Environmental, Social, Governance (ESG) and Islamic Finance: A Review

Darwis Harahap[1], Mimma Maripatul Uula[2], Abdillah Arif Nasution[3]

[1]*UIN Syekh Ali Hasan Ahmad Addary Padangsidimpuan, Indonesia.*
[2]*Shariah Economics Applied Research and Training (SMART), Indonesia.*
[3]*Universitas Sumatera Utara, Indonesia*

This study aims to look at the development of research on Environmental, Social, Governance (ESG) and Islamic finance and research path that can be carried out based on journals published on this theme. This study used a qualitative method with a bibliometric analysis approach. The data used is secondary data with the theme "ESG & Islamic Finance", which comes from the Scopus database with a total of 44 journal articles. Then, the data is processed and analyzed using the VosViewer application to know the bibliometric map of “ESG & Islamic Finance” research development worldwide. The study results found that in the bibliometric author mapping, the authors who published the most research on the theme “ESG & Islamic Finance” were Ahmed A and Hassan M.K.; Chiaramonte I. Furthermore, based on the bibliometric keyword mapping, 4 clusters can become research lines with topics related to Sustainable Banking and Corporate Social Responsibility (ESG), Management of Financial Risk and the Impact of COVID-19, Financial Sustainability and Environment-Based Sharia Investment and The Role of Islamic Finance and Achieving the SDGs, and the words most used are Islamic Finance, Islamic Bank, and Environment.

Keywords: ESG; Islamic Finance; SDGs

*Correspondence:
Abdillah Arif Nasution
badinst@usu.ac.id

Received: 23 October 2022
Accepted: 16 November 2022
Published: 31 December 2022

Citation:
(2022) Environmental, Social, Governance (ESG) and Islamic Finance: A Review. Management and Sustainability. 1.1.

.

INTRODUCTION

ESG (Environmental, Social and Governance) is a framework used to evaluate company performance in these three areas, which are considered important factors in measuring the impact of sustainability and business ethics. The ESG component consists of 3 aspects: environmental, social and governance. Steblianskaia et al. (2023) explain that ESG is a concept used to evaluate a company's non-financial performance based on sustainability and ethical factors. In other words, the ESG is a framework that assesses how a company operates regarding its impact on the environment, its relationship with society and its governance practices. Socially responsible investors use the ESG criteria to screen investments and determine the sustainability and ethical impact of the choices investors have made. ESG-screened investments are considered good investments because they prioritize companies more likely to succeed in the long term and minimize risks for investors (Li et al., 2021).

Then, Islamic finance or Islamic finance is a way of managing money that adheres to Islamic moral principles, known as Sharia. Islamic finance refers to a financial system based on the belief that money should not have intrinsic value but is a vehicle for exchanging products and services that have real value. This principle emphasizes the importance of avoiding making money solely from money itself. In addition, Islamic Finance emphasizes the importance of avoiding risks that can lead to financial losses. Therefore, investments in illicit sectors, such as alcohol, tobacco and gambling, are completely avoided (Bank of England, 2022).

ESG and Islamic finance themselves have a close relationship or relationship. This relationship can be seen from shared principles, alignment with sustainability, potential overlap, and complementary investment approaches (Fadzillah, 2023; PWC, 2022; CFA Institute, 2019). Furthermore, incorporating ESG criteria into Islamic finance can provide several benefits, including promoting sustainability and ethical practices, diversifying risk and income streams, and aligning with general principles. This area has substantial global potential both in terms of growth and "Green" credentials (Hammod, 2022).

Even though ESG and Islamic finance are related, in reality, there are still some obstacles and challenges in implementing ESG practices in Islamic finance, including the lack of agreed standards, lack of agreed standards on what is meant by ESG investment and how it is mapped to Sharia principles that can hinder the growth of ESG investment in Islamic finance (Hammod, 2022; Pengally, 2022). This can make it difficult for investors to assess the ESG performance of Islamic financial products. The complexity of ESG screening: Incorporating ESG criteria into Islamic finance investments can be complex and requires the assistance of external experts to assess the compliance of proposed transactions. This can add to the cost and complexity of the investment process (Lawrence & Hewitt, 2022). Moreover, the appeal of ESG-focused investments in Islamic finance markets is largely limited to institutional and sophisticated investors. This can limit the growth potential of ESG investments in Islamic finance (Pengelly, 2022).

