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Integrating Waqf and Takaful: Developing the Inclusive Takaful Waqf Ecosystem (ITWE) in Indonesia

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Abstract

This study examines the development of waqf-based takaful products in Indonesia through the integration of an inclusive Islamic financial ecosystem. The research was motivated by the significant disparity between the enormous potential of national waqf assets and the limited utilization of takaful as a mechanism for protecting waqf properties from various risks. Employing a mixed methods approach with an explanatory sequential design, the study collected quantitative and qualitative data from key stakeholders in the Islamic insurance and waqf sectors, including sharia insurance companies, regulators, and waqf institutions. Data were analyzed using the Analytic Network Process integrated with Strengths, Weaknesses, Opportunities, and Threats (ANP-SWOT) analysis to identify strategic priorities and formulate an ecosystem-based development model. The findings reveal that regulatory support, the tabarru' risk-sharing mechanism, and the increasing value of waqf assets constitute the most influential factors supporting the development of waqf-based takaful products. Conversely, the absence of dedicated waqf insurance products, limited institutional capacity, fragmented waqf data systems, and strong competition from conventional insurance providers remain significant challenges. Based on these findings, this study proposes the Inclusive Takaful Waqf Ecosystem (ITWE), an integrated framework that connects regulators, waqf institutions, takaful operators, religious authorities, donors, and beneficiaries within a collaborative financial ecosystem. The study contributes to the literature on Islamic financial ecosystems by demonstrating how Islamic social finance and Islamic commercial finance can be integrated to strengthen waqf asset protection, enhance Islamic financial inclusion, and support sustainable socio-economic development in Indonesia.

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Introduction

The rapid development of Islamic finance has transformed the global financial landscape by offering an alternative financial system grounded in ethical, social, and economic justice principles. Unlike conventional finance, which primarily focuses on profit maximization, Islamic finance emphasizes fairness, transparency, risk-sharing, and social welfare in accordance with the objectives of Islamic law (*maqāṣid al-sharī'ah*). As a result, Islamic financial institutions are expected not only to generate economic value but also to contribute to equitable wealth distribution and sustainable social development. Within this framework, *takaful* (Islamic insurance) and *waqf* (Islamic endowment) represent two important pillars of the Islamic economic system that possess significant potential to support inclusive and sustainable development.

Indonesia, as the country with the largest Muslim population in the world, has demonstrated a strong commitment to strengthening its Islamic economic ecosystem. The government has introduced various strategic initiatives through regulatory reforms, institutional strengthening, and the establishment of national bodies dedicated to Islamic economic development. These efforts have contributed to the growth of Islamic banking, Islamic capital markets, and Islamic social finance institutions. Nevertheless, the performance of several sectors within the Islamic financial ecosystem remains below their potential, particularly in the Islamic insurance industry.

Takaful plays a strategic role in providing financial protection while complying with Islamic legal principles. Unlike conventional insurance, which is based on risk transfer, *takaful* operates through risk-sharing mechanisms whereby participants contribute to a collective fund (*tabarru'*) to assist members who experience losses. This cooperative structure reflects the Islamic values of solidarity, mutual assistance, and social responsibility. Consequently, *takaful* serves not only as a risk management instrument but also as a mechanism for strengthening social resilience and economic stability.

Despite its strategic importance, the growth of the *takaful* industry in Indonesia remains relatively limited. According to data from the Financial Services Authority (Otoritas Jasa Keuangan/OJK), the market share of Islamic insurance has stagnated at approximately 5–7 percent of the national insurance industry over the last several years. The disparity becomes even more evident when comparing the overall financial performance of conventional and Islamic insurance sectors. By the first quarter of 2026, conventional insurance assets reached approximately IDR 1,949.79 trillion, while *takaful* assets amounted to only IDR 51.46 trillion. This significant gap indicates that the penetration of Islamic insurance remains relatively weak despite Indonesia's substantial Muslim population and growing Islamic economic awareness. Such conditions suggest the existence of structural challenges related to product innovation, institutional capacity, public literacy, and ecosystem integration.

At the same time, Indonesia possesses enormous potential in Islamic social finance, particularly in the *waqf* sector. According to the Indonesian Waqf Board (Badan Wakaf Indonesia/BWI), the estimated value of national *waqf* assets has reached approximately IDR 2,000 trillion, while the annual potential of cash *waqf* is estimated at IDR 181 trillion. Furthermore, more than 450,000 *waqf* locations are distributed across the country, consisting of mosques, educational institutions, Islamic boarding schools, health facilities, and various productive assets. These figures indicate that *waqf* has the potential to become

a significant instrument for social welfare enhancement, poverty alleviation, and economic empowerment.

However, the enormous potential of waqf assets is accompanied by substantial risks. Many waqf properties remain vulnerable to natural disasters, structural damage, fire, and operational disruptions. Data from the National Disaster Management Agency (Badan Nasional Penanggulangan Bencana/BNPB) indicate that numerous waqf-based religious and educational facilities have suffered severe damage due to natural disasters. The 2021 West Sulawesi earthquake damaged numerous mosques and madrasahs in Mamuju and Majene. Similarly, the 2022 Semeru eruption and the 2022 Cianjur earthquake caused extensive destruction to waqf-based educational and religious infrastructure. More recently, the collapse of a prayer hall building at Al Khoziny Islamic Boarding School in East Java in 2025 resulted in significant casualties and highlighted the vulnerability of religious infrastructure. These incidents demonstrate that the sustainability of waqf functions is highly dependent on the availability of effective risk mitigation mechanisms.

Paradoxically, despite the vulnerability of waqf assets and the availability of Islamic insurance institutions, the utilization of takaful as a protection mechanism for waqf assets remains extremely limited. Most waqf institutions do not possess systematic risk management strategies, while specific insurance products designed for waqf protection remain scarce. Consequently, valuable social assets that are intended to provide long-term benefits to society remain exposed to various risks that may compromise their sustainability.

