

Risk Analysis and Sustainability of Sharia Insurance in Facing the Challenges of the Digital Era

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Abstract

Digitalization of Islamic finance leverages technology to enable financial transactions anytime and anywhere, removing specific time constraints. This research explores the challenges, opportunities, and risks associated with digitalization in the sharia insurance sector. Utilizing qualitative methods with a descriptive approach, the study reveals that challenges include: a) Upholding sharia principles in technology adoption, b) Ensuring security and compliance, c) Addressing bias in big data and AI, d) Forming strategic partnerships with fintech, and e) Investing in sustainable projects. Opportunities for digitalization in sharia insurance encompass: a) Easier customer reach, b) Enhanced customer education and facilities, c) Streamlined transactions and SOP completion, d) Broader introduction of sharia insurance, e) More effective marketing, and f) Collaborative efforts. Risks associated with digitalization can be mitigated by: a) Providing robust customer protection, b) Enhancing trust and security, and c) Reinforcing justice and sustainability. This research aims to provide a comprehensive understanding of these aspects to better guide the implementation of digital technologies in the sharia insurance sector.

Keywords: sharia insurance, digitalization, information technology

1. Introduction

Sustainable economic growth is the primary objective of many countries in the world. In the pursuit of inclusive and sustainable growth, the financial sector plays a crucial role. With the evolution of the times and changing market demands, Sharia banking has emerged as an attractive alternative to the conventional financial system. In various parts of the world, including in Muslim-majority countries, the presence of Shariah finance is growing rapidly and has become an important part of the global financial system. (Umida et al., 2024). The Sharia insurance industry in Indonesia has become an integral part of a rapidly growing economy, reflecting the people's desire to secure their financial future in a way consistent with Sharia principles. The reason behind Sharia insurance has huge business potential in Indonesia is the large number of Indonesians who are Muslim. Sharia insurance not only provides financial protection but also aims to create sustainable value for policemen and society in general. Investment fund management is a critical aspect of sharia insurance operations, requiring a careful and strategic approach to ensuring sustained portfolio growth and corporate operational sustainability. (Mutiah & Lubis, 2023). Shariah life insurance is a type of insurance that guarantees a person's life or death as a result of an accident or illness, whereas Sharia insurance is the kind of insurance to guarantee the impact of losses arising from the presence of unexpected losses such as natural disasters, theft and other.

Therefore, Indonesia must have sufficient strength and energy to boost the growth of the Shariah industry, especially the sharia insurance. The development of the Shariah industry in Indonesia will continue to increase with the growth of the sharia insurance company in Indonesia. It is driven by the official regulations of the Financial Services Authority relating to Shariah enterprise units (SBUs) owned by private or private (Siregar et al., 2023). The 4.0 industrial revolution makes the boundaries between the digital, physical and biological worlds ever thinner and even disappear. Prof. Klaus in Rafidah & Maharani (2024), as founder of the World Economic Forum, said that the 4.0 revolution could have a negative impact on governments that have not been able to take advantage of rapid technological developments. The use of technology in various fields such as in the field of economics will encourage thinking in bringing out product innovations so as not to be swallowed up with the development of the times. The Sharia insurance industry must take

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advantage of opportunities, namely by providing information and communication technology (ICT) based product innovations to provide a variety of options and broaden the reach of society. Another important thing to support the development of the sharia insurance industry in Indonesia is to take advantage of economic growth opportunities (Apriyanti, 2018). Digital transformation is not just a trend, but a trick in responding to growing market demands and the increasing complexity of the global financial ecosystem. The relevance of digital transformation in the context of Shariah financial management involves the application of technology to enhance transparency, accountability and efficiency, while ensuring compliance with the fundamental principles of the shariah. The development of the Sharia insurance industry that is advancing in the sharia financial market has a major impact on the economy of the people. Sharia insurance can contribute to transforming the economy through productive economic activities, adding value and increasing inclusiveness (Qothrunnada et al., 2023).