Thus, further research is needed to discuss ESG and Islamic finance. This is because the increased interest and growth of managed ESG-related assets are expected to encourage Islamic finance to progressively shift from negative screening of projects and operations to positive screening, where projects with positive ESG impacts are given priority (Damak et al., 2019). The complementary nature of ESG and Islamic finance can provide unique opportunities for financial services companies to diversify their risks and revenue streams while promoting sustainability and ethical practices (Halawi, 2023).

Several studies that discuss issues related to ESG and Islamic finance include Al Adawiyah et al. (2023), examining the Bibliometric computational mapping of sustainability publications and Islamic finance; Kashi & Shah (2023) reviewed a bibliometric review related to sustainable finance; and Hassan et al. (2021) explain a literature review related to Islamic finance. Based on the several studies above, no research specifically addresses ESG & Islamic Finance using bibliometric studies. Therefore, this study aims specifically to see the development of research on "ESG & Islamic Finance" worldwide published by journals with this theme and to see future research opportunities by formulating a future research agenda.

LITERATURE REVIEW

ESG stands for Environmental, Social, and Governance. The ESG is a framework used to evaluate a company's performance in these three areas, which are considered important factors in measuring the impact of sustainability and business ethics. The ESG component consists of 3 aspects, namely 1) environmental, referring to the company's impact on the environment, including carbon footprint, energy use, waste management, and natural resource conservation; 2) social, referring to the company's impact on society, including its treatment of employees, customer relations, community involvement, and human rights policies, and 3) governance, referring to the company's internal management and decision-making processes, including board structure, executive compensation, shareholder rights, and transparency in financial reporting. Investors are increasingly using ESG factors to evaluate a company's long-term sustainability and ethical impact. By considering a company's ESG performance, investors can make more informed decisions about where to invest a company's money. Companies also use ESG factors to increase their sustainability and ethical impact, as well as to attract socially responsible investors (Becchetti et al., 2022; Chan & Hsieh, 2022; Bulyga & Safonova, 2022; Tsygalov & Strizhov, 2022; Turner & Weirich, 2022; Dugar-Zhabon & Zeinalov, 2022).

ESG has links with Islamic finance, characterized by similarities and complementary potentials. Islamic finance is a way of managing money that adheres to Islamic moral principles, known as Sharia. It includes various financial activities such as saving, investing and borrowing to buy a house. Islamic finance is based on the belief that money should not have any value; rather, it is a way to exchange products and services that do have value. Islamic finance also emphasizes that it should not incur losses and should not invest in forbidden things such as alcohol, tobacco and gambling (Bank of England, 2022).

The relationship or link between ESG and Islamic finance can be explained from several points, namely, 1) shared principles, ESG and Islamic finance are based on ethical and moral principles. Islamic finance follows Sharia principles, including avoiding interest (riba) and promoting social and economic justice. ESG, on the other hand, focuses on environmental sustainability, social responsibility, and good governance; 2) alignment with sustainability, Islamic finance and ESG both aim to contribute to sustainable development and benefit society. While Islamic finance emphasizes social benefits in its transactions, ESG goes a step further by specifying the desired impact and how it should be achieved; 3) potential overlap, there is significant overlap between the financial instruments provided by Islamic finance and ESG finance. Both approaches consider the impact of investments on environmental and social factors and governance practices. Islamic finance can contribute to ESG goals by prioritizing projects with positive ESG impacts, and 4) complementary investment approach, integration of ESG and Islamic finance can be seen as a complementary investment approach. ESG and Islamic finance share common and unique characteristics when applied to equity and fixed-income investments. The principle-based approach of Islamic finance and the ESG's focus on sustainability can create an investment strategy that aligns with both principles (Fadzillah, 2023; PWC, 2022; CFA Institute, 2019).