Several previous studies have explored the relationship between waqf and takaful from different perspectives. Research has highlighted the potential of integrating waqf into Islamic insurance schemes, the importance of institutional collaboration, and the role of Islamic social finance in strengthening economic resilience. Other studies have identified challenges related to regulatory fragmentation, low financial literacy, weak institutional coordination, and the limited availability of innovative waqf-based insurance products. Although these studies have contributed significantly to the literature, most remain conceptual and focus primarily on theoretical integration rather than operational ecosystem development. Existing research has not sufficiently explained how multiple stakeholders—including regulators, waqf institutions, takaful operators, religious authorities, and beneficiaries—can be systematically connected within a comprehensive and inclusive financial ecosystem.

This limitation indicates the existence of both theoretical and practical gaps in the current literature. Theoretically, there is limited discussion regarding ecosystem-based approaches that integrate Islamic commercial finance and Islamic social finance into a unified framework. Practically, there is still no operational model capable of facilitating collaboration among key stakeholders while simultaneously enhancing financial inclusion, waqf protection, and takaful market expansion. Consequently, a more integrated framework is required to bridge the gap between the potential of waqf assets and the capacity of takaful institutions to provide sustainable protection.

To address these challenges, this study proposes the Inclusive Takaful Waqf Ecosystem (ITWE) as an integrated model for developing waqf-based takaful products in Indonesia. The ITWE model seeks to connect Islamic insurance companies, waqf institutions, regulators, religious authorities, and beneficiaries within a collaborative

ecosystem that promotes financial inclusion, asset protection, and sustainable social impact. Unlike previous studies that primarily discuss waqf-takaful integration at a conceptual level, the proposed model offers an operational ecosystem framework supported by empirical analysis using the Analytic Network Process (ANP) integrated with SWOT analysis. Through this approach, the study identifies strategic priorities, supporting factors, and implementation pathways for strengthening the integration of waqf and takaful within Indonesia's Islamic financial ecosystem.

Therefore, this study aims to analyze the strategic factors influencing the development of waqf-based takaful products in Indonesia and to formulate an integrated ecosystem model capable of enhancing waqf protection, strengthening Islamic financial inclusion, and supporting the sustainable growth of the national Islamic economy.

Literature Review

1. Waqf and Productive Waqf

Waqf is one of the most important instruments of Islamic social finance that has historically contributed to economic development, social welfare, education, healthcare, and public infrastructure throughout the Muslim world. In Islamic jurisprudence, waqf refers to the permanent dedication of an asset for charitable purposes, where the principal asset is preserved while its benefits are continuously distributed to beneficiaries. The concept is rooted in the prophetic tradition emphasizing sustainable charity (*ṣadaqah jāriyah*), whereby social benefits continue to flow even after the donor's death.

Contemporary scholars have expanded the traditional understanding of waqf beyond religious and charitable functions toward productive and developmental purposes. Productive waqf refers to the utilization of waqf assets in income-generating activities that create sustainable economic value while maintaining compliance with Islamic principles. Through productive management, waqf assets can contribute to poverty reduction, employment generation, educational development, healthcare provision, and broader socio-economic empowerment. This transformation has shifted waqf from a passive charitable institution into an active instrument of sustainable development.

Indonesia possesses one of the largest waqf potentials in the world. The vast number of waqf properties, combined with the growing development of cash waqf, provides substantial opportunities for strengthening national economic resilience. However, the effectiveness of productive waqf depends heavily on asset sustainability and protection. Waqf assets face various risks, including natural disasters, fire, structural failure, legal disputes, and operational disruptions. These risks may reduce the productivity of waqf assets and undermine their ability to generate long-term social benefits. Consequently, risk management mechanisms have become increasingly important within modern waqf governance frameworks.

Recent studies emphasize that the sustainability of productive waqf requires stronger institutional governance, professional management, technological innovation, and integration with Islamic financial instruments. Such integration enables waqf institutions to enhance financial capacity while maintaining compliance with Islamic legal principles. Therefore, productive waqf should not be viewed merely as a charitable institution but as a strategic component of the broader Islamic economic ecosystem.

Takaful and Risk-Sharing Principles

Takaful represents the Islamic alternative to conventional insurance and is founded upon the principles of mutual cooperation (*ta'āwun*), solidarity (*takāful*), and risk-sharing. Unlike conventional insurance, which is based on the transfer of risk from policyholders to insurers, takaful operates through collective risk management in which participants contribute to a common fund known as *tabarru'*. The fund is subsequently utilized to compensate members who experience covered losses or damages.

The philosophical foundation of takaful derives from Islamic teachings that encourage mutual assistance and collective responsibility. The principles of risk-sharing eliminate elements prohibited under Islamic law, including *riba* (interest), *gharar* (excessive uncertainty), and *maisir* (gambling). Consequently, takaful serves not only as a financial protection mechanism but also as a manifestation of Islamic ethical values in economic transactions.

The growing complexity of contemporary economic activities has expanded the role of takaful beyond individual protection toward institutional and social risk management. Modern takaful products cover various sectors, including property, health, engineering, agriculture, transportation, and investment. Within the context of waqf management, takaful offers a Sharia-compliant mechanism for protecting valuable religious and social assets against unforeseen risks.

Several studies have highlighted the compatibility between waqf and takaful due to their shared foundations in Islamic social solidarity. Both institutions aim to promote welfare, protect community interests, and strengthen social resilience. Nevertheless, despite their conceptual compatibility, practical integration between waqf and takaful remains limited in many Muslim countries. Challenges include regulatory fragmentation, institutional separation, limited product innovation, and low stakeholder awareness. These constraints suggest the need for a more integrated framework capable of connecting social finance and commercial finance within a unified Islamic economic system.

