Islamic green investment. The study utilizes an intensive literature review combined with a systematic literature review (SLR) based on the PRISMA guidelines to systematically identify recurring themes and theoretical patterns, thereby strengthening the proposed model. The findings provide valuable insights for policymakers, corporations, and government institutions in promoting environmentally responsible practices that enable adaptation and resilience to climate change while ensuring long-term sustainability. The Maldives presents a unique setting for this framework compared to other countries, as its small market size, strong Islamic identity, and acute climate risks highlight the urgent need to align institutional forces with individual investment behavior.

Keywords: Sustainable Finance; Islamic Green Investment; Behaviour Economic; Institutional Theory

1. Introduction

The Maldives is a small island nation with a predominantly Muslim population. As a Muslim-majority country, Islam serves as the state religion and forms the foundation for all legislative and regulatory frameworks within the nation. Nevertheless, despite the constitutional emphasis on Islamic principles, interest-based (*riba*) financial systems continue to exist within the broader economic structure (Shujau et al., 2022). In recent years, the Maldives has taken steps to develop its Islamic financial infrastructure. The Islamic capital market in the country is regulated by the Capital Market Development Authority (CMDA), established under the Maldives Securities Act. To ensure adherence to Shariah principles, the CMDA also established a Shariah Advisory Committee, now known as the Shariah Advisory Council, which provides guidance on Islamic financial activities and compliance matters (Muneeza, 2018). Although the CMDA has made commendable progress in establishing the foundation for an Islamic capital market, the development of Islamic finance in the Maldives remains in its early stages. Research in this area is still limited, and several key challenges persist, including a general lack of awareness among industry stakeholders, a small number of market participants, the absence of secondary market liquidity, weak Shariah governance frameworks, limited incentives, and various legal and institutional barriers that constrain growth (Muneeza, 2018; Shujau et al., 2022). Addressing these issues is

Article history
Received: 23 January 2026
Accepted: 27 March 2026

essential to strengthen the Maldives' Islamic financial ecosystem and enhance its alignment with global standards of Islamic finance and sustainable investment.

Additionally, the impact of climate change, natura l disasters, and environmental degradation—particularly those driven by human activities such as global temperature rise, carbon emissions, and marine pollution—has become increasingly severe in recent years (Monasterolo & de Angelis, 2020; Y. Wang et al., 2024). For small island nations like the Maldives, the consequences of climate change are not merely environmental concerns but existential threats. The country's geographic characteristics—low elevation, dispersed islands, and heavy reliance on marine and coastal resources—make it one of the most climate-vulnerable nations in the world. Rising sea levels, saltwater intrusion, coral bleaching, and the loss of coastal land pose direct risks to livelihoods, biodiversity, and the nation's long-term sustainability (World Bank, 2024). Given this reality, green investment has emerged as a crucial strategy for the Maldives to strengthen environmental resilience and transition toward a sustainable economy. Green investments, such as renewable energy projects, sustainable tourism infrastructure, waste management systems, and Islamic green finance instruments, play a vital role in addressing both climate adaptation and mitigation needs. Furthermore, as a nation that depends heavily on tourism and fisheries, integrating green finance mechanisms is essential for maintaining economic stability and protecting natural assets. The government's initiatives, such as the Maldives Green Fund and Green Tax Scheme, reflect growing institutional support for sustainable investment and environmental conservation (ESMF, 2021; Ministry of Tourism and Environment Republic of Maldives, 2025). These frameworks not only channel resources into environmental protection programs but also create opportunities for Islamic finance instruments to support climate-resilient development. However, although several efforts have been made to develop the green sector, the Maldives continues to face significant fiscal challenges and investment gaps that constrain its pathway toward sustainable development. Fiscal issues remain: nearly 67% of the national budget in 2022 was allocated to recurrent expenditures, of which 44% went to public sector salaries, subsidies, and welfare programs, severely limiting the fiscal space available for capital investment. In addition, the Maldives is burdened by a high level of public debt, with debt repayments projected to surge to approximately USD 600 million by 2026 (UNDP, 2022a, 2022b).

Moreover, the country exhibits an unsustainable pattern of credit allocation. Banking data from the Maldives Monetary Authority (MMA) indicate that the majority of bank lending has been directed toward traditional infrastructure development, such as resorts and commercial real estate, while only 1.36% has been allocated to green and blue economic activities (UNDP, 2022a). This financing gap, coupled with limited fiscal space, underscores the importance of private financing as a primary solution. Therefore, enhancing the participation of Islamic green investors is crucial to mobilize the ethical and impact-oriented capital required to finance the Maldives' green transition in the coming years. To identify effective strategies for attracting such capital, this study proposes a conceptual framework based on two main theories: (1) institutional theory, which examines how the external environment, including norms, regulations, and legal systems, shapes organizational and investor behavior and decision-making. In the context of Islamic green investment, this theory helps explain how various external pressures influence investors' intentions to participate in Islamic green initiatives; and (2) the theory of planned behavior (TPB), which focuses on internal factors and individuals' intentions to perform certain behaviors. Within this framework, the TPB is employed to identify the key drivers that directly influence investors' intentions, such as attitude, perceived behavioral control (PBC), and subjective norms. By understanding these drivers through the integration of institutional theory and the TPB, policymakers and regulators can better design targeted interventions, such as fiscal incentives, the development of Shariah-compliant green Sukuk products, and the strengthening of regulatory frameworks to enhance investor interest and intention. Ultimately, these efforts aim to create a market environment that is both conducive and psychologically appealing to Shariah-compliant investors, thereby facilitating a large-scale redirection of private capital from traditional sectors toward blue and green economic sectors that are essential for the Maldives' long-term sustainability.

2. Literature Review

2.1 Institutional Theory

Institutional theory explains how external pressures—such as regulations, social norms, and value systems—shape the behavior and decision-making processes of organizations and individuals (Scott, 2014). In the context of developing countries such as the Maldives, this theory is particularly relevant for understanding how institutional structures, fiscal policies, and legal systems influence investor behavior, especially in the realm of sustainable finance. According to Meyer and Rowan (1977) and Scott (2014), institutions consist of three fundamental pillars: the regulative, normative, and cultural-cognitive pillars. The regulative pillar refers to rules, laws, and sanctions that control behavior; the normative pillar concerns shared values, professional standards, and norms that dictate appropriate conduct; and the cultural-cognitive pillar encompasses shared meanings, symbolic systems, and common understandings that shape institutional behavior, such as belief systems and rationalized knowledge. These three institutional dimensions act as key forces that encourage organizations and individuals to conform to external expectations in order to gain legitimacy within the market (DiMaggio & Powell, 2000). In the context of a small island economy like the Maldives, institutional pressures play a crucial role, as the country remains highly dependent on fiscal policy, international support, and government regulation to drive its green economic agenda. However, weak fiscal capacity and the absence of a robust policy framework for Islamic green finance have limited the potential of Islamic investors to contribute effectively to sustainable development financing (Muneeza, 2018; Shujau et al., 2022).

Furthermore, social norms and the strong religiosity of the predominantly Sunni-Muslim population in the Maldives can create moral pressure on investors to channel their capital toward projects aligned with sustainability principles and the objectives of *maqasid al-shariah*. Previous studies have shown that social norms and religiosity significantly influence individuals' financial and investment decisions, suggesting that moral and cultural contexts can be powerful determinants of behavior in Islamic finance (Ali, 2016; Othman et al., 2017; Rehman & Shabbir, 2010; Shukor & Jamal, 2013). Therefore, institutional theory provides a valuable framework for understanding how institutional systems and external pressures shape green investment behavior in the Maldives. However, to fully comprehend investors' actual intentions and decisions to participate in Islamic green investment, it is essential to complement this perspective with a theory that captures internal psychological factors, such as perceptions, attitudes, and behavioral control. Consequently, combining institutional theory with the theory of planned behavior (TPB) offers a more comprehensive understanding of the multifaceted determinants influencing Shariah-compliant investors' participation in the Maldives' green transition.

2.2 Theory of Planned Behavior

The theory of planned behavior (TPB), developed by Ajzen (1991), posits that an individual's intention to perform a particular behavior is influenced by three key components: attitude toward the behavior, subjective norms, and perceived behavioral control (PBC). In the context of Islamic green investment in the Maldives, the TPB is relevant for explaining how individuals' beliefs shape their investment intentions. The TPB framework encompasses these three primary dimensions—attitude, subjective norms, and perceived behavioral control—that collectively determine behavioral intention. This theory has been extensively applied and further developed to examine internal psychological factors influencing financial behavior, including those within the field of Islamic finance (R. R. Ahmed et al., 2019; Ashraf, 2023; Duyufur Rohman & Al-Shaghdari, 2025; Ismail, 2024). Numerous studies have utilized the TPB to investigate the factors driving individuals' participation in Islamic banking, zakat payment, and responsible investment, confirming its robustness as a behavioral framework in predicting intention and action in ethical financial contexts. Integrating the TPB with institutional theory provides a more comprehensive understanding of both external and internal determinants that influence investor decision-making in the Maldives. Institutional theory explains how regulations, norms, and social pressures form the external framework that guides behavior, whereas the TPB highlights the internal psychological and perceptual dimensions that shape individual decision-making processes. Thus, the combination of these two theoretical perspectives offers a multidimensional lens for understanding Islamic green investment behavior. It enables policymakers and regulators in the Maldives to design more effective strategic interventions—such as fiscal incentives, green financial education, and the strengthening of Shariah-compliant regulatory frameworks—to enhance the motivation and participation of Islamic investors in sustainable investment initiatives.