Based on this, ESG (Environmental, Social, and Governance) is becoming increasingly important in the world of finance, including Islamic finance. There are several reasons behind this, including being able to promote sustainability. Islamic finance is based on ethical and moral principles emphasizing social justice and environmental sustainability. Incorporating ESG factors into Islamic finance can help promote sustainability by encouraging investment in companies prioritizing environmental and social responsibility. Improving risk management ESG factors can also help improve risk management in Islamic finance. By considering environmental and social risks, investors can make more informed decisions about the long-term viability of their investments. Then, to meet investor demands, there is a growing demand from investors for socially responsible investments, including in the Islamic finance sector.

Incorporating ESG factors into Islamic finance can help meet this demand and attract more investors. Furthermore, aligning with global standards, many global standards and initiatives, such as the UN's Sustainable Development Goals (SDGs), focus on promoting sustainability and social responsibility. By incorporating ESG factors into Islamic finance, it can be aligned with these global standards and initiatives. As well as increasing reputation incorporating ESG factors into Islamic finance can also help improve the industry's reputation. By promoting sustainability and social responsibility, Islamic finance can position itself as a responsible and ethical alternative to conventional finance (Jawad & Abdulla, 2022; Budiman et al., 2022; Mustafida & Fauziah, 2021; Hamidi, 2021; Ferri & Acosta, 2019).

Thus, it is important to see how far ESG & Islamic Finance is currently developing through research, and one of the methods that can be used to see research developments is bibliometrics using VosViewer. The method can create and display maps of journal authors and research paths based on co-citation data or keyword maps based on shared incident data. Furthermore, several studies relevant to this research include Qudah et al. (2022), discussing Islamic finance and financial technology and prospective topics for future research. The research results found four main research trends: the first trend shown was "Financial Inclusion and Corporate Governance in Islamic Fintech". The second trend focuses on "information technology and future Islamic financial services". The third trend is "Transformation of Islamic Finance: How Fintech Changed the Game". The fourth trend is related to "Islamic Finance: A Growing Force in the Digital Age". The research also provides a comprehensive analysis of research trends at the intersection of Islamic finance and financial technology, identifying future research directions.

Galletta et al. (2022) discover research trends, evaluate academic progress, author traits, and texts pertaining to Environmental, Social, and Governance (ESG) challenges in the banking industry. National and international agencies are paying more and more attention to these ESG aspects. In order to create medium- and long-term value, the banking industry is becoming more and more cognizant of the significance of incorporating the ESG dimension into financial strategies, procedures, and instruments. The study documents a wide range of facts, such as well-known writers in journals and institutions, often referenced works, the distribution of keywords, co-authors, and highly regarded publications and authors. The bibliometric analysis clearly outlines the progression of the several stages in this study as well as the emerging fields of research that demand more in-depth analysis. Other newest studies on ESG can be seen at Aizada et al., (2023), Verma & Mohnot (2023), Pratama et al., (2022) also Trisnowati et al., (2022).

Hassan et al. (2022) explains Islamic finance and fintech literature. Modern technology-driven financial innovation has fundamentally altered the financial sector's business paradigm. The analysis's findings indicate that there are four groupings (clusters), each of which is represented by a unique hue. The largest group, which has 158 authors, is highlighted in red. In addition, the second-largest group, which has 107 authors, is highlighted in green. The keyword occurrence network also reveals that Islamic Finance is the most prominent keyword in this context and frequently appears there.

Other relevant research Al Adawiyah et al. (2023) examines the Bibliometric computational mapping of sustainability publications and Islamic finance; Kashi & Shah (2023) reviewed a bibliometric review related to sustainable finance; Hassan et al. (2021) explain a literature review related to Islamic finance; and Taqi et al., (2021) on environmental accounting. In addition, there are also studies conducted using bibliometric method by As-Salafiyah et al., (2021), Rusydiana et al., (2021) and Marlina et al., (2021). Based on the several studies above, no research specifically addresses ESG & Islamic Finance using bibliometric studies. Therefore, this research was conducted to complement existing research and fill in the gaps in previous research. The purpose of this research specifically looks at the development of research on "ESG & Islamic Finance" worldwide published by journals with this theme and sees future research opportunities by formulating a future research agenda.