2. Islamic Financial Ecosystem

The concept of an Islamic financial ecosystem has emerged as a response to the growing complexity of Islamic economic development. Rather than viewing Islamic financial institutions as isolated entities, ecosystem theory emphasizes the importance of interconnected relationships among multiple stakeholders, including regulators, financial institutions, social finance organizations, technology providers, educational institutions, and beneficiaries.

An effective Islamic financial ecosystem enables the circulation of financial resources across various sectors while ensuring compliance with Islamic principles. Within such an ecosystem, Islamic commercial finance—including Islamic banking, capital markets, and takaful—can interact synergistically with Islamic social finance instruments such as zakat, waqf, and charitable funds. This integration creates opportunities for more inclusive, sustainable, and impactful economic development.

However, numerous studies have identified fragmentation as one of the primary challenges facing Islamic finance in Indonesia. Commercial institutions and social finance institutions often operate independently, resulting in inefficiencies, duplicated efforts, and missed opportunities for collaboration. Regulatory differences, institutional silos, and limited data interoperability further weaken ecosystem integration.

Recent policy initiatives by Bank Indonesia, KNEKS, and OJK emphasize the importance of ecosystem-based approaches to strengthen the national Islamic economy. Such approaches seek to create stronger linkages between commercial and social financial sectors while encouraging innovation, digitalization, and stakeholder collaboration. Within this context, integrating waqf and takaful through a structured ecosystem framework becomes increasingly relevant as a strategy for enhancing financial inclusion and asset sustainability.

3. Financial Inclusion in Islamic Finance

Financial inclusion refers to the ability of individuals and institutions to access affordable, appropriate, and sustainable financial products and services. Within the Islamic finance context, financial inclusion extends beyond access to financial services and incorporates ethical, social, and religious dimensions. Islamic financial inclusion seeks to ensure that financial services are accessible while remaining consistent with Islamic values and principles.

Despite substantial growth in Islamic finance, financial inclusion remains a significant challenge in many Muslim-majority countries, including Indonesia. Although Islamic banking, takaful, and social finance institutions continue to expand, large segments of society remain underserved by formal Islamic financial services. Limited literacy, insufficient product innovation, geographical barriers, and institutional fragmentation contribute to this challenge.

Islamic social finance instruments such as waqf possess significant potential to support financial inclusion by providing access to social protection, education, healthcare, and economic empowerment. Likewise, takaful can contribute to financial resilience by protecting individuals and institutions from financial shocks. Integrating these instruments can create a more comprehensive inclusion framework that addresses both social welfare and financial security.

Recent studies suggest that ecosystem-based integration can enhance Islamic financial inclusion by improving coordination among stakeholders, expanding service accessibility, and increasing public trust. Therefore, combining waqf and takaful within a collaborative ecosystem may provide an innovative pathway toward more inclusive and sustainable Islamic economic development.

4. Conceptual Framework of the Inclusive Takaful Waqf Ecosystem (ITWE)

The Inclusive Takaful Waqf Ecosystem (ITWE) is developed based on the premise that sustainable waqf management requires systematic risk protection, while the expansion of takaful requires access to broader and socially relevant market segments. Existing models of waqf-takaful integration generally focus on individual products or contractual arrangements. However, they often overlook the broader institutional relationships necessary for sustainable implementation.

The ITWE framework conceptualizes waqf and takaful integration as a collaborative ecosystem involving multiple stakeholders. These stakeholders include waqf institutions, takaful operators, regulators, religious authorities, financial associations, donors (*waqif*), beneficiaries (*mauquf 'alaih*), and supporting institutions. Through coordinated interaction, each stakeholder contributes to strengthening financial inclusion, protecting waqf assets, enhancing governance, and expanding the reach of Islamic financial services.

Within this framework, *takaful* functions as a risk mitigation instrument that safeguards *waqf* assets against physical and operational losses. Simultaneously, *waqf* institutions provide access to socially impactful investment and protection opportunities that expand the relevance of *takaful* within the broader Islamic economy. Regulatory institutions provide legal certainty and governance oversight, while religious authorities ensure Sharia compliance. Together, these interactions create a mutually reinforcing ecosystem capable of generating sustainable economic and social benefits.

The ITWE framework therefore extends previous discussions on *waqf-takaful* integration by shifting the analytical focus from isolated financial products toward ecosystem-based collaboration. This approach provides the theoretical foundation for examining strategic factors influencing the development of *waqf*-based *takaful* products and for formulating an operational model capable of strengthening Islamic financial inclusion, asset protection, and sustainable economic development in Indonesia.

Method

This study employed a mixed methods approach using an explanatory sequential design. Mixed methods research combines quantitative and qualitative approaches to obtain a more comprehensive understanding of complex research problems than either method alone (Creswell & Creswell, 2023). In this design, quantitative data were collected and analyzed in the first phase, followed by qualitative data collection and analysis to explain and strengthen the quantitative findings.

The study was conducted within institutions directly related to the development of *waqf*-based *takaful* products in Indonesia, including Sharia General Insurance Companies, the Indonesian *Waqf* Board (BWI), the Financial Services Authority (OJK), the National Sharia Council–Indonesian Ulema Council (DSN-MUI), and the Indonesian Sharia Insurance Association (AASI). Participants were selected using purposive sampling based on their expertise, professional experience, and involvement in the Islamic insurance and *waqf* sectors. The expert respondents consisted of directors and senior executives representing fully-fledged sharia general insurance companies operating in Indonesia.