According to the Financial Services Authority (OJK) data for 2022, the financial literacy rate of the Indonesian population was 49.68%. However, the Shariah financial literacy rate was only 9.14%, which is lower than in general. This indicates that public knowledge and understanding of Sharia financial products and services is low. OJK data also indicate that the sharia financial inclusion rate in Indonesia by 2022 is 12.12%. This means that most people do not have adequate access to Sharia products and financial services and indicates gaps in access between urban and rural areas, as well as limited public understanding of sharia finance. (Qothrunnada et al., 2023) Some of the challenges faced in implementing Sharia management include a lack of understanding of Sharia principles, lack of support from management and employees, and lack of clear regulation from the government related to Sharia administration. In addition, there are still concerns from investors and consumers about the safety and reliability of halal products produced by companies that apply Shariah management. (Bakhri et al., 2022). Therefore, greater efforts are needed to promote Shariah management as a sustainable financial and business development strategy in the halal industry. Governments, financial institutions and companies should work together to improve understanding of Sharia insurance and develop clear regulations related to the implementation of sharia insurance. In addition, companies must be committed to implementing Sharia insurance effectively and provide education and training to employees on Sharia principles. So, this study will examine the risk analysis and sustainability of sharia insurance in the face of the challenges of the era of digitalization in Indonesia.

2. Literature Review

2.1. Insurance

Insurance in Arabic is called *attaka'min*, the insurer is called *mu'ammin*, while the insured is known as *mu'amman lahu* or *musta'min*. *Atta'min* is derived from the word *amana* which means protection, peace, security and freedom from fear. The other term for sharia insurance is *takaful*. The meaning of *takaful* according to Sheikh Abu Zahra quoted in Fitrah & Aslami (2022), is that every individual of a company is under the guarantee or liability of its company. Everyone qualifies to be a worthy guarantor of all human potential in a society suitable for the maintenance of individual happiness. Article 1 (1) states that insurance is an agreement between two parties, namely the insurance company and the policyholder, which forms the basis for the acceptance of premiums by the insurer in exchange for: to provide compensation to the insured or the policy holder for loss, damage, costs incurred, loss of profit, or legal liability to a third party that may be suffered by the assured, or the policy holder due to the occurrence of an uncertain event; or to provide payment based on the death of the insufficient person or on the lifetime of the liable person with a major benefit which has been established and/or based on fund management results. (Susmita, 2021). In general, insurance can be defined as liability or it is often mentioned that insurance means an agreement between two parties. Then the second party or the insurance company collects the premiums from many participants and manages the funds. The second party must then provide a guarantee to the participant if something happens against what is already in the agreement. In this case, simply, insurance can be understood as the liability given by the company to the participant who pays the allowance. (Ajib, 2019).

2.2. Sharia insurance

Sharia insurance is a form of insurance that is based on the principles of Shariah or Islamic law. The basic concept of Sharia insurance is based upon the principle of justice, mutual assistance, and avoid the elements of interest, speculation and uncertainty that are not permitted in Islam. In Sharia insurance, the risks encountered by the insurer are transferred to the insurance company with the payment of the fixed premiums and in case of loss, the participant is entitled to obtain compensation in accordance with the principle of Sharia. (Apriadi et al., 2024). The Sharia insurance sector has shown positive growth with offers that are in line with Sharia principles. The sector provides protective solutions for individuals and that prioritize sustainability and ethics in risk management. Provision of more innovative and relevant

sharia insurance products to customer needs is expected to accelerate the growth of this sector. Suryosumirat states that the Sharia sector is also a major attraction for Sharia-based investment. The concept of ownership and financing in line with Sharia principles provides promising investment opportunities. The sector is implemented in accordance with Islamic law, becoming a magnet for investors seeking sustainable economic growth. The role and importance of Islamic finance in the context of the global economy cannot be underestimated. Islamic finance makes a significant contribution to creating sustainable economic stability and growth. With principles based on Sharia law can encourage fair, transparent, and accountable financial practices. It helps prevent harmful interest practices and excessive speculation. Islamic financial institutions also play an important role in promoting financial inclusion, by providing access to financial products and services that are consistent with religious beliefs and values for Muslim communities. In addition, the sector also gives impetus to productive investments in real sectors, such as industry, agriculture, and infrastructure, which contribute to job creation and sustainable economic growth.(Fitroh, 2023).