METHOD AND DATA

This study uses various scientific journal publications related to the theme "ESG & Islamic Finance" worldwide as data sources. Data was collected by searching for indexed journal publications in the Scopus database using the keywords "ESG & Islamic Finance". After that, articles or scientific journals that are relevant to the research theme will be selected based on the publication data that has been collected. Journals equipped with DOI are criteria for filtering and processing data using the software. There are 44 published journal articles in the "ESG & Islamic Finance" research theme. The development of publication trends related to the research topic was analyzed using VOSviewer software, which can display bibliometric maps and allows for more detailed analysis.

In order to build maps, VOSviewer uses the abbreviation VOS which refers to Visualizing Similarity. In previous studies, the VOS mapping technique has been used to obtain bibliometric visualizations, which are then analyzed. Furthermore, VOSviewer can create and display journal author maps based on co-citation data or keyword maps based on shared incident data. Therefore, in this study, journal maps related to "ESG & Islamic Finance" will be analyzed, including author maps and keywords which will then be analyzed for research paths that can be carried out in the future through clusters on keyword mapping.

The purpose of VOS is to place items in low dimensions such that the distance between the two items accurately reflects the uniformity or interrelation of the items. For each pair of items i and j, VOS requires an input similarity sij (sij $\geqslant$ 0). VOS treats the

Sij equation as a measurement on a ratio scale. The equations of sij are usually calculated using the power of association defined in Equation 1 (for example Van Eck & Waltman, 2007). VOSviewer determines the location of items in the map by minimizing:

$$V(x_i, \ldots, x_n) \ = \ \sum_{i<j} s_{ij} \left\| x_i - x_j \right\|^2 \qquad (1)$$

to be:

$$\frac{2}{n\,(n-1)} \sum_{i<j} \left\| x_i - x_j \right\| = 1 \qquad (2)$$

There are two computer programs that have already implemented VOS mapping techniques. Both of these programs use the SMACOF algorithm variants mentioned above to minimize Equation 1 to Equation 2.

This research uses a descriptive qualitative approach with meta-analysis and descriptive statistical literature studies based on 44 journal publications that discuss the theme "ESG & Islamic Finance". Meta-analysis is a method that integrates previous research related to a particular topic to evaluate the results of existing studies. Furthermore, the qualitative method used in this research is also called the constructive method, in which the data collected in the research process will be constructed into themes that are easier to understand and meaningful.

The sampling technique used in this study is a purposive non-probability sampling method, which aims to fulfil certain information following the desired research objectives. For example, several studies with a bibliometric approach on the same topic can be seen in Khairunnisa (2020), Puspita & Kartikawati (2022), Rusydiana & Bahri (2022), Rahayu & Irfany (2022), Uula (2022), Puspita (2022), Luthfi & Uula (2022), and Niswah (2022).

RESULTS AND DISCUSSION

This study discusses "ESG & Islamic Finance" using 44 published journal articles indexed in Scopus. Bibliometrics is a method used to measure and evaluate scientific performance by considering factors such as citations, patents, publications, and other more complex indicators. Bibliometric analyses were conducted to evaluate the activities of research, laboratories, and scientists and the performance of countries and scientific specialities. Several stages in the bibliometric analysis include identifying the research background, collecting the database (for the example Scopus, Web of Science/WoS or Dimensions database), and determining the main indicators for the research.

This section will deepen the meta-analysis results by showing a visual mapping chart depicting 44 journals related to "ESG & Islamic Finance". In this research, mapping is done by analyzing keywords and important or unique terms in journal articles. Mapping is a process for identifying elements of knowledge, configuration, dynamics, dependencies, and interactions among these elements. One of the main outputs is related to research clusters or research maps. The network visualization results of 44 journals from Scopus database with the theme "ESG & Islamic Finance" will be explained in more detail in the next section.

Bibliometric Author Mapping

Using bibliometric analysis using VOSviewer software, a mapping of authors who contributed to the "ESG & Islamic Finance" field was obtained. The resulting image provides a visual representation of the mapping. The bigger and brighter the dot marked in yellow, the greater the number of journal publications related to the theme "ESG & Islamic Finance" published by the author.