2.3 Islamic Green Finance Development in the Maldives

Being a country that relies heavily on tourism and marine-based industries, the Maldives faces an urgent need for substantial climate financing (World Bank, 2024). Its geographic exposure to climate change, compounded by fiscal constraints and rising public debt, limits the government's capacity to fund green transition initiatives through national budgets (UNDP, 2022a). In this context, the emergence of global Islamic green finance represents a pivotal mechanism to fill this financing gap, as conventional banking channels continue to favor traditional infrastructure investments—such as resorts and real estate—rather than financing green or blue projects, including eco-friendly hotels and sustainable tourism development (UNDP, 2022a, 2022b). The advancement of Islamic finance in the Maldives has been relatively significant, promoted by the nation's Islamic identity and international acknowledgment of its financial system (Ministry of Finance and Planning, 2024). For example, the Bank of Maldives (BML), through its Islamic subsidiary, has introduced green financing products designed to assist individuals and enterprises in funding environmentally responsible projects, such as solar power systems and energy-efficient equipment. These facilities generally require equity participation and collateral, and they offer long-term repayment periods.

Such initiatives illustrate a growing institutional awareness of the need to harmonize Shariah principles, which prohibit interest (*riba*) and promote social justice, with environmental sustainability objectives (Muneeza, 2018; Shujau et al., 2022). However, several challenges continue to hinder progress. The range of viable green investment opportunities remains narrow, regulatory frameworks for Islamic financial instruments have yet to fully incorporate sustainability dimensions, and the pool of skilled professionals in the field remains limited (Muneeza, 2018; Shujau et al., 2022). Furthermore, public awareness and stakeholder engagement regarding green Islamic finance are still developing. The broader Islamic financial ecosystem, including the Islamic capital market, is also less mature compared to its conventional counterpart (Shujau et al., 2022). At the policy level, the Maldivian government has outlined a long-term strategic vision aimed at transforming the nation into a regional hub for Islamic finance, supported by ongoing digital economic transformation (The President's Office, 2025). This strategic orientation is instrumental in fostering a robust Islamic green finance ecosystem, ranging from regulatory support for Islamic green investments, such as green Sukuk issuance, to the establishment of a Shariah-compliant carbon market. Collectively, these efforts are expected to attract both domestic and international capital flows that are essential for financing climate change mitigation and adaptation projects in the Maldives.

3. Research Methodology

To build a robust and well-grounded framework, this study used a two-stage qualitative synthesis. Stage 1: Intensive Literature Review (ILR). In this stage, NVivo software was used to analyze the foundations of the theory of planned behavior (TPB) and institutional theory. Rather than just summarizing, this stage focuses on theoretical derivation, stripping these theories down to their cores to see how they can be effectively integrated into a single, cohesive model for the Maldivian context. Stage 2: Systematic Literature Review (SLR). This stage acts as a stress test for our model. Using a systematic literature review (SLR) guided by the PRISMA protocol, the study systematically scans existing empirical studies. The goal is to find evidence that supports (or challenges) the proposed paths between the constructs. This stage ensures that the conceptual model is not just theoretical but firmly rooted in empirical reality. In Stage 1, this study adopts a qualitative-exploratory approach focusing on developing a conceptual framework that integrates various factors influencing retail investors' intentions toward Islamic green investment in the Maldives. This approach was chosen because green investment lies at the intersection of institutional policy and individual behavior, necessitating an in-depth theoretical exploration.

The primary method employed is an intensive literature review (ILR). This process is conducted to identify conceptual patterns, recurring variables, and established causal relationships in prior studies (Webster & Watson, 2002). The reviewed sources include leading academic books and journals in the fields of Islamic finance, sustainable finance, and behavioral finance, as well as policy reports from international institutions such as the UNDP and the World Bank that are relevant to the Maldivian context. The stage of literature analysis and theory construction employs both deductive and inductive approaches. The deductive approach is used to elaborate and adapt existing theories to the context of Islamic green investment in small island nations, while the inductive approach is applied to develop new concepts based on emerging empirical patterns and findings from the literature within local communities that affect Islamic green investment intentions (Babbie, 2013).
Subsequently, theoretical modeling is undertaken by deconstructing each theory into its core components and integrating them to form a coherent and contextually grounded conceptual framework (Babbie, 2013). In this regard, institutional theory is utilized to map the antecedents of the external environment, namely: regulative

pressures (government regulations and Shariah compliance), normative pressures (influence of religious scholars and social expectations), and cognitive pressures (religiosity, financial literacy, and green knowledge). These institutional pressures are hypothesized to influence the behavioral determinants in the TPB framework, consisting of attitude, subjective norms, and perceived behavioral control. Through the integration of deductive and inductive reasoning, this study seeks to explain how the institutional structures and socially embedded religious norms of the Maldives shape investors' perceptions, attitudes, and intentions toward Islamic green investment. The outcome is an integrative conceptual framework that presents detailed hypotheses suitable for empirical testing in future research.

In the second phase, a systematic literature review (SLR) governed by the PRISMA protocol is conducted to provide empirical support to the proposed conceptual framework. This stage acts as a validation process, systematically identifying and filtering empirical studies that examine the intersections of Islamic finance, green investment, and institutional drivers (Page et al., 2021). The search was executed through the Google Scholar database, utilizing a strategic combination of keywords, including: ("Green Investment" OR "Islamic Green Investment") AND ("Theory of Planned Behavior" OR "Behavioral Theory") AND "Institutional Theory". To ensure methodological rigor and transparency during the screening process, the systematic review tool Rayyan was employed for the initial identification and screening process. Starting from an initial pool of 201 documents, the process followed strict inclusion and exclusion criteria, including a quality assessment of the methodology and contextual relevance, resulting in a final selection of 24 documents for in-depth synthesis. The detailed screening process is illustrated in Figure 1.

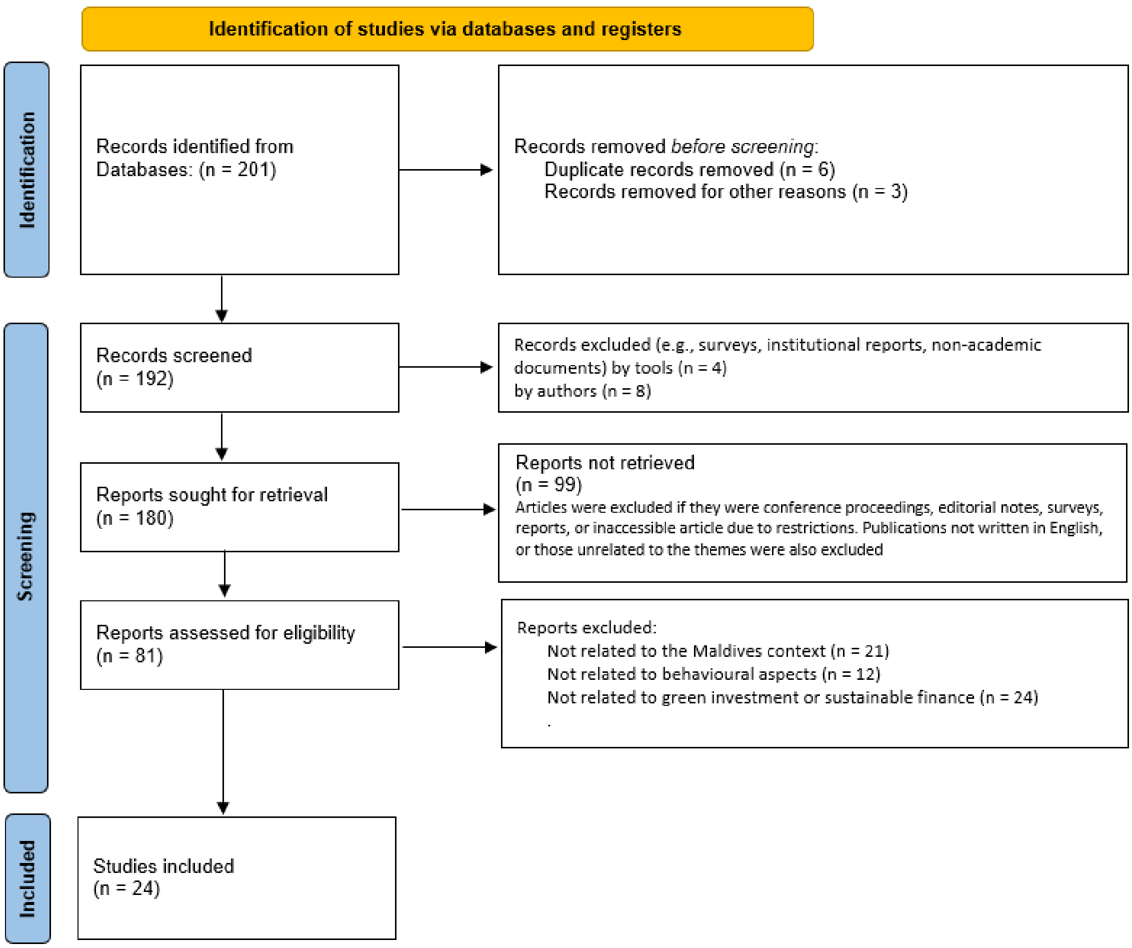


Figure 1. PRISMA FLOW (2020)