2.3. Digitalization

Digitalization is the process of conversion of information from analogue to digital form. In the business context, digitalization refers to the use of digital technology to update or change business operations to be more efficient and efficient. The utilization of digital technologies to transform business and its operating models in order to take advantage of new opportunities offered by such technologies.(Rafidah, 2024). Gartner in stated that digitization is a use of digital technology for new business models that can offer value-generating opportunities. In companies, digitization provides an opportunity to enhance their business. It represents digital business and the integrity of digital technology into everyday life. Digitalization has a huge impact because it can change human habits of accessing information and electronic services. Besides, digitization can affect developing in various sectors becoming extremely rapid. Digital transformation is widely seen as a driver of change in all contexts, especially in the business context and affects aspects of human life based on the use of technology and digitalization. Digital technology has transformed the public sector by affecting applications, processes, cultures, structures and responsibilities as well as employee duties. Digital transformation can be defined as a modification (or adaptation) of business models resulting from the dynamic pace of technological advances and innovations that trigger changes in consumer and social behavior. Digitalization will facilitate and accelerate public service processes and decision-making.(Tulungen et al., 2022).

3. Research Method and Materials

Quantitative research is a type of research that produces data calculations of a descriptive and numerical nature and focuses on an in-depth understanding of the phenomena being studied. (Moleong, 2016). Qualitative research is often used in social sciences, education, and psychology, and can be done with a variety of approaches such as case studies, phenomenology and ethnography (Sugiyono, 2019).

In this study, samples were taken based on the Slovin formula which is formulated as follows:

$$n = \frac{N}{1 + N(e^2)}$$

Description :

- n = sample
- N = population
- E = Error rate in sampling

It is known that the number of students at UINSU is 4300 consisting of men and women. In writing this study, the researchers used 85% and 15% confidence for the errors they obtained. Then this sample calculation uses the Slovin formula, as follows:

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{100}{1 + 100(0.05^2)}$$

$$n = \frac{100}{1 + 0.25}$$

$$n = \frac{100}{1,25}$$

$$n = 80$$

So the research data to be carried out is 80 samples that will be examined after being calculated using the Slovin formula that above has been calculated.

Data in this study uses research instruments such as: observations, interviews, questionnaire contents and documentation. Data analysis in this study uses several steps which include:

- 1) data reduction, choosing the substance that matches the research topic,
- 2) data display, data presentation, and
- 3) conclusion drawings. (Muhammad Nazir, 2017).

In data processing, the first step was compile the data obtained and then perform data interpretation referring to theoretical references to the research problem, as well as draw conclusions in order to be able to answer the problems that arise in this research (Apriadi et al., 2024).

4. Results and Discussion

4.1. Results

The characteristics of respondents based on education were divided into respondents with a level of equal high school education of 34 per cent and respondents of Strata 1 of 66%. More clearly can be seen in the Table 1.

Table 1. Classification of Gender Types

No	Gender Types	Totally (%)
1	Men	66%
2	Women	34%
Total		100%

4.1.1. Validity Test

The validity test is used to determine whether or not the question instrument used for this study is valid.(Yusup, 2018). The validity test is used by comparing r-Calculation and r-Table with the r-Computation > r-table clause so that the data can be declared valid and vice versa. Validity test results are presented in Table 2.

Based on the validity test results in Table 2, all data has r-Calculate> r-Table values. Then all data in this study can be declared valid

4.1.2. Reability test

A realism test was performed to find out whether the questionnaire used in this study was reliable or not. Relliability tests can be performed simultaneously with details of questions in the questionnaire (Yusup, 2018). A data can be said to be reliable when the cronbach’s alpha value of a variable is above 0.6. The reliability test in this study is presented in Table 3.

Based on the results of the reliability test in Table 4 stated that cronbach’s alpha value of the whole variable above 0.6 which means the questionnaire used in this study is reliable and can be used as a data collection instrument in this research.