Primary data were collected through questionnaires, in-depth interviews, and Focus Group Discussions (FGDs). In the quantitative phase, questionnaires were distributed to experts to evaluate strategic factors influencing the development of *waqf*-based *takaful* products. The questionnaire employed pairwise comparisons following the Analytic Network Process (ANP) framework. Subsequently, in-depth interviews and FGDs were conducted to obtain deeper explanations regarding the quantitative results and to explore institutional challenges, opportunities, and strategic directions for integrating *waqf* and *takaful* within the national Islamic financial ecosystem.

Secondary data were obtained from official publications and statistical reports issued by the Financial Services Authority (OJK), Indonesian *Waqf* Board (BWI), Bank Indonesia (BI), Ministry of Religious Affairs, National Committee for Islamic Economy and Finance (KNEKS), Central Bureau of Statistics (BPS), and National Disaster Management Agency (BNPB). Additional information was gathered from academic journals, books, policy documents, and previous studies related to *waqf*, *takaful*, Islamic financial inclusion, and Islamic financial ecosystems.

The analytical framework of this study integrated the Analytic Network Process (ANP) with Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. The SWOT framework was employed to identify internal and external strategic factors affecting the development of waqf-based takaful products. Internal factors consisted of strengths and weaknesses, while external factors consisted of opportunities and threats. The identified factors were derived from literature reviews, preliminary interviews, and expert consultations.

ANP was applied to determine the relative priority of each strategic factor and to examine the interrelationships among variables. Pairwise comparison judgments provided by expert respondents were processed using Super Decisions software to generate priority weights and ranking scores. The consistency of expert judgments was evaluated through the Consistency Ratio (CR), while the level of agreement among respondents was measured using the Geometric Mean (GM) and Kendall's Coefficient of Concordance (W). The integration of ANP and SWOT enabled the identification of strategic priorities and the formulation of an operational model for developing waqf-based takaful products in Indonesia.

To enhance the credibility of the findings, methodological triangulation was employed through the integration of survey results, interviews, FGDs, and document analysis. Data from multiple sources were compared and cross-validated to ensure consistency and accuracy in the interpretation of findings. The results of the analysis subsequently served as the basis for developing the Inclusive Takaful Waqf Ecosystem (ITWE) model as a proposed framework for strengthening waqf protection, Islamic financial inclusion, and the sustainable development of the takaful industry in Indonesia.

Results

The Performance Gap between Conventional Insurance and Takaful Industries

The analysis of Indonesia's insurance industry reveals a substantial structural disparity between conventional insurance and takaful sectors. Data published by the Financial Services Authority (OJK) show that conventional insurance continues to dominate the national insurance market across all major indicators, including assets, equity, and premium income.

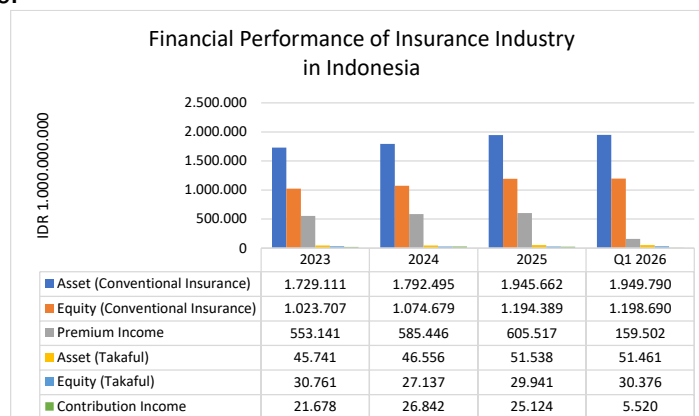


Figure 1. Financial Performance of the Insurance Industry in Indonesia

The data indicate that by the first quarter of 2026 conventional insurance assets had reached IDR 1,949.79 trillion, while takaful assets amounted to only IDR 51.46 trillion. This disparity demonstrates that conventional insurance assets are nearly forty times larger than those of the takaful sector. A similar pattern is observed in equity and premium contributions, indicating that Islamic insurance remains a marginal segment within the broader insurance industry.

The findings further reveal that the market share of takaful remains below its potential despite Indonesia having the largest Muslim population globally. These conditions suggest that significant challenges persist regarding institutional capacity, product innovation, public literacy, and ecosystem integration.

The Potential and Vulnerability of Waqf Assets in Indonesia

The study also identified a significant mismatch between the enormous potential of waqf assets and the limited availability of risk protection mechanisms. According to data obtained from the Indonesian Waqf Board (BWI), the estimated value of waqf assets in Indonesia has reached approximately IDR 2,000 trillion, with annual cash waqf potential estimated at IDR 181 trillion.

At the same time, waqf assets remain highly vulnerable to various risks. Data from BNPB indicate that numerous waqf-based facilities, including mosques, Islamic boarding schools, educational institutions, and community facilities, have suffered damage due to earthquakes, volcanic eruptions, floods, and structural failures. These incidents demonstrate the absence of comprehensive protection mechanisms for waqf assets and highlight the urgency of integrating risk management into waqf governance.

Identification of Strategic Factors

Based on literature review, document analysis, and expert consultations, twenty strategic factors influencing the development of waqf-based takaful products were identified and classified into four SWOT clusters consisting of strengths, weaknesses, opportunities, and threats.