This systematic refinement is critical to support the hypothesized relationships between institutional pillars and behavioral constructs, ensuring that the integrated model transcends purely theoretical postulation to become an empirically grounded framework anchored in diverse, real-world evidence**.**

4. Data Analysis

This study employs a qualitative, theory-driven data analysis approach using NVivo 12 software to support the systematic development of a conceptual framework for Islamic green retail investment in the Maldives. NVivo is utilized to enhance analytical rigor by enabling the structured coding, comparison, and synthesis of academic literature and institutional reports relevant to Islamic finance, green finance, and investor behavior. The data analyzed consist of peer-reviewed journal articles, policy documents, and reports published by international financial institutions and regulatory bodies. These sources were selected based on their relevance to Islamic finance, sustainable investment, behavioral finance, and institutional frameworks. NVivo facilitates cross-source comparison and pattern recognition, allowing the study to systematically identify convergent themes and theoretical linkages across diverse literature streams. The resulting framework is not based on statistical estimation but on theoretically grounded synthesis and analytical reasoning.

To operationalize this synthesis, the analysis followed a systematic, three-stage coding process. First, an open coding process was applied to extract and consolidate key variables and recurring concepts from both academic and contextual sources (Bazeley & Jackson, 2013). These identified concepts related specifically to behavioral factors (attitude, personal norms, perceived behavioral control) and institutional influences (regulatory support, legitimacy, technological infrastructure). Second, axial coding was utilized to organize these variables into higher-order categories aligned with the TPB and institutional theory, allowing for the examination of their interrelationships. Finally, selective coding was undertaken to integrate these behavioral and institutional constructs into a coherent conceptual framework explaining retail investors' intentions to invest in Islamic green finance. Analytical rigor is ensured through this systematic coding procedure supported by NVivo, which minimizes researcher bias and enhances consistency in theme identification. Additionally, construct validity is achieved by grounding each construct in established theories and prior empirical studies, while content validity is ensured through a comprehensive coverage of behavioral, institutional, and Islamic finance dimensions. Figure 2 presents the overall methodological and analytical process of the study, illustrating the stages of qualitative synthesis and theory integration leading to the development of the proposed conceptual framework (Creswell, 2014).

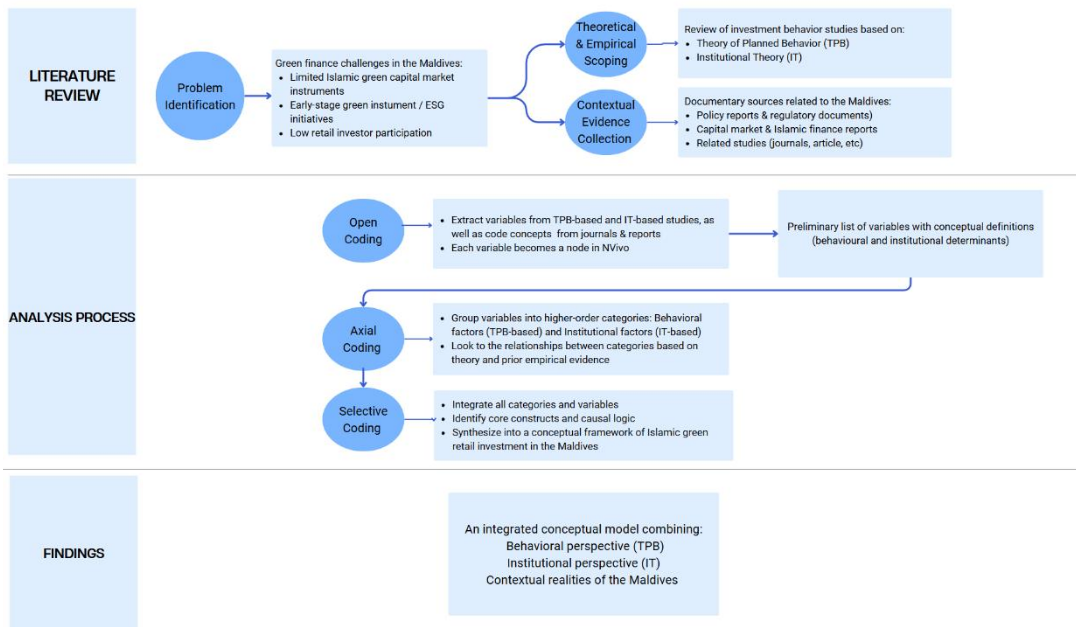


Figure 2. Qualitative Research and Conceptual Framework Development Process

5. Results and Discussion

Based on the multi-stage qualitative synthesis process outlined earlier, this study integrates insights derived from prior empirical studies, theoretical frameworks, and contextual evidence related to Islamic green finance in the Maldives. Through systematic coding and thematic integration of constructs drawn from the TPB and Institutional Theory, the analysis identifies key behavioral, normative, and institutional dimensions shaping retail investors' engagement with Islamic green investment instruments. Accordingly, the study proposes an integrated conceptual framework that captures the interaction between individual-level behavioral mechanisms and broader institutional forces influencing Islamic green retail investment decisions, as illustrated in Figure 3.