4.2. Discussion

4.2.1. Challenges and Opportunities

In the Application of Digitalization to the Sharia Insurance Sector Shariah financial digitization is an initiative in the shariah finance world that uses technology to carry out financial transactions anytime, anywhere, and without any time limit. The implementation of digitalization in the Shariah financial sector aims to facilitate access for less experienced

people in terms of finance and financial services. More than just facilitating, Shariah financial digitization also opens up opportunities for people to access various financial services products and apply for funding directly or in other words, improving public accessibility to Shari'ah financial services (Qothrunnada et al., 2023). Sharia insurance is known as a brand of all aspects and the composition of its activities is characterized by the difference whether an insurance is managed in accordance with the standards of Sharia principles or not, or is still mixed with conventional insurance. Therefore, all sharia financial products, whether banking or non-banking, such as sharia insurance must be assured that they have been placed within the limits of the rules and provisions of the Sharia, which are far from any physical or empirical existence that indicates the direction of fraud, interest, uncertainty of the risks that are raised, insurance claims that are overstretched or the concealment of the true amount of liability (*gharar, maisyir*). Once it is established that the whole product is able to comply with the provisions of the law of Shariah then this will have an impact comparable to having the product of the sharia that attracts the interest of the Muslim consumer's purchasing power (Susmita, 2021).

Table 3. Validity test

Question of item	r-count	r-Table
X1 Risk-based Business Opportunities		
X1.1	0.891	0.155
X1.2	0.723	0.155
X1.3	0.745	0.155
X1.4	0.715	0.155
X1.5	0.676	0.155
X1.6	0.556	0.155
X2 Capital		
X2.1	0.789	0.155
X2.2	0.756	0.155
X2.3	0.678	0.155
X2.4	0.347	0.155
X2.5	0.897	0.155
X2.6	0.656	0.155
X3 Development of Sharia Insurance		
X3.1	0.456	0.155
X3.2	0.784	0.155
X3.3	0.465	0.155
X3.4	0.557	0.155
X3.5	0.890	0.155
X3.6	0.759	0.155
Y Income		
Y1	0.345	0.155
Y2	0.767	0.155
Y3	0.676	0.155
Y4	0.734	0.155
Y5	0.745	0.155
Y6	0.673	0.155

Table 4. Realibility test

Variable	Cronbach's Alpha	Description
Oppurtunity (X1)	0.785	Reliabel
Capital (X2)	0.834	Reliabel
Development of shrimp straw business (X3)	0.890	Reliabel
Income (Y)	0.881	Reliabel

The digitization of the financial system and technology is called Financial Technology (fintech) which is the innovation of the digital financial system so that people can easily access financial products and services and weaken the barrier to entry. KPMG defines the financial technology industry as a technology-based business that competes, or collaborates with financial institutions. Fintech refers to financial services or innovative products delivered through new technologies. This development of fintech changes the current pattern of financial business models where weakening the barrier to entry gives a role to fintech in generating unregulated behaviour that runs a business model like a company

or regulated institutio (Nurfalah, 2019). Rokhmat said that there are two factors that lead to evolution and innovation in finance: demand and supply. In terms of demand, there are two factors. First, consumer interest in innovation has changed; ease of access to the Internet drives high expectations of convenience, speed, low cost and other network services; changes in preferences caused by demographics, such as job groups or families. Second, the evolution of technology; technological innovation in providing services is growing rapidly by leveraging new models. New business models and technology applications bring new players into the financial industries, like big data, artificial intelligence, machine learning, cloud computing, and biometrics (Afwadzi, 2024). The use of digitalization as an attempt to develop the sharia insurance sector sustainably in the future is not an easy thing to maintain. The Industry 4.0 revolution has brought major changes in many aspects of life, including in the financial sector. Shariah finance with its unique principles will face some specific challenges in adopting the latest technology as follows (Rafidah, 2024)

4.2.2. *Risk Analysis of the Application of Digitalization in the Development of Sharia Insurance*

According to Sirojudin in, that conclusion with the presence of an increasingly rapid technological revolution has a significant impact on the Shariah financial system. Thus, the growth of the Sharia financial industry in this era of globalization has grown very rapidly. This research resulted that technology greatly affects the patterns of everyday activities that are influenced by technology so that it impacts on the efficiency and efficiency of the entire activities carried out. In addition, digitalization can offer both a threat and an opportunity to the Sharia insurance sector.(Rahmawati, 2022). Sharia insurance is based on the principle of Shariah with a commitment to help (*ta'awuni*) and protect (*takafuli*) among the participants through the formation of funds (*dana tabarru'*) managed according to the principles of shariah to face certain risks. As for the principles of Shariah consisting of (Handayani et al., 2023): Risk is shared between the company and the participant. Forms a grant fund in the tabarru account. Participants are both bearers and recipients of the grant fund. Transparent, Do not contain (*Mais, Gharar, and Riba*), Claims are liquidated from joint savings (*tabarru'*), Investment in shariah-based financial institutions.