Table 1. SWOT Factors Influencing Waqf-Based Takaful Development

Internal	
Strengths (S)	Weaknesses (W)
OJK regulatory support (S1)	The limited capital capacity of sharia general insurance companies (W1)
Alignment with the halal value chain (S2)	Limited support from sharia reinsurance companies (W2)
The risk-sharing mechanism via the tabarru' contract (S3)	The minimal existence of specific waqf insurance products (W3)
The asset growth of the sharia general insurance industry (S4)	The lack of integrated access to waqf data (W4)
The potential for joint capacity through sharia co-insurance schemes (S5)	The low financial literacy of Nazhirs regarding Takaful (W5)
External	
Opportunities (O)	Threats (T)

The increasing growth of waqf asset values (O1)	The massive dominance of conventional insurance companies in the industry (T1)
The development of Cash Waqf (O2)	The absence of mandatory waqf insurance regulations (T2)
Strong national support for the sharia economy (O3)	The market perception that Takaful is not yet ready to cover large-scale objects (T3)
The development of Waqf through Money (O4)	Fierce price and contribution competition against conventional insurance (T4)
The potential for mandatory regulations within the waqf ecosystem (O5)	Macroeconomic risk factors (T5)

The identified strengths include regulatory support from OJK, alignment with the halal value chain, the tabarru' risk-sharing mechanism, growth of takaful assets, and opportunities for co-insurance arrangements. Weaknesses include limited capital capacity, insufficient sharia reinsurance support, limited waqf-specific insurance products, fragmented waqf data, and low literacy among waqf managers.

The opportunity cluster consists of increasing waqf asset values, expansion of cash waqf, national support for Islamic economic development, productive waqf initiatives, and potential mandatory waqf protection regulations. Meanwhile, threats include the dominance of conventional insurance companies, the absence of mandatory waqf insurance regulations, market perceptions regarding takaful capacity, price competition, and macroeconomic uncertainty.

ANP-SWOT Cluster Analysis

The strategic priorities were subsequently evaluated using the Analytic Network Process (ANP). The analysis revealed differences in the relative importance of each SWOT cluster.

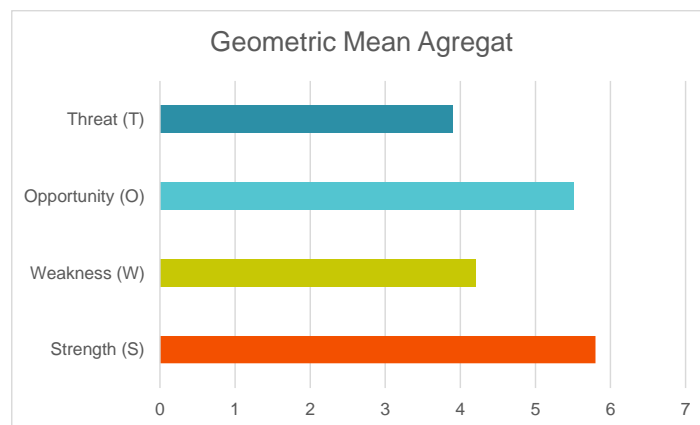


Figure 2. ANP-SWOT Cluster Analysis

The results indicate that the Strengths cluster obtained the highest priority score with a geometric mean of 5.8, followed by Opportunities with 5.5, Weaknesses with 4.2, and Threats with 3.9. These findings suggest that the development of waqf-based takaful products is primarily supported by internal institutional advantages and favorable external opportunities.

Strength Cluster Analysis

The analysis of the Strengths cluster identified the most influential internal factors supporting waqf-based takaful development.

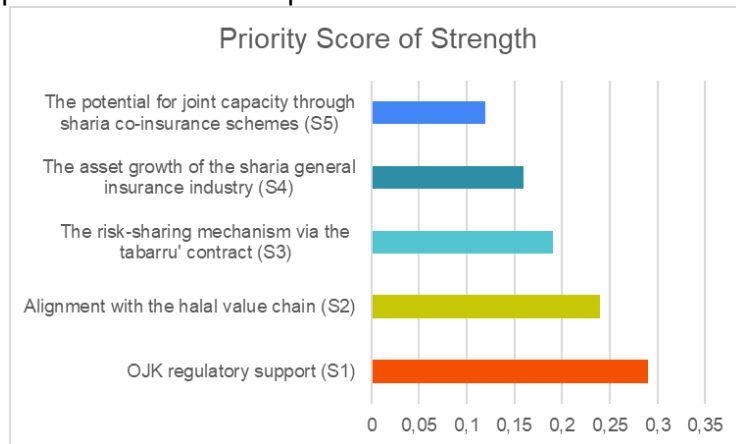


Figure 3. Priority Weights of Strength Factors

Among all strength variables, OJK regulatory support (S1) received the highest priority weight (0.29), followed by the tabarru' risk-sharing mechanism (S3) with a weight of 0.24. Asset growth within the sharia insurance industry (S4), alignment with the halal value chain (S2), and co-insurance potential (S5) ranked third, fourth, and fifth respectively.

These results indicate that regulatory support and Sharia-compliant risk-sharing mechanisms are considered the most critical internal foundations for integrating waqf and takaful within a sustainable financial ecosystem.

Weakness Cluster Analysis

The Weakness cluster identifies internal limitations that may hinder the development of waqf-based takaful products.

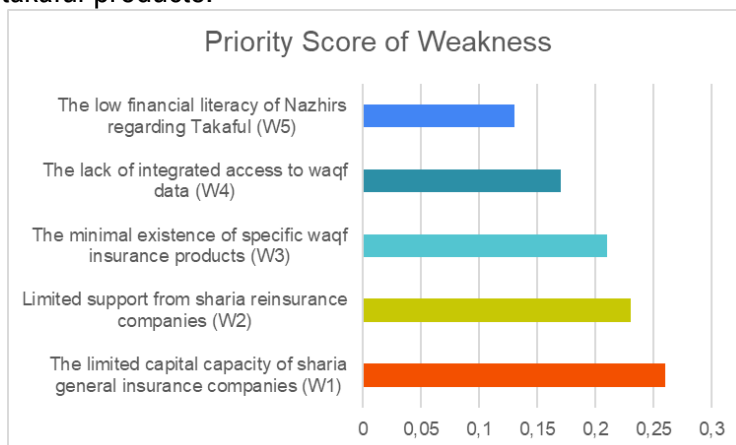


Figure 4. Priority Weights of Weakness Factors

The absence of specific waqf-based insurance products (W3) emerged as the most significant weakness with a priority weight of 0.26. Limited capital capacity (W1) and inadequate sharia reinsurance support (W2) ranked second and third respectively.