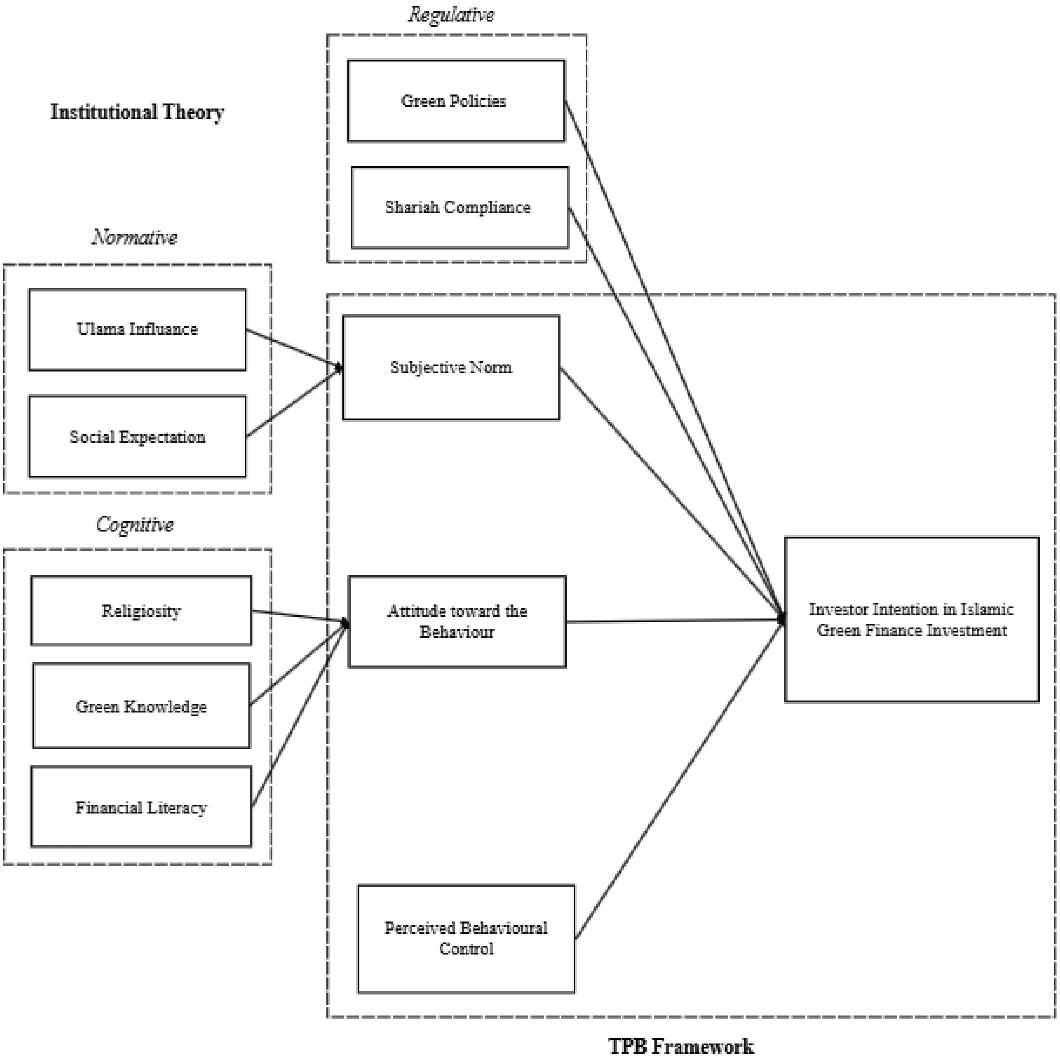


Figure 3. Proposed Conceptual Framework

Theoretical Framework: Integrated TPB and Institutional Theory

Since the primary objective of this study is to enhance retail investor participation, the TPB is adopted as the foundational theoretical framework to explain investor intentions toward Islamic green finance. TPB is particularly suited for analyzing individual decision-making, as retail investment participation is driven by a combination of psychological evaluations, social pressures, and the capacity to act. Consequently, investor intention is positioned as the primary dependent variable, while attitude toward the behavior, subjective norms, and perceived behavioral control (PBC) serve as the core mediating constructs that translate internal and external factors into behavioral intention (Ajzen, 1991; Ajzen & Fishbein, 1980).

To complement the TPB, the study integrates Institutional Theory through its pillars (regulative, normative, and cultural-cognitive) to explain the systemic forces shaping the intention to invest. Under the normative pillar, the influence of religious scholars (Ulama) and social expectations represents religious authority and societal pressures that define socially and religiously appropriate investment behavior. These variables are hypothesized to positively influence subjective norms, reflecting the degree to which retail investors feel pressured or expected by significant others to participate in Islamic green investment (Oman et al., 2019). In turn, subjective norms are proposed to exert a direct positive effect on investment intention. This suggests a mediated relationship where institutional religious legitimacy and social endorsement do not drive intention directly, but operate indirectly by shaping the individual's perceived social pressure.

The framework introduces the cultural-cognitive dimension to explain how internal awareness and internalized knowledge influence investment attitudes. Religiosity, green knowledge, and financial literacy are proposed as antecedents to attitude toward the behavior (Kurniawan & Fadhilla, 2024; Rahayu et al., 2024; Uikey et al., 2025). Specifically: (1) Religiosity reflects the alignment between investment decisions and Islamic ethical responsibilities (Oman et al., 2019), and (2) Green knowledge captures environmental awareness and sensitivity. Financial literacy represents the investor's technical understanding of Islamic financial products. These cognitive factors are hypothesized to positively shape an investor's evaluation of Islamic green finance, fostering a more favorable attitude. Consistent with TPB, attitude acts as a critical mediator, transmitting cognitive beliefs into a stronger behavioral intention

Finally, the framework incorporates regulatory institutional factors, specifically green policies and Shariah compliance, reflecting the regulative pillar. These variables are proposed to influence investor intention directly by enhancing institutional legitimacy, reducing market uncertainty, and building trust. Strong regulatory support signals government commitment (Sindra, 2014), while Shariah compliance assurance mitigates religious and ethical ambiguity for Muslim investors (Oman et al., 2019; Timur et al., 2025). Thus, PBC is hypothesized to exert a direct effect on intention and bolstering investor confidence in executing the behavior.

The proposed conceptual framework positions TPB constructs as central mediators linking macro-institutional pressures and micro-cognitive factors to investor intention. Normative forces shape intention through the formation of subjective norms; cognitive awareness operates through the development of favorable attitudes; and regulatory support enhances intention by providing direct institutional legitimacy.

The detailed relationships between these variables are further elaborated in the following sections:

H1a: Green policies positively influence subjective norms toward Islamic green investment.

Public policies and regulatory frameworks play a vital role in fostering the development of green markets by providing legal certainty, incentives, and technical guidance for ESG disclosures. Fatemi (2018) argue that ESG regulations and government involvement enhance disclosure transparency and attract institutional investors. Several studies have also identified environmental regulation as a key predictor of green participation. For instance, Feng et al., (2025) found that government environmental regulation significantly strengthens Green Consumer Orientation (GCO) and positively influences green purchase intention. Similarly, Wu and Wu (2025) demonstrated that participatory environmental regulations substantially reduce carbon emission intensity in China. Governments are therefore encouraged to promote green behaviour among citizens by introducing measures such as proper waste management, green project initiatives, and green investment awareness campaigns, all of which should be supported by broad policy dissemination, incentive structures, and legal integration (Li et al., 2019; Sindra, 2014; Tian et al., 2019; J. Wang et al., 2018). Findings from Timur et al. (2025) also indicate that authority support plays a significant role in shaping Indonesian Muslim investors' intention to invest in green sukuk.

However, there is also a study reporting that policy support has a limited influence, particularly when regulatory interventions lack clear specifications, practical implementation mechanisms, and tangible institutional support that directly facilitates user engagement (Basaglia et al., n.d.; Islam et al., 2024).

In the context of the Maldives, environmental regulation and policy implementation have been relatively progressive. The Maldives Green Fund, for example, allocates financial resources to support environmental, social, and preservation programs in protected areas and local communities, including initiatives on climate advocacy and capacity building (Ministry of Tourism and Environment Republic of Maldives, 2025). Additionally, the country imposes a Green Tax on tourist accommodations and vessels, with revenues channeled toward environmental conservation through the Green Fund. Furthermore, comprehensive regulatory frameworks such as the Environment Protection and Preservation Act and the mandatory Environmental Impact Assessment (EIA) laws ensure that development projects undergo environmental risk assessments before approval, reinforcing the nation's commitment to sustainable development and environmental stewardship (ESMF, 2021). Additionally, the integration of sustainability policies and operational tourism practices that involve tourists directly in environmental conservation enhance ecological awareness and contribute to scalable environmental restoration outcomes in marine tourism destinations.

H1b: Shariah compliance positively influences subjective norms toward Islamic green investment.

Shariah compliance refers to customers' perceptions that financial transactions are conducted in accordance with Islamic principles, free from prohibited elements such as *riba, maysir* (gambling), and *gharar* (excessive uncertainty) (Kaakeh et al., 2019). It has been widely recognized as a major determinant influencing customers' choices of Islamic financial products and services (Jan & Shafiq, 2021; Kaakeh et al., 2019; Lee & Ullah, 2011;Oman et al., 2019). However, contrary evidence also exists; for instance, Jamshed and Uluyol (2024) found that Shariah compliance had neither a direct nor an indirect influence on individuals' intention or actual behaviour to adopt Islamic financial products, suggesting that its impact may vary across contexts or levels of financial literacy.

In the context of the Maldives, the relevance of Shariah compliance becomes even more prominent. As a country with huge Muslim population adhering to Sunni Islam, Shariah principles underpin not only religious life but also institutional governance (Office of International Religious Freedom, 2022). From the perspective of Institutional Theory, as proposed by DiMaggio and Powell (1983) and later expanded by Scott (2005), these regulatory and normative pressures function as institutional forces that shape both organizational and individual behaviour.

H2a: Ulama influence has a positive effect on subjective norms toward Islamic green investment.

One of the key determinants shaping subjective norms is the influence of significant referent individuals, such as family members, peers, community leaders, and religious scholars (Ajzen, 1991; Ali, 2016). In the context of Islamic financial behaviour, religious leaders and scholars play a vital role in shaping perceptions and guiding financial decision-making. Gustina (2025)found that the opinions and fatwas issued by ulama significantly contribute to the formation of Islamic financial intentions and behaviours, particularly by enhancing public trust and adherence to Shariah principles in investment practices. This finding underscores that religious authority not only act as sources of doctrinal guidance but also as normative agents that shape social expectations and encourage ethical financial conduct aligned with Islamic values.

In the context of the Maldives, the influence of ulama and religious leaders is particularly salient due to the nation's tightly knit, community-based social structure and high level of religiosity. As a predominantly Sunni Muslim society, local scholars (ulama) are widely respected and serve as key opinion leaders in both spiritual and socio-economic matters (Ministry of Youth, 2023)

H2b: Social expectations positively influence subjective norms toward Islamic green investment

Social expectation or social pressure represents one of the central components shaping subjective norms, as it reflects individuals' perceived expectations from important social groups or communities to engage in certain behaviours (Ajzen, 1991). Within the TPB, subjective norms capture this social influence by illustrating how individuals conform to the perceived approval or disapproval of others in their decision-making processes. Several studies have emphasized that social pressure, manifested through family, peers, and societal expectations, can significantly affect pro-environmental and ethical financial intentions. For instance, Hemdan and Zhang (2024) revealed that subjective norm, as a form of social pressure, has a positive and significant impact on individuals' intention toward green investment, demonstrating that social acceptance and community endorsement play a decisive role in encouraging sustainable financial behaviour.