4.2.3. *The most important factor driving the growth of the digital-based sharia insurance sector is the use of information technology.*

Software and big data technology can be used to analyze the risks posed by prospective customers, but this is not always a negative thing for technology because almost everyone has a social media account that stores their personal data. In today's digital age, companies have to undergo a radical transformation into institutions that offer public financing easily and transparently. Products and services already known. Given that today there are many banking activities in terms of financing taken over by start-ups using financial technology or fintech programs. As for the role in the implementation of fintech is as follows (Nurangraeni, 2020): Provide structural solutions for e-commerce growth. Encourage the growth of small and medium-sized enterprises and the birth of new entrepreneurs. Encourages creative efforts to critical mass market distribution. Enable the development of markets, especially those still not served by financial services and conventional companies. (unbanked population). Furthermore, there are several factors that should be taken into account in applying digitalization to the sharia insurance sector, including: The practice of insurance companies is aimed at providing services to the society in the form of guarantees for the presence of risks and disasters that occur. Acta ta'min is similar to Acta mu'min because on both sides there are obligations that must be carried out. Acta Ta'min resembles Nizham 'awaqil in Islam. Acta ta'min is not Acta B&B but Acta tadhammun/takafulli between the insured participants face the disaster and alleviate its impact. Acta TA'min included Acta Mu'awah. Despite increased interest, some people still do not fully understand the laws and principles governing Sharia investment instruments. This can lead to uncertainty and lack of confidence among potential investors. In addition, policies and regulations that support the Sharia capital markets are still not uniform in various countries. Some countries may have a supporting framework, while others still face obstacles in drawing up regulations to accommodate the needs of the Sharial capital market. This regulatory uncertainty could be an obstacle to attracting investment and developing Sharia capital markets globally (Atikah & Sayudin, 2024). In this context, the role of insurance becomes a crucial factor in supporting the success and sustainability of Sharia housing financing. Here are some steps that can be taken in addressing the risks that may arise in the application of digitalization to the Shariah insurance sector, namely (Annisa, 2022):

Providing protection against customers, insurance is very important in sharia housing financing to protect companies and customers from the risk of failure to pay or the possibility of default. In the case of customers experiencing financial constraints or certain risks, insurance can be a guarantee of payment or replacement of losses thus reducing risk of distribution of funds. Increasing confidence and security, the existence of insurance in sharia financing can increase trust and security for both companies and customers. Customers feel more protected and secure when having insurance that protects them. Strengthening justice and sustainability, the use of insurance in the financing of sharia insurance also has a role in strengthening the aspects of justice and durability. Insurance allows the risk to be fairly distributed between

the company and the customer, as well as helping to maintain the stability of Sharia financing for the long term. Sharia insurance offers protection and benefits in accordance with Sharia principles, where risks are shared and there are no elements of speculation or interest in insurance contracts. The principle of Sharia insurance is different from conventional insurance. Takaful involves joint contributions to help fellow members suffer losses, where risk and gain are shared fairly. Its operations are based on the principle of Shariah, such as the avoidance of interest and the sharing of risk and profit between the company and the customer. (Kurnia et al., 2023).

4.2.4. *Risk control in the Sharia insurance industry plays an important role in ensuring the stability and operational sustainability of the company.*

In the literature, it is found that effective risk control involves the identification, evaluation, and mitigation of risks relevant to Sharia principles, such as interest risk, gharar (uncertainty), and maysir. (perjudian). Emphasis on proactive risk management based on Sharia principles can help Sharia insurance companies avoid conflict with Sharia values. However, there are some complexities emerging in risk management in the context of Shariah. One of them is the restriction of financial instruments that conform to the principle of Shariah available for risk mitigation. So the importance of conducting financial report analysis in the sharia insurance industry has become increasingly globally recognized. This is not surprising considering the vital role of Sharia insurance in managing complex financial risks by considering Sharia principles. (Apriadi et al., 2024).