Fragmented waqf data systems (W4) and low literacy among waqf managers (W5) also represent important challenges requiring strategic intervention.

These findings indicate that institutional readiness and product innovation remain critical issues for the takaful industry.

Opportunity Cluster Analysis

The Opportunity cluster highlights external conditions that can facilitate the expansion of waqf-based takaful products.

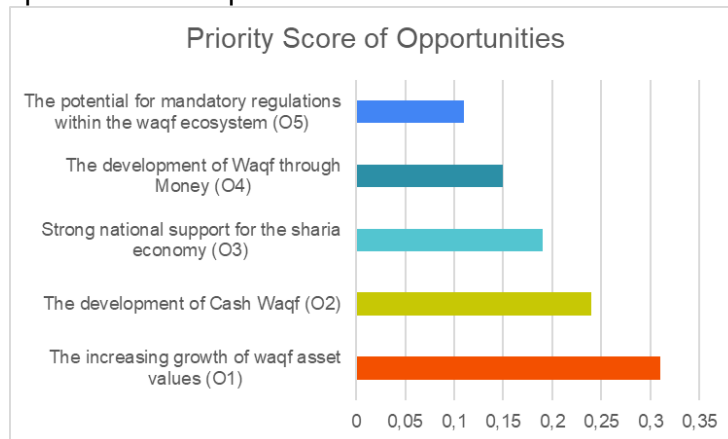


Figure 5. Priority Weights of Opportunity Factors

The increasing value of waqf assets (O1) was identified as the most influential opportunity with a weight of 0.31. This was followed by the expansion of cash waqf (O2) with 0.24 and national support for Islamic economic development (O3) with 0.19.

The findings indicate that Indonesia possesses a substantial untapped market for waqf-based takaful products, particularly within productive waqf and cash waqf sectors.

Threat Cluster Analysis

The Threat cluster identifies external factors that may impede ecosystem integration.

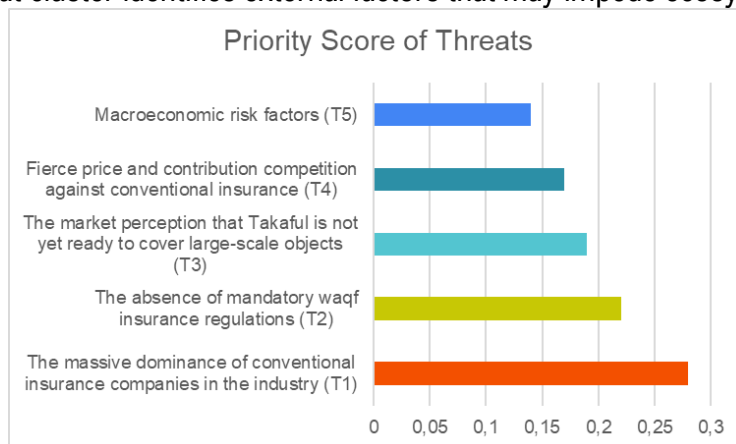


Figure 6. Priority Weights of Threat Factors

The dominance of conventional insurance companies (T1) received the highest threat score with a weight of 0.28. The absence of mandatory waqf protection regulations

(T2) ranked second with 0.22, followed by market perceptions regarding limited takaful capacity (T3).

These findings suggest that regulatory uncertainty and strong competition from conventional insurers remain significant obstacles to market expansion.

Development of the Inclusive Takaful Waqf Ecosystem (ITWE)

Based on the results of the ANP-SWOT analysis, an integrated ecosystem model referred to as the Inclusive Takaful Waqf Ecosystem (ITWE) was developed.

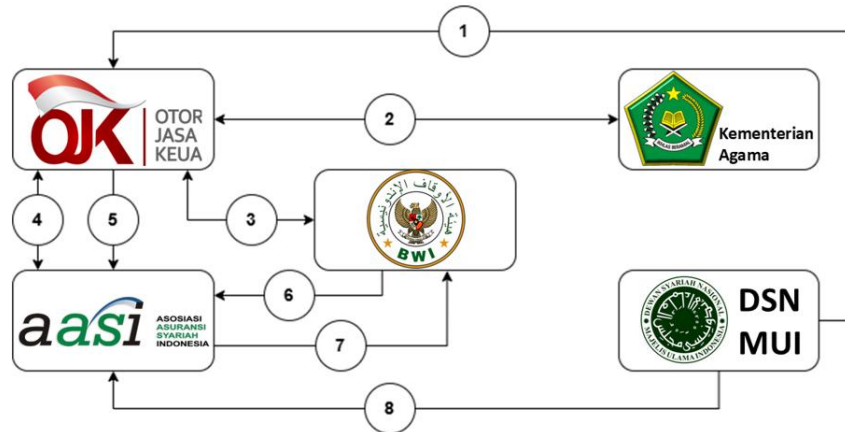


Figure 7. Inclusive Takaful Waqf Ecosystem (ITWE)

The ITWE model integrates key stakeholders within the Islamic financial ecosystem, including waqf institutions, takaful operators, OJK, DSN-MUI, the Ministry of Religious Affairs, AASI, waqif, nazhir, and beneficiaries. The model is designed to facilitate coordination, improve financial inclusion, strengthen governance, and provide sustainable protection for waqf assets.

The findings indicate that ITWE functions as an ecosystem-based framework that connects Islamic social finance and Islamic commercial finance within a single operational structure.

Proposed Development of Waqf-Based Takaful Products

The study also identified several potential product categories that can be developed within the ITWE framework.