In the case of the Maldives, where communal ties and social cohesion are deeply embedded in the culture, social pressure is a powerful motivator in shaping behavioural norms. Maldivian society is characterized by strong interpersonal networks and a high degree of collectivism, where individuals' actions are often influenced by the opinions and expectations of their close communities and religious leaders (Ministry of Youth, 2023; Office of International Religious Freedom, 2022).

H3a: Religiosity has a positive influence on investors' attitudes toward Islamic green investment.

Religiosity refers to a system of beliefs and practices related to sacred matters that shape an individual's understanding of human relationships and moral responsibilities. It reflects the degree of one's commitment to religious teachings and principles, which is often demonstrated through attitudes, behaviours, and decision-making processes (Faisal et al., 2023; Keshminder et al., 2021). Within the framework of Islamic religiosity and financial behaviour, Islam places strong emphasis on personal accountability and moral responsibility for every action and decision made in this world, with the belief that all deeds will be judged in both this life and the hereafter (Sabiq, 1983).

Empirical studies have consistently demonstrated a significant association between religiosity and financial behaviour among Muslims (K. Ali, 2016; Oman et al., 2019; A. Rehman & Shahbaz Shabbir, 2010) Theoretically, Muslims are inclined to choose financial products that comply with Islamic principles and ethical values (Rehman, 2010). For instance, Ali (2016) found that religiosity serves as a key determinant in shaping individuals' preferences and decision-making when purchasing financial products. Moreover, some empirical studies have even found that religiosity as the strongest predictor of intention to invest in Islamic investments (A. I. Ahmed & Nizam, 2019; Oman et al., 2019). This underscores that religiosity have a considerable influence on individuals' decisions to engage in Islamic green investments particularly relevant in the context of the Maldives, where the population is predominantly Sunni Muslim (Office of International Religious Freedom, 2022).

H3b: Green knowledge positively influences investors' attitudes toward Islamic green investment.

Green knowledge is defined as an individual's comprehension of environmental concepts, issues, and actions that contribute to environmental protection and sustainability (Otto & Pensini, 2017) Based on previous studies, green knowledge plays a crucial role in shaping individual behaviour, including sustainable investment decisions. Numerous studies have confirmed that action-related environmental knowledge, often referred to as green knowledge, is one of the key determinants of pro-environmental behaviour (Crohn & Birnbaum, 2010; Otto & Pensini, 2017; Zsóka et al., 2013)

Empirical evidence from several case studies also demonstrates that environmental knowledge influences green purchase intentions both directly and indirectly (Faisal, Gunawan, Cupian, Hayati, Apriliadi, & ..., 2023; Haryono, 2021; Indriani et al., 2019; Rahayu et al., 2024). Rahayu (2024) highlights that environmental attitude acts as a mediating factor between environmental knowledge and green buying intention, indicating that knowledge not only shapes awareness but also strengthens attitudes that lead to environmentally responsible behaviour. Similarly, Indriyani (2019) found that while environmental knowledge does not have a significant direct effect on consumers' green purchase intention, attitude fully mediates the relationship between environmental knowledge and green financial behaviour.

Building upon these findings, this study integrates green knowledge as one of the key variables influencing intention to invest in Islamic green finance, with attitude serving as a mediating variable. This conceptualization aligns with the TPB framework, which has been widely adopted in similar studies to explain how knowledge, attitude, and perceived behavioural control jointly shape behavioural intention toward sustainable and ethical financial practices.

H3c: Financial literacy positively influences investors' perceived behavioural control over Islamic green investment.

Financial literacy represents a cornerstone of sound investment decision-making, as it equips individuals with the capability to evaluate risks, returns, and product suitability (Lusardi & Mitchell, 2014). According to Kasri & Chaerunnisa (2021), awareness and comprehension of Islamic financial instruments, when reinforced by trust and religiosity, significantly enhance people to engage Islamic financial products. Moreover, financial literacy serves as a vital enabler of green investment participation, where environmental, social, and governance (ESG) dimensions are embedded within financial decision-making frameworks. Empirical evidence indicates that sustainable finance literacy increases households' probability of channelling their assets into eco-friendly instruments by reducing the sense of complexity that often hinders green market involvement (Anderson & Robinson, 2022; Lusardi & Mitchell, 2014; K. Rehman & Mia, 2024).

Additionally, Madjid (2023), in his investigation of Indonesia's MSME engagement with green sukuk, revealed that both green knowledge and financial literacy foster favourable investor attitudes toward sustainable investment. These attitudes, in turn, mediate the relationship between literacy and investment intention, suggesting that financial literacy shapes behaviour by cultivating positive cognitive and emotional evaluations of investment opportunities.

In the Maldivian context, the advancement of financial literacy is particularly vital. Strengthening public literacy concerning Islamic and green financial mechanisms, such as ESG reporting standards, product structures, and risk management practices, can empower individuals with greater confidence, ultimately encouraging broader participation in Islamic green investment initiatives.

H4a: Attitude toward the behaviour positively influences investors' intention to invest in Islamic green financial instruments.

Within the framework of the TPB, attitude refers to an individual's overall evaluation of a specific behaviour, which may be either favorable or unfavorable (Ajzen, 1991). In the context of pro-environmental behaviour, numerous studies have demonstrated that a positive attitude significantly influences individuals' intentions and actions toward sustainable practices such as using eco-friendly products, green hotels, and engaging in green investment (Ahn & Kwon, 2020; Chen & Tung, 2014; Ikhsan & Wulandari, 2024).

Conceptually, investors' attitudes toward Islamic green finance are shaped by belief that such investments generate value not only in financial terms but also in their social and environmental contributions. Empirical evidence supports a positive relationship between Environmental, Social, and Governance (ESG) performance and corporate financial performance, reinforcing favorable attitudes toward sustainable instruments (Friede et al., 2015; Sidharta & Kim, 2024). Furthermore, several determinants such as green values, and religiosity, have been identified as essential determinants shaping these attitudes (Hasan & Aziz, 2024; Ikhsan & Wulandari, 2024; Sadiq et al., 2023; Yadav & Pathak, 2017).

Additionally, previous studies have consistently shown that attitude serves as one of the strongest predictors of investment intention, particularly in Islamic green financial instruments such as the Retail Green Sukuk (Akbar et al., 2024; Ikhsan & Wulandari, 2024; Majid & Maulana, 2023). Positive attitudes are often influenced by environmental awareness, understanding of Shariah principles, and favorable perceptions of ESG performance. Accordingly, fostering positive attitudes through financial literacy programs, public awareness campaigns, and sustainable investment education is essential to enhance participation in Islamic green investment.

In the case of the Maldives, despite its growing tourism sector, awareness and engagement in green investment remain at an early stage. Strengthening positive attitudes toward Islamic green investment requires collaborative efforts among government agencies, Islamic financial institutions, and the private sector to expand the availability and accessibility of green financial instruments. Such initiatives can enhance public understanding of the economic, social, and spiritual benefits of sustainable investment while attracting both local and international investors.

H4b: Subjective norm positively influences investors' intention to invest in Islamic green financial instruments.

Subjective norm refers to the perceived social pressure an individual experiences to perform or refrain from a particular behaviour (Ajzen, 1991). Such pressure often originates from influential sources, including family, friends, peers, or even social media networks. In this study, subjective norms are conceptualized as social influences exerted by individuals, communities, or religious leaders that shape personal behavioural tendencies, particularly in financial decision-making (Hsien-Ming et al., 2022; Ikhsan & Wulandari, 2024; Musa et al., 2024).

Within the context of green investment, social influence plays a vital role in shaping these norms. Prior studies have demonstrated that subjective norms significantly affect pro-environmental intentions (Fauzi et al., 2024; J. Wang et al., 2018, 2021). When green investment becomes a socially accepted or desirable behaviour within one's social circle, individuals are more inclined to engage in such practices, including investing in green sukuk, ESG-based mutual funds, or social impact bonds.

In the Maldives, subjective norms hold significant relevance due to the country's community-based social structure (Hussain, 2025; Office of International Religious Freedom, 2022). The influence of religious scholars, community leaders, and social networks connected to the tourism and local economic sectors plays a major role in shaping individuals' perspectives and financial decisions.

H4c: Perceived behavioural control positively influences investors' intention to invest in Islamic green financial instruments.