5. Conclusion

Based on the results of previously published research, the conclusion in this study is as follows, challenges in applying digitization to the Sharia insurance sector. Upholding Sharia principles in technology adoption. ensuring security and compliance in digitization. Overcoming bias in big data and AI. Strategic partnerships with Fintech Technology. Investing in sustainable projects. As for the opportunities that require companies to implement digitalization in the sharia insurance sector. Make it easier for companies to reach customers even with remote positions. Facilitate companies in providing education and facilities to customers. Facilitate customers in carrying out various types of transactions such as payment of premiums, filing of claims, and filling of SOPs. Enable companies to introduce Sharia insurance to the general public. Facilitate companies in the marketing process with a broader reach and in an effective way. Facilitate companies to make various kinds of collaboration with other institutions in making the latest innovations.

The risks that may arise from the implementation of digitalization in the Sharia insurance sector can be addressed in several ways. Providing protection to customers. Enhancing trust and security, strengthening justice and sustainability. Its operations are based on the principle of Shariah, which includes: the existence of assistance between policy holders, the risk being shared between companies and participants, the form of a grant fund in the tabarru account, participants both bearers and recipients of the grant, transparent, does not contain, claims derived from joint savings (tabarru'), investments in sharia-based financial institutions.

Efforts that can be made to face the challenges and exploit the opportunities of digitalization in the Shariah insurance sector include: ensuring that the sharia principles remain awake in every adoption of technology, strengthening the security and compliance of digitalisation, as well as overcoming bias in the use of big data and AI. Furthermore, establishing strategic partnerships with fintech companies and investing in sustainable projects is also important. Digitalization makes it easier for companies to reach remote customers, provide education and facilities, facilitate premium transactions and claims, introduce Sharia insurance to the general public, improve marketing effectiveness, and enable innovative collaboration with other institutions. Risks that may arise can be overcome by providing adequate protection to customers, enhancing confidence and security, and strengthening the principles of justice and sustainability. Sharia insurance operations must remain based on the principles of help-to-help between policyholders, risk-sharing, subsidy funds in tabarru accounts, transparency, exemption from maysir, gharar, and interest, and investment in sharia-based financial institutions.

References

- Afwadzi, B. (2024). Pengembangan Ekonomi Berbasis Syariah Di Era Digital: Antara Peluang, Tantangan, Dan Kendala. *Journal of Sharia Economics*, 5(1), 70–86. <https://doi.org/10.22373/jose.v5i1.3966>
- Ajib, M. (2019). Asuransi Syariah. *Asuransi Syariah*, 1–96.
- Annisa, V. (2022). Penerapan Asuransi Dalam Pembiayaan Kredit Pemilikan Rumah (Kpr) Flpp Pada Pt. Bank Sumut