Table 2. Proposed Waqf-Based Takaful Product Development

Class Of Business	Benefit
Property	A program that promises protection against one (1) or more insurable risks arising from an uncertain event affecting the insured property, by providing compensation to the Policyholder or Participant for losses, damages, costs incurred, loss of profits, or legal liabilities to third parties that the Policyholder or Participant may suffer based on Sharia principles.
Motor Vehicle	A program that promises protection against loss and/or damage to Motor Vehicles and/or insured interests directly caused by collision, impact, overturning, skidding, or sinking, malicious acts, theft, and fire, by providing compensation to the Policyholder or Participant for losses, damages, incurred costs, loss of profits, or legal liability to third parties

	that the Policyholder or Participant may suffer based on Sharia principles.
Personal Accident	A program that promises protection against one (1) or more types of risks by providing compensation or payment to the Policyholder, Insured, or Participant, or other entitled parties in the event of accident based on sharia principles.
Health	A program that promises protection against one (1) or more types of risks by providing compensation or payment to the Policyholder, Insured, or Participant, or other entitled parties related to the physical health condition of a person or the decline in the health condition of a person covered based on Sharia principles.
Engineering	A program that promises protection against one (1) or more insurable risks arising from an uncertain event affecting the insured construction object, by providing compensation to the Policyholder or Participant for losses, damages, incurred costs, loss of profits, or legal liabilities to third parties that may be suffered by the Policyholder or Participant based on Sharia principles;
Liability	A program that promises protection against one (1) or more types of third-party legal liability risks arising from an uncertain event by providing compensation to the Policyholder or Participant for losses, damages, incurred costs, loss of profits, or legal liability to third parties that may be suffered by the Policyholder, Insured, or Participant based on Sharia principles.
Livestock	A program that promises protection against one (1) or more insurable risks arising from an uncertain event affecting the insured livestock, by providing compensation to the Policyholder or Participant for losses, damages, costs incurred, loss of profits, or legal liabilities to third parties that may be suffered by the Policyholder or Participant based on Sharia principles.
PAYDI	The program that provides the least protection against the risk of death and offers benefits based on the investment returns from a fund specifically formed for Sharia-compliant insurance products.
Credit	Sharia General Insurance Business Line Program that provides management of the risk of failure to fulfill the financial obligations of the Debtor to the Creditor in accordance with the Sharia Financing agreement based on Sharia principles.
Suretyship	The Sharia General Insurance Business line program that guaranties the principal's ability to fulfill obligations according to the main agreement between the principal and the obligee based on Sharia principles.

The proposed products include property, engineering, health, personal accident, livestock, motor vehicle, liability, credit, suretyship, and investment-linked takaful products. These products provide opportunities for expanding risk protection coverage while supporting the sustainability of productive waqf assets across different sectors.

Overall, the results demonstrate that the integration of waqf and takaful through the ITWE framework possesses significant potential to strengthen waqf asset protection, expand Islamic financial inclusion, and support the sustainable growth of Indonesia's Islamic financial ecosystem.

Discussion

The findings demonstrate that the development of waqf-based takaful products in Indonesia cannot be understood solely as a matter of product innovation within the Islamic insurance industry. Rather, it represents a broader challenge concerning the integration of Islamic commercial finance and Islamic social finance within a unified ecosystem. The results reveal that while Indonesia possesses enormous waqf assets and a rapidly developing Islamic economic infrastructure, the protection of waqf assets through takaful remains limited. This situation creates a paradox in which valuable religious and social assets continue to face substantial risks despite the availability of Sharia-compliant risk management mechanisms.

The ANP-SWOT analysis identified regulatory support from the Financial Services Authority (OJK) as the most influential strength factor. This finding highlights the central role of regulatory institutions in facilitating innovation within Islamic finance. Effective regulations provide legal certainty, strengthen public trust, and reduce institutional uncertainty, all of which are essential for the development of new financial products. Previous studies have similarly emphasized the importance of regulatory frameworks in accelerating Islamic financial development and encouraging institutional collaboration. The present study extends this perspective by demonstrating that regulatory support is not merely an enabling factor but constitutes the primary foundation for integrating waqf and takaful within a sustainable ecosystem.

The findings also reveal that the *tabarru'* risk-sharing mechanism represents one of the strongest internal advantages supporting waqf-based takaful development. This result confirms the theoretical compatibility between waqf and takaful. Both institutions are grounded in the principles of mutual assistance, social solidarity, and public welfare. The risk-sharing nature of takaful aligns closely with the objectives of waqf, particularly in preserving social assets for long-term community benefit. This finding supports previous studies that argue for the compatibility of Islamic social finance and Islamic commercial finance instruments. However, while earlier studies primarily discussed compatibility at the conceptual level, the present research provides a more operational perspective by demonstrating how such compatibility can be institutionalized within an ecosystem framework.

Among the opportunity factors, the increasing value of waqf assets emerged as the most influential external driver. Indonesia's estimated waqf assets of approximately IDR 2,000 trillion and annual cash waqf potential of IDR 181 trillion indicate the existence of a substantial untapped market for Islamic insurance services. The results suggest that waqf institutions should no longer be viewed solely as beneficiaries of financial services but also as strategic actors capable of driving innovation within the Islamic financial industry. This finding reinforces arguments advanced in recent Islamic finance literature that social finance instruments possess significant potential to support sustainable economic development when integrated with commercial financial mechanisms.

Conversely, the analysis identified the absence of specific waqf-based takaful products as the most significant internal weakness. This finding indicates that innovation within the takaful industry remains largely incremental and has yet to adequately address the unique characteristics of waqf assets. Most existing products are designed for individual or commercial customers rather than institutional social assets. Consequently,

many waqf institutions either remain uninsured or rely on conventional insurance products that may not fully align with Sharia principles. This finding supports previous studies highlighting the limited operational implementation of waqf-takaful integration and demonstrates the necessity of developing more specialized products tailored to the needs of waqf institutions.