Perceived Behavioural Control (PBC) refers to an individual's perception of the ease or difficulty in performing a particular behaviour, reflecting the extent to which a person feels in control over that behaviour (Ajzen, 1991). In this context, PBC describes how confident individuals feel in their ability to invest in green financial instruments. Factors such as access to information, digital infrastructure, and technological capability play a crucial role in shaping this perceived control, related to Islamic green investment (Akhtar et al., 2023; Ambreen & Sultana, 2023).

Several studies have confirmed that PBC significantly predicts green behaviour, including the intention to invest in sustainable financial instruments (Han, 2015; Wang et al., 2018; Yadav & Pathak, 2017). Moreover, Kostadinova (2016) found that technological literacy and perceived consumer effectiveness (PCE) strengthen investors' belief that their financial decisions can make a meaningful difference. When individuals feel confident in their knowledge, access to green financial products, and capacity to manage risks, their investment intention is likely to increase.

In the case of the Maldives, improving digital access and financial literacy is vital to enhancing perceived behavioural control toward Islamic green investment (Ali, 2014). Strengthening digital financial infrastructure and empowering Islamic financial institutions can build greater confidence among Maldivians to engage in Islamic green investments.

Research Implications and Future Research Agenda

The study highlights the need for a coordinated stakeholder-driven strategy to accelerate the development of Islamic green finance in the Maldives. From a regulatory perspective, authorities may prioritize the establishment of preferential listing requirements for Shariah-compliant green sukuk, streamlined approval procedures for Islamic ESG instruments, and standardized Shariah-aligned sustainability disclosure frameworks to enhance public participation toward Islamic green finance. Government intervention remains essential through fiscal incentives for Islamic green investments, green project guarantee mechanisms, and the integration of sustainable finance objectives into national economic planning. At the corporate level, firms require clearer operational guidance on accessing Islamic green financing, including ESG reporting readiness, sustainable project structuring, and Shariah-compliant financing models.

Islamic financial institutions also play a critical role in expanding market participation by developing inclusive retail-oriented products such as low-entry Islamic ESG mutual funds, digital investment platforms, and investor education initiatives grounded in *maqasid al-shariah*. Collaborative engagement among regulators, financial institutions, technology platforms, and religious authorities is equally important to address key retail investor constraints, particularly limited financial literacy, weak environmental awareness, and low investment participation (Alam et al., 2023; Faisal at al., 2023; Fitrah & Soemitra, 2022). The involvement of religious leaders and technology-enabled outreach mechanisms may further strengthen public trust and behavioral adoption of Islamic green investments.

Implementation should follow a phased roadmap. The short-term phase (0-12 months) should focus on regulatory groundwork, institutional coordination, and nationwide Islamic green finance literacy initiatives. The medium-term phase (6-18 months) may emphasize product innovation, institutional capacity enhancement, and pilot issuances of Islamic green instruments. Long-term development requires structural integration of Islamic green finance within the national financial architecture and the establishment of a liquid secondary market. However, implementation risks remain, including small market size, scarcity of Shariah experts with ESG competence, limited investor awareness, and competition from conventional finance. Accordingly, framework effectiveness should be evaluated, such as green sukuk issuance frequency, retail investor participation, Islamic green investment volume, and the number of financed sustainable projects (Akhtar et al., 2023; V. Ali, 2014; Keshminder et al., 2021).

Academically, this study provides a foundation for a structured research agenda on Islamic green finance adoption in small island economies. Future research may prioritize more specific aspects, such as: (1) examining religiosity as a behavioral driver of Islamic green investment intention; (2) evaluating the effectiveness of policy support mechanisms in facilitating adoption; (3) assessing the influence of institutional authority and trust formation; (4) investigating the role of Shariah-based ESG literacy in shaping investor behavior; and (5) exploring institutional readiness to operationalize sustainability through *maqasid al-shariah* principles. Given the limited empirical evidence in the Maldivian context, future studies are essential to inform evidence-based regulation and policy formulation.

Future research should employ diverse approaches, including SEM-based quantitative testing, exploratory qualitative inquiry, and mixed-method designs to strengthen theoretical validation. Construct operationalization requires careful adaptation of established scales measuring Islamic religiosity, environmental concern, trust, policy support, and investment intention, alongside the development of context-sensitive instruments suitable for small-population environments. A progressive research program may begin with expert validation and Delphi studies, followed by cross-sectional empirical testing, longitudinal behavioral analysis, and comparative international investigations should be explicitly addressed to enhance methodological rigor and external validity.

6. Conclusion and Recommendation

The study proposes an integrated conceptual framework explaining retail investor intention toward Islamic green finance investment by combining the TPB and institutional theory within the context of the Maldives. The framework positions the TPB constructs—attitude, subjective norms, and perceived behavioral control (PBC)—as both primary predictors and mediating mechanisms that translate institutional pressures and cognitive factors into investment intention. Normative institutional forces, such as social expectations and religious authority, shape subjective norms; cognitive factors, including religiosity, green knowledge, and financial literacy, influence attitude formation; while regulatory legitimacy, reflected through green policies and Shariah compliance assurance, strengthens perceived behavioral control and directly enhances investor intention. The integration of these perspectives provides policymakers and stakeholders with a clearer analytical structure for mapping effective strategies to increase retail investor participation in the Islamic green capital market in the Maldives.

From a theoretical perspective, this study contributes by demonstrating how institutional structures function as upstream determinants of TPB mechanisms, thereby bridging micro-level behavioral theory and macro-level institutional theory. The framework explains the causal pathway through which institutional legitimacy and socio-religious environments influence individual behavioral intention. Furthermore, the study extends the TPB into the Islamic finance context by incorporating specific elements—such as religiosity, Shariah governance, and *ulama* influence—as behavioral determinants that remain underexplored in sustainable finance literature. Finally, the framework advances Islamic green finance research by integrating sustainability behavior, Islamic ethical finance principles, and climate finance perspectives into a unified behavioral model focused on retail investors, an area that has previously been dominated by institutional, regulatory, or policy-oriented analyses.
Despite these contributions, several limitations should be acknowledged. First, the conceptual framework primarily emphasizes retail investor behavior and may not fully capture the dynamics influencing institutional or corporate investors. Second, the model assumes relatively stable institutional and regulatory environments, which may not entirely reflect evolving policy conditions, market maturity, or implementation challenges faced in practice. Third, the proposed framework remains conceptual and therefore requires empirical testing to validate the strength, direction, and mediating roles of the proposed relationships among variables. Empirical studies using survey-based structural modeling or mixed-method approaches are necessary to examine how institutional and behavioral factors interact in real investment settings. In addition, cultural and religious influences embedded within the framework may limit its generalizability to non-Islamic financial systems or countries with different socio-religious characteristics.

References

Ahmed, A. I., & Nizam, I. (2019). The Determinants of Customer Patronage in the Case of Islamic Finance Products in the Maldives. *International Journal of Accounting & Business Management*. www.ftms.edu.my/journals/index.php/journals/ijabm

Ahmed, R. R., Vveinhardt, J., Streimikiene, D., & Pilinkienė, V. (2019). Application of the Theory of Planned

Behaviour Model for Examining Customers' Intentions towards Islamic Hire Purchase Financing. *Engineering Economics*, *30*(2). https://doi.org/10.5755/j01.ee.30.2.21589

Ahn, J., & Kwon, J. (2020). Green hotel brands in Malaysia: perceived value, cost, anticipated emotion, and revisit intention. *Current Issues in Tourism*, *23*(12), 1559–1574. https://doi.org/10.1080/13683500.2019.1646715

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, Icek., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior* (Paperback). Prentice-Hall.

Akbar, N., Suryomurti, W., & Kassim, S. (2024). *Investment Behaviour in Retail Green Sukuk: Case of Indonesia* (pp. 437–448). https://doi.org/10.1007/978-3-031-48479-7_37

Akhtar, Mohammed Anam, Khan, Khurram Ajaz, & Hoang, Hung Cuong. (2023). Role of Social Networking Sites in Financial Product Choice: An Investigation Through the Theory of Planned Behavior. *Business Perspectives and Research*, *11*(1), 44–62. https://doi.org/10.1177/22785337211070342

Alam, A., Ratnasari, R. T., Jannah, I. L., & Ashfahany, A. El. (2023). "Development and evaluation of Islamic green financing: A systematic review of green sukuk." *Environmental Economics*, *14*(1), 61–72. https://doi.org/10.21511/ee.14(1).2023.06

Ali, K. (2016). Impact of Religiosity on Buying Behavior of Financial Products: A Literature Review. *International Journal of Finance and Banking Research*, *2*, 18. https://doi.org/10.11648/j.ijfbr.20160201.14

Ali, V. (2014). *Factor affecting the adoption of information and communication technology in the tourism sector of the Maldives*.