- Syariah Kantor Cabang Pembantu Syariah Kisaran. *EKOMA : Jurnal Ekonomi, Manajemen, Akuntansi*, 2(1), 12–22. <https://doi.org/10.56799/ekoma.v2i1.880>
- Apriadi, A., Aulia, I., Akbar, R., Fitria, A. M., & Sisdianto, E. (2024). ANALISIS LAPORAN KEUANGAN ASURANSI SYARIAH: PERANAN TATA KELOLA DAN PENGENDALIAN RISIKO. *Jurnal Media Akademik*, 2(4), 1–14.
- Apriyanti, W. (2018). Perkembangan Industri Perbankan Syariah Di Indonesia : Analisis Peluang Dan Tantangan. *Maksimum*, 8(1), 16. <https://doi.org/10.26714/mki.8.1.2018.16-23>
- Atikah, N., & Sayudin. (2024). ANALISIS PERKEMBANGAN PASAR MODAL SYARIAH: TANTANGAN DAN PELUANG DALAM INVESTASI BERBASIS PRINSIP SYARIAH. *Jurnal Inovasi Global*, 2(1), 204–213. <https://doi.org/10.58344/jig.v2i1.54>
- Bakhri, S., Saiban, K., & Munir, M. (2022). Peran Lembaga Keuangan Syariah dalam Industri Halal sudut Pandang Maqosid Syariah. *Tasharruf: Journal of Islamic Economics and Business*, 3(1), 11–29. <https://doi.org/10.55757/tasharruf.v3i1.88>
- Fitroh, N. (2023). Peran Teknologi Disruptif dalam Transformasi Perbankan dan Keuangan Islam. *MUSYARAKAH: Journal of Sharia Economics (MJSE)*, 3(1), 76–90.
- Handayani, N. P., Widiastuti, D., Anwar, A., & Zahara, A. E. (2023). Problematika Asuransi Syariah (Takaful) di Indonesia. *GANAYA: Jurnal Ilmu Sosial Dan Humaniora*, 6, 1068–1076.
- Kurnia, E., Parmitasari, R. D. A., & Abdullah, M. W. (2023). TINJAUAN MENDALAM TERHADAP DINAMIKA LEMBAGA KEUANGAN SYARIAH: MASA DEPAN, TANTANGAN, DAN INOVASI. *Jurnal Ekonomi, Manajemen Dan Akuntansi*, 1(5), 292–303.
- Moleong, L. J. (2016). *Metode Penelitian Kualitatif Edisi Revisi*. PT Remaja Rosdakarya.
- Mutiah, A., & Lubis, F. A. (2023). Analisis Pengembangan Dana Investasi Asuransi Syariah Pada Pt Prudential Binjai. *Journal of Management*, 6(3), 325–336.
- Nazir, M. (2017). *Metode Penelitian*. Ghalia Indonesia.
- Nurangraeni, I. (2020). Inovasi Financial Technology (Fintech) pada Asuransi Syariah (Studi kasus: PT Duta Danadyakasa Teknologi). *JESI (Jurnal Ekonomi Syariah Indonesia)*, 9(2), 94. [https://doi.org/10.21927/jesi.2019.9\(2\).94-103](https://doi.org/10.21927/jesi.2019.9(2).94-103)
- Nurfalah, I. (2019). Digitalisasi Keuangan Syariah Menuju Keuangan Inklusif: Kerangka Maqashid Syariah. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan Dan Akuntansi*, 11(1), 55. <https://doi.org/10.35313/ekspansi.v11i1.1205>
- Qothrunnada, N. A., Iswanto, J., S, D. F., Hendrarti, B. G., & Subekan. (2023). Transformasi Digital Lembaga Keuangan Syariah: Peluang dan Implementasinya di Era Industri 4.0. *Indonesian Journal of Humanities and Social Sciences*, 4(3), 741–756.
- Rafidah, A. S. (2024). Inovasi dan Pengembangan Produk Keuangan Syariah: Tantangan dan Prospek Era Revolusi Industri 4.0. *Jurnal Ilmiah Edunomika*, 8(1), 1–14.
- Rahmawati, Y. (2022). AKUNTANSI SYARIAH DI INDONESIA DALAM ERA DIGITAL. *Indonesian Journal of Islamic Economics and Finance*, 2(1), 1–12.
- Siregar, A. N., Endang, Nababan, F. D., Sianturi, P. T., Ramli, R., & Tobing, S. (2023). Peran Asuransi Syariah Dalam Menyediakan Perlindungan Finansial Yang Islami. *Journal Of Social Science Research*, 3(6), 3384–3395.
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
- Susmita, D. A. (2021). Potensi Teknologi dan Media Sosial Dalam Meningkatkan Pemasaran Produk Asuransi Syariah. *VISA: Journal of Vision and Ideas*, 2(1), 39–52. <https://doi.org/10.47467/visa.v2i1.809>
- Tulungen, E., Saerang, D., & Maramis, J. (2022). TRANSFORMASI DIGITAL : PERAN KEPEMIMPINAN DIGITAL. *Jurnal EMBA*, 10(2), 1116–1123.
- Umida, N., Anggriani, R. A., Studi, P., Keuangan, M., Syariah, J., Ekonomi, D., Tinggi, S., Islam, A., & Bengkalis,

N. (2024). Pengembangan Perbankan Syariah Dan Dampaknya Terhadap Pembangunan Ekonomi. *Neraca Manajemen, Ekonomi*, 4(7), 181–194.