The dominance of conventional insurance companies was identified as the most significant threat to the expansion of waqf-based takaful products. Conventional insurers possess larger capital bases, broader distribution networks, stronger technological capabilities, and greater market penetration. As a result, Islamic insurance operators face substantial competitive pressure when attempting to expand into new market segments. However, the findings suggest that takaful should not compete solely on price or market size. Instead, its competitive advantage lies in its ability to combine financial protection with social and religious value creation. This unique positioning enables takaful to serve market segments that prioritize Sharia compliance, social impact, and sustainable philanthropy.

One of the most important contributions of this study is the development of the Inclusive Takaful Waqf Ecosystem (ITWE). Unlike previous studies that focus primarily on contractual arrangements between waqf institutions and takaful operators, the ITWE model adopts an ecosystem perspective. The model recognizes that successful integration requires collaboration among multiple stakeholders, including regulators, waqf institutions, takaful companies, religious authorities, financial associations, donors, and beneficiaries. The ecosystem approach reflects contemporary developments in Islamic finance, which increasingly emphasize institutional interconnectedness, collaborative governance, and cross-sectoral integration.

From a theoretical perspective, the ITWE model contributes to the growing literature on Islamic financial ecosystems by extending existing discussions beyond the traditional separation between social and commercial finance. Previous research has frequently examined waqf, zakat, Islamic banking, and takaful as distinct institutional entities. In contrast, the ITWE framework conceptualizes these institutions as interconnected components of a broader Islamic economic system. This perspective supports ecosystem theory, which argues that sustainable innovation emerges from coordinated interactions among diverse actors rather than isolated organizational initiatives.

Furthermore, the ITWE model contributes to the literature on Islamic financial inclusion. Existing financial inclusion frameworks generally focus on expanding access to banking, financing, and insurance services. The findings of this study suggest that inclusion should also encompass access to institutional protection mechanisms for social assets. By providing systematic protection for waqf assets, the ITWE model expands the meaning of financial inclusion from individual participation toward institutional resilience and social sustainability. Consequently, the model integrates economic, social, and religious dimensions of inclusion within a single framework.

The findings also carry important policy implications. First, stronger regulatory coordination among OJK, BWI, DSN-MUI, KNEKS, and the Ministry of Religious Affairs is necessary to facilitate ecosystem integration. Second, specific regulatory frameworks governing waqf-based takaful products should be developed to provide legal certainty and operational guidance. Third, greater investment in literacy programs is required to enhance

awareness among waqf managers regarding the importance of risk mitigation and Islamic insurance. Finally, digital integration of waqf databases and insurance systems would improve transparency, facilitate risk assessment, and support the development of more accurate and efficient protection products.

Overall, the results indicate that the integration of waqf and takaful should not be viewed merely as a financial innovation but as a strategic mechanism for strengthening Islamic economic resilience. Through the proposed Inclusive Takaful Waqf Ecosystem (ITWE), waqf assets can be protected more effectively, Islamic financial inclusion can be expanded, and the long-term sustainability of social welfare initiatives can be enhanced. The model therefore offers a practical and theoretically grounded framework for advancing the development of Islamic finance in Indonesia and other Muslim-majority countries.

Conclusion

This study examined the development of waqf-based takaful products in Indonesia through the integration of an inclusive Islamic financial ecosystem. The findings reveal that Indonesia possesses substantial opportunities for strengthening the integration of waqf and takaful due to the enormous value of national waqf assets, the growing development of cash waqf, and increasing governmental support for the Islamic economy. However, the study also identified several challenges, including the limited availability of waqf-specific takaful products, inadequate institutional capacity, fragmented waqf data systems, low literacy among waqf managers, and strong competition from conventional insurance companies.

The ANP-SWOT analysis indicates that regulatory support from the Financial Services Authority (OJK), the risk-sharing mechanism of *tabarru'*, and the growth of waqf assets constitute the most influential strategic factors supporting the development of waqf-based takaful products. Conversely, the absence of dedicated waqf insurance products and the dominance of conventional insurance institutions remain major obstacles to ecosystem expansion. These findings demonstrate that the future development of waqf-based takaful requires not only product innovation but also stronger institutional collaboration and ecosystem integration.

The principal contribution of this study is the development of the Inclusive Takaful Waqf Ecosystem (ITWE) model. Unlike previous studies that primarily focused on conceptual relationships between waqf and takaful, the ITWE model offers an operational ecosystem framework that integrates regulators, waqf institutions, takaful operators, religious authorities, donors, and beneficiaries within a coordinated structure. The model provides a mechanism for enhancing waqf asset protection, expanding Islamic financial inclusion, strengthening governance, and promoting sustainable socio-economic development.

From a theoretical perspective, this study contributes to the literature on Islamic financial ecosystems by demonstrating how Islamic social finance and Islamic commercial finance can be integrated within a collaborative institutional framework. From a practical perspective, the findings provide strategic guidance for policymakers, regulators, waqf institutions, and takaful operators seeking to strengthen the resilience and sustainability of waqf assets in Indonesia.

This study is subject to several limitations. The analysis relied primarily on expert assessments and focused on strategic-level considerations rather than large-scale implementation outcomes. Furthermore, the proposed ITWE model has not yet been tested through pilot implementation within actual waqf institutions or takaful operations. Future research may therefore examine the practical implementation of the ITWE model, evaluate its effectiveness in different institutional contexts, and explore the role of digital technologies in supporting ecosystem integration, governance, and financial inclusion within the waqf–takaful sector.

Overall, the study concludes that the integration of waqf and takaful through the Inclusive Takaful Waqf Ecosystem (ITWE) offers a promising pathway for strengthening waqf asset protection, enhancing Islamic financial inclusion, and supporting the sustainable development of Indonesia's Islamic economy.

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