Ambreen, U., & Sultana, K. (2023). Artificial intelligence, environmental sustainability, eco-friendly products, Islamic values, and green purchase intention. *Journal of Excellence in Management Sciences*, *3*(1), 185–204.

Anderson, A., & Robinson, D. T. (2022). Financial Literacy in the Age of Green Investment*. *Review of Finance*, *26*(6), 1551–1584. https://doi.org/10.1093/rof/rfab031

Ashraf, M. A. (2023). Theory of Islamic planned behavior: applying to investors' Sukuk purchase intention. *Journal of Islamic Accounting and Business Research*, *14*(4), 554–573. https://doi.org/10.1108/JIABR-03-2021-0096

Babbie, E. (2013). *The Practice of Social Research* (13th ed.). Wadsworth.

Basaglia, L., Pecorelli, V., Pepe, A., Saponari, L., & Malatesta, S. (n.d.). *Luxury Tourism and Environmental Awareness: A Case Study in Alifu Dhaalu Atoll, Maldives*.

Bazeley, P., & Jackson, K. (2013). *Qualitative Data Analysis with NVivo (2nd ed.)* (2nd ed.). Sage.

Chen, M.-F., & Tung, P.-J. (2014). Developing an extended Theory of Planned Behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, *36*, 221–230. https://doi.org/https://doi.org/10.1016/j.ijhm.2013.09.006

Creswell, J. W., & Creswell, J. D. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Sage.

Crohn, K., & Birnbaum, M. (2010). Environmental education evaluation: Time to reflect, time for change. *Evaluation and Program Planning*, *33*, 155–158. https://doi.org/10.1016/j.evalprogplan.2009.07.004

DiMaggio, P. J., & Powell, W. W. (2000). The iron cage revisited institutional isomorphism and collective rationality in organizational fields. In J. A. C. Baum & F. Dobbin (Eds.), *Economics Meets Sociology in Strategic Management* (Vol. 17, pp. 143–166). Emerald Group Publishing Limited. https://doi.org/10.1016/S0742-3322(00)17011-1

Duyufur Rohman, G., & Al-Shaghdari, F. M. O. (2025). Why are SMEs willing to pay trade zakat? Evidence from East Java, Indonesia. *Review of Islamic Social Finance and Entrepreneurship (RISFE)*, *2025*(2), 87. https://doi.org/10.20885/RISFE

ESMF. (2021). *Building Climate Resilient Safer Islands in Maldives* . https://www.environment.gov.mv/v2/wp-content/files/publications/20210309-pub-env-and-social-management-framework.pdf

Faisal, Y. A., Gunawan, I., Cupian, Hayati, A., Apriliadi, A., & ... (2023). Examining the purchase intentions of Indonesian investors for green sukuk. *Sustainability*, (Query date: 2025-07-11 19:18:4719 cites:

https://scholar.google.com/scholar?cites=12093471794346489473 & as_sdt=2005 & sciodt=0,5 & hl=en). https://www.mdpi.com/2071-1050/15/9/7430https://www.mdpi.com/2071-1050/15/9/7430

Faisal, Y. A., Gunawan, I., Cupian, Hayati, A., Apriliadi, A., & Fajri, M. (2023). Examining the Purchase Intentions of Indonesian Investors for Green Sukuk. *Sustainability (Switzerland)*, *15*(9). https://doi.org/10.3390/su15097430

Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, *38*, 45–64. https://doi.org/https://doi.org/10.1016/j.gfj.2017.03.001

Fauzi, M. A., Hanafiah, M. H., & Kunjuraman, V. (2024). Tourists' intention to visit green hotels: building on the theory of planned behaviour and the value-belief-norm theory. *Journal of Tourism Futures*, *10*(2), 255–276. https://doi.org/10.1108/JTF-01-2022-0008

Feng, Y., Feng, Y., & Liu, Z. (2025). The Impact Mechanism of Government Environmental Regulation and Green Consumer Orientation (GCO) on Green Purchase Intention: A Case Study of Zespri. *Sustainability (Switzerland)*, *17*(6). https://doi.org/10.3390/su17062575

Fitrah, R., & Soemitra, A. (2022). Green Sukuk For Sustainable Development Goals in Indonesia: A Literature Study. *Jurnal Ilmiah Ekonomi Islam*. https://doi.org/10.29040/jiei.v8i1.4591

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment*, *5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917

Gustina, Lukman, S., Sakti, M. R. P., & Alfarisi, M. F. (2025). The Role of Ulama in Shaping Attitude, Subjective Norms, Digitalisation and Trust Towards Cash Waqf Behaviour. *Intellectual Discourse*, *33*(2). https://doi.org/10.31436/id.v33i2.2246

Haryono, A. (2021). Pengaruh Environmental Knowledge dan Environmental Attitude Terhadap Pro-Environmental Purchasing Behaviour (Sebuah Study Tentang Perilaku Konsumen Gen Z). *AKSES: Jurnal Ekonomi Dan Bisnis*, *16*. https://doi.org/10.31942/akses.v16i2.5552

Hasan, A. A.-T., & Aziz, R. (2024). Theory of environmentally responsible behavior (TERB) to predict waste reduction behaviors among young coastal tourists: a case of Bangladesh. *European Business Review*, *36*(6), 899–917. https://doi.org/10.1108/EBR-10-2023-0317

Hemdan, W., & Zhang, J. (2024). Investors' intention toward green investment: an extension of the theory of planned behavior. *International Journal of Emerging Markets*, *20*(9), 3744–3759. https://doi.org/10.1108/IJOEM-06-2023-0874

Hsien-Ming, S., Chen, B., Chen, M.-H., Wang, C.-H., & Li-Fen, W. (2022). A Study of the Financial Behavior Based on the Theory of Planned Behavior. *International Journal of Marketing Studies*, *14*, 1. https://doi.org/10.5539/ijms.v14n2p1

Hussain, F. M. (2025). *Empowering health professional graduates to promote health equity: A case study of the Maldives National University* (C. Jaye, C. Cameron, & T. Stokes, Eds.).

Ikhsan, M. A., & Wulandari, R. (2024). Impact of attitude, subjective norms, and perceived behavioural control on intention to invest in retail green sukuk among Muslim millennials in Jabodetabek. *Journal of Islamic Economics Lariba*, *10*(1), 149–168. https://doi.org/10.20885/jielariba.vol10.iss1.art9

Indriani, D. I. A., Rahayu, M., & Hadiwidjojo, D. (2019). The Influence of Environmental Knowledge on Green Purchase Intention the Role of Attitude as Mediating Variable. *International Journal of Multicultural and Multireligious Understanding*, *6*(2), 627. https://doi.org/10.18415/ijmmu.v6i2.706

Islam, M. F., Rahman, M. M., Sultana, S., Nabi, M. N., Rosid, M. H. O., & Alnour, M. (2024). Uncovering the impact on environmental challenges through the predictors of m-tourism apps adoption: SEM-NCA approaches. *Environmental Challenges*, *17*. https://doi.org/10.1016/j.envc.2024.101028

Ismail. (2024). Determinan Niat Investasi Green Sukuk pada Investor di DKI Jakarta: Penerapan Theory of Planned Behaviour. *Jurnal Alwatzikhoebillah : Kajian Islam, Pendidikan, Ekonomi, Humaniora*, *10*, 29–40. https://doi.org/10.37567/alwatzikhoebillah.v10i1.2101

Jamshed, K. M., & Uluyol, B. (2024). What Drives to Adopt Islamic Banking Products and Services: is it Shariah Compliance or Convenience? *Journal of Islamic Marketing*, *15*, 2891–2915. https://doi.org/10.1108/JIMA-08-2023-0243

Kaakeh, A., Hassan, M. K., & Van Hemmen Almazor, S. F. (2019). Factors affecting customers' attitude towards Islamic banking in UAE. *International Journal of Emerging Markets*, *14*(4), 668–688. https://doi.org/10.1108/IJOEM-11-2017-0502

Kasri, R., & Chaerunnisa, S. (2021). The role of knowledge, trust, and religiosity in explaining the online cash waqf amongst Muslim millennials. *Journal of Islamic Marketing*, *ahead-of-print*. https://doi.org/10.1108/JIMA-04-2020-0101

Keshminder, J. S., Abdullah, M. S., Keshminder, J. S., Mardi, M., Abdullah, M. S., Abdullah, M. S., Abdullah, M. S., & Mardi, M. (2021). Green sukuk – Malaysia surviving the bumpy road: performance, challenges and reconciled issuance framework. *Qualitative Research in Financial Markets*. https://doi.org/10.1108/qrfm-04-2021-0049

Kurniawan, A., & Fadhilla, H. N. (2024). The Influences of Environmental Knowledge, Word of Mouth (WOM), Green Marketing, and Environmental Care Attitude on the Purchase Intention of Green Products (A Study on Generation Z in Yogyakarta). *Eduvest - Journal of Universal Studies*, *4*(9), 7638–7654. https://doi.org/10.59188/eduvest.v4i9.1700

Li, J., Zhang, J., Zhang, D., & Ji, Q. (2019). Does gender inequality affect household green consumption behaviour in China? *Energy Policy*, *135*, 111071. https://doi.org/https://doi.org/10.1016/j.enpol.2019.111071

Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, *52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

Majid, R., & Maulana, A. (2023). *The Initial Discussions of MSMEs' Green Sukuk Through Islamic Securities Crowdfunding: Behavioral Intentions Study of Prospective Investors* (pp. 316–343). https://doi.org/10.2991/978-94-6463-176-0_21

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. In *Source: The American Journal of Sociology* (Vol. 83, Number 2). http://www.jstor.orgURL:http://www.jstor.org/stable/2778293

Ministry of Tourism and Environment Republic of Maldives. (2025). *Maldives Green Fund*. https://www.environment.gov.mv/v2/en/maldives-green-fund

Ministry of Youth, S. & C. E. (2023). *COMPREHENSIVE STUDY OF THE MALDIVIAN CIVIL SOCIETY*. www.mv.undp.org

Monasterolo, I., & de Angelis, L. (2020). Blind to carbon risk? An analysis of stock market reaction to the Paris Agreement. *Ecological Economics*, *170*, 106571. https://doi.org/https://doi.org/10.1016/j.ecolecon.2019.106571

Muneeza, A. (2018). Establishment of Islamic capital market in jurisdictions with limited Islamic financial services. *International Journal of Law and Management*, *60*(2), 373–385. https://doi.org/https://doi.org/10.1108/IJLMA-12-2016-0146

Musa, H., Hayati, N., & Mat Nor, A. (2024). Extending the Theory of Planned Behavior in financial inclusion participation model – evidence from an emerging economy. *Cogent Economics & Finance*, *12*. https://doi.org/10.1080/23322039.2024.2306536

Office of International Religious Freedom. (2022). *2022 Report on International Religious Freedom: Maldives*. https://www.state.gov/wp-content/uploads/2023/05/441219-MALDIVES-2022-INTERNATIONAL-RELIGIOUS-FREEDOM-REPORT.pdf

Oman, I., Main, M., Ruhaini Muda, Syahirah Amin, Husni Sharifah, Faigah Syed Alwi, Faridah Hassan, & Arshad Ayub. (2019). DETERMINANTS OF BEHAVIOURAL INTENTION TOWARDS GREEN INVESTMENTS: THE PERSPECTIVES OF MUSLIMS. In *International Journal of Islamic Business* (Number 1).

Othman, Y. H.-, Alwi, I., Yusuff, M. S. S., & Saufi, M. S. A. M. (2017). The Influence of Attitude, Subjective Norm, and Islamic Religiosity on Compliance Behavior of Income Zakat Among Educators. *International Journal of Academic Research in Business and Social Sciences*, *7*(11). https://doi.org/10.6007/ijarbss/v7-i11/3549

Otto, S., & Pensini, P. (2017). Nature-based environmental education of children: Environmental knowledge and connectedness to nature, together, are related to ecological behaviour. *Global Environmental Change*, *47*, 88–94. https://doi.org/https://doi.org/10.1016/j.gloenvcha.2017.09.009

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. In *The BMJ* (Vol. 372). BMJ

Publishing Group. https://doi.org/10.1136/bmj.n71

Rahayu, S., Novitasari, E., & Vedy, N. K. (2024). Impact of Environmental Knowledge toward Green Purchase Intention: Attitude as Mediator. *Journal of Business and Information Systems*, *6*(2). https://doi.org/10.36067/jbis.v6i2.255

Rehman, A., & Shahbaz Shabbir, M. (2010). The relationship between religiosity and new product adoption. *Journal of Islamic Marketing*, *1*(1), 63–69. https://doi.org/10.1108/17590831011026231

Rehman, K., & Mia, M. A. (2024). Determinants of financial literacy: a systematic review and future research directions. *Future Business Journal*, *10*(1). https://doi.org/10.1186/s43093-024-00365-x

Sabiq, S. (1983). *Fiqh Sunnah*. Darul Fikr.

Sadiq, M., Adil, M., & Paul, J. (2023). Organic food consumption and contextual factors: An attitude–behavior–context perspective. *Business Strategy and the Environment*, *32*(6), 3383–3397. https://doi.org/https://doi.org/10.1002/bse.3306

Scott, W. (2005). *Institutional Theory: Contributing to a Theoretical Research Program*.

Scott, W. R. (2014). *Institutions and Organizations: Ideas, Interests, and Identities* (4th ed.). Sage Publishing.

Shujau, M., Hassan, R., Syahira, S., Yusoff, M., & Muneeza, A. (2022). *ISLAMIC CAPITAL MARKET IN MALDIVES: A REFORM-ORIENTED ANALYSIS*.

Shukor, S. A., & Jamal, A. (2013). Developing Scales for Measuring Religiosity in the Context of Consumer Research. *Middle East Journal of Scientific Research*, *13*, 69–74. https://doi.org/10.5829/idosi.mejsr.2013.13.1884

Sidharta, K., & Kim, S. S. (2024). Enrichment: Journal of Management The influence of esg performance on stock price volatility in Indonesia. In *Enrichment: Journal of Management* (Vol. 14, Number 3).

Sindra, D. S. K. (2014). *Microloans, Climate Change Adaptation, & Stated Investment Behaviour in Small Island Developing States-A Fiji Case-Study*.

The President's Office. (2025, May 7). *Vision is to establish Maldives as a key financial centre focused on Islamic Finance, driven by digital economic transformation: President*. https://presidency.gov.mv/Press/Article/33670

Tian, M., Pu, B., Chen, Y., & Zhu, Z. (2019). Consumer's Waste Classification Intention in China: An Extended Theory of Planned Behavior Model. *Sustainability (Switzerland)*, *11*(24). https://doi.org/10.3390/su11246999

Timur, Y. P., Ridlwan, A. A., Rahim, S. A., Fikriyah, K., Susilowati, F. D., Canggih, C., Nurafini, F., & Badrul Munir, M. B. (2025). Determinants of Muslim investors in investing through green sukuk retail: an extended pro-environmental planned behavior approach. *Journal of Islamic Marketing*, *16*(8), 2403–2432. https://doi.org/10.1108/JIMA-07-2024-0286

Uikey, Ashish Ashok, Baber, Ruturaj, Kinawy, Ream N, & Marak, Zericho R. (2025). Green Marketing in Asian Nations: Current State of Research and Future Frontiers. *Sage Open*, *15*(4), 21582440251394560. https://doi.org/10.1177/21582440251394562

UNDP. (2022a). *Economic Bulletin-3*.

UNDP. (2022b). *The case for de-risking investments to attract private capital for underserved sectors in the Maldives*. https://files.acquia.undp.org/public/migration/mv/Economic-Bulletin.-UNDP-MV.-Apr-2022.pdf

Wang, J., Shen, M., & Chu, M. (2021). Why is green consumption easier said than done? Exploring the green consumption attitude-intention gap in China with behavioral reasoning theory. *Cleaner and Responsible Consumption*, *2*, 100015. https://doi.org/https://doi.org/10.1016/j.clrc.2021.100015

Wang, J., Wang, S., Wang, Y., Li, J., & Zhao, D. (2018). Extending the theory of planned behavior to understand consumers' intentions to visit green hotels in the Chinese context. *International Journal of Contemporary Hospitality Management*, *30*(8), 2810–2825. https://doi.org/10.1108/IJCHM-04-2017-0223

Wang, Y., Zhao, Z., Shi, M., Liu, J., & Tan, Z. (2024). Public environmental concern, government environmental regulation and urban carbon emission reduction—Analyzing the regulating role of green finance and industrial agglomeration. *Science of The Total Environment*, *924*, 171549. https://doi.org/https://doi.org/10.1016/j.scitotenv.2024.171549

Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. In *Source: MIS Quarterly* (Vol. 26, Number 2).

World Bank. (2024). *MALDIVES June 2024 i Country Climate and Development Report: Maldives*. www.worldbank.org

Wu, X., & Wu, Z. (2025). The digital economy and urban carbon emissions: mediating effects of green innovation and moderating effects of government intervention. *Frontiers in Environmental Science*, *13*. https://doi.org/10.3389/fenvs.2025.1597203

Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, *134*, 114–122. https://doi.org/https://doi.org/10.1016/j.ecolecon.2016.12.019

Zsóka, Á., Szerényi, Z. M., Széchy, A., & Kocsis, T. (2013). Greening due to environmental education? Environmental knowledge, attitudes, consumer behavior and everyday pro-environmental activities of Hungarian high school and university students. *Journal of Cleaner Production*, *48*, 126–138. https://doi.org/https://doi.org/10.1016/j.jclepro.2012.11.030