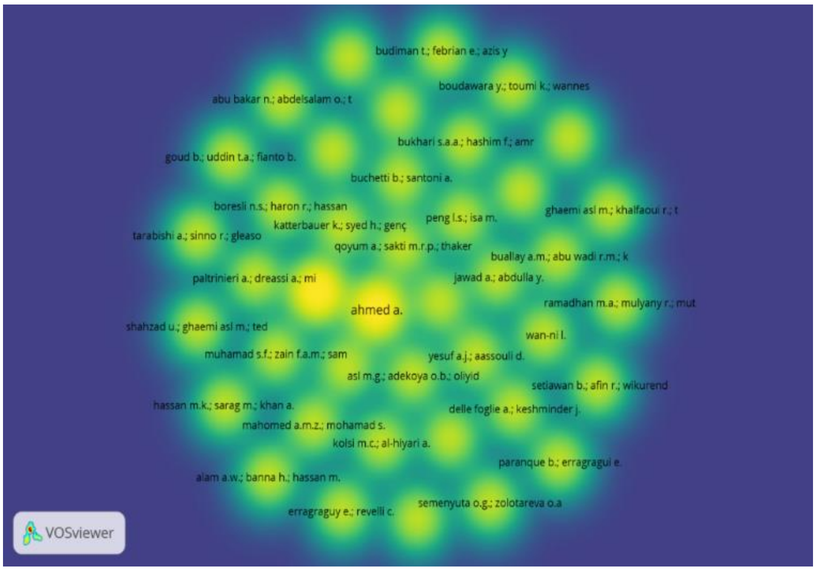

Figure 1. Author mapping

The figure above explains that the cluster density in the bibliometric map depends on the intensity of the yellow colour shown. And the yellow colour on the map depends on how many items are related to other items. For this reason, this section is very important to get an overview of the general structure of bibliometric maps, which are considered important for analysis. From this, the author who has published most of his work can be identified.

Every writer or researcher has a different tendency in every publication of his work. On some occasions, an author appears as a single author, but on other occasions, the author may co-author with other authors or researchers, so this will affect the cluster density and some clusters show different densities. However, authors with a relatively large cluster density identify that these authors publish the most research on the theme "ESG & Islamic Finance" when compared to authors with a lower cluster density, so the results found can be a reference for other researchers in the future. The analysis found that the authors who published the most Social "ESG & Islamic Finance" publications were Ahmed A, Hassan M.K, and Chiaramonte I.

Research Map

The figure below describes the trend of keywords that appear in the research theme "ESG & Islamic Finance", and the larger form is the word most used in journal publications with the theme "ESG & Islamic Finance".

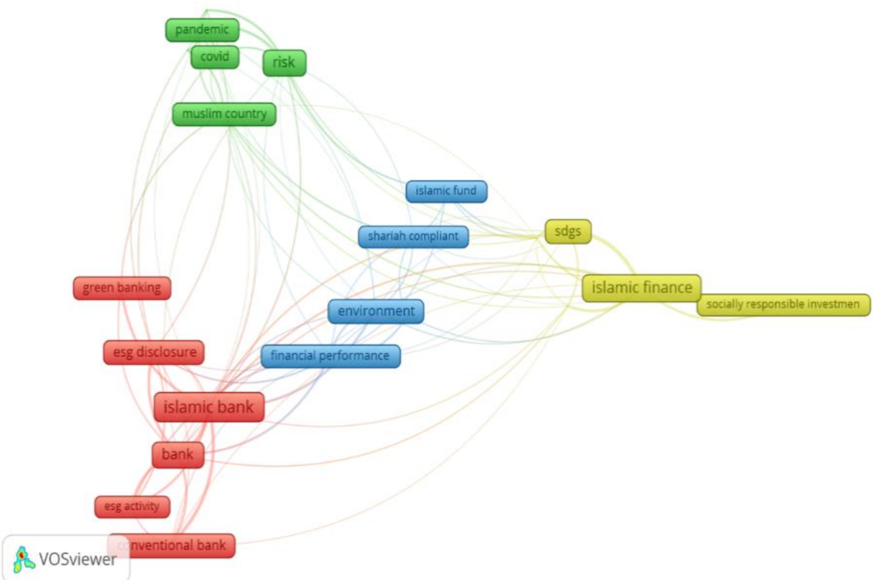

Figure 2. Research cluster

As for the mapping, the keywords that appear the most in the publication "ESG & Islamic Finance" include Islamic Finance, Islamic Bank, and Environment, which are then divided into 4 clusters, as follows:

Table 1. Research cluster and the keywords

Cluster	Keywords
Cluster 1 (6 items)	Bank, conventional Bank, ESG activity, esg disclosure, green banking, Islamic bank
Cluster 2 (6 items)	Cash holding, covid, muslim country, muslim majority country, pandemic, risk
Cluster 3 (5 items)	Corporation, environment, financial performance, islamic fund, shariah compliant
Cluster 4 (5 items)	Development, islamic finance, sdgs, socially responsible investment, sustainable development goal

Research maps that can be made based on the four keyword mapping clusters are:

Cluster 1: Sustainable Banking and Corporate Social Responsibility (ESG)

In the first cluster, the topics discussed are related to sustainable banking and ESG. Not much research has been done regarding this topic. Among the relevant studies, Nguyen (2023) analyzed the factors that influence the implementation of green banking strategies and created hypotheses about how effective these factors are for green banks. The background of this research states that over the last decade, most research in sustainable development has emphasized the implementation of green banking as an important component of the transition to Sustainable Finance 2.0. Maximizing integrated value, which integrates financial, social and environmental values, provides value to stakeholders. In general, one of the most important goals of sustainable growth is ensuring environmental value. A stable environment can allow the next generation to benefit more without worrying about the hardships and risks of natural disasters. As a result, a stakeholder approach to corporate governance and corporate social responsibility practices is leading to the adoption of green banking. This study uses the theory of change to classify these factors into the ESG model (environment, community, and governance). While external factors influencing green banking strategy include the environment (including physical risk, transition risk, and liability risk) and society (including policy, regulation, customer demand, and competition), bank management is an important internal component to steer the banking system towards green.

Kurniasari et al. (2023) evaluate how Bank X and Bank Y are related to implementing sustainable Corporate Social Responsibility (CSR) and credit governance during the COVID-19 pandemic. With an emphasis on the UMK TJSL Funding program, implementing credit governance in the two banks is seen as one of three pillars connected to corporate social responsibility (CSR), particularly in the context of lending amid the COVID-19 epidemic. This action is consistent with what Bank X and Bank Y have contributed to the Sustainable Development Goals (SDGs), notably in fulfilling the 8th goal, Decent Work and Economic Growth. Additionally, these two banks have adhered to fair operating procedures, successfully adopted ISO 26000 standards in their organizational governance, and successfully managed customer complaints.

According to the study's findings, Bank X and Bank Y have successfully included the three ESG (Environmental, Social, and Governance) pillars as a component of their sustainable business strategy in the banking industry. In particular, during the COVID-19 pandemic, this commitment covers sustainable banking, operations, and corporate social responsibility (CSR). These two banks prioritize Good Corporate Governance & Sustainability Business in their banking operations and have adopted sustainable business practices. Risks, including market, liquidity, legal, and reputation risks, certainly exist, but they do not stop the two banks from applying sustainable practices in their daily business operations.

Mishra & Sant (2023) determine how widely financial institutions use environmental, social, and governance (ESG) indicators in India. According to the study context, it is widely acknowledged that the central objective of all development initiatives is sustainable development (SD). Adopting sustainable banking practices by various banking institutions is vital to achieving this. The banking sector is a crucial component of SD. The study's findings demonstrate that compared to the other dimensions, these two sectors reveal more environmental indicators. As a result, the data also shows that private corporations outperform public companies in revealing their environmental, social, and governance indices. India is moving toward implementing the Global Reporting Initiatives, United Nations Environment Program Financial Initiatives (UNEP FI), Green Credit Policy, and Equator Principles (EP) standards to adopt international practices. The only organization in India to begin applying EP practices is IDFC Bank, and Yes Bank is notable for its excellent execution of green policies and for being a signatory to UNEP's FI.

Other relevant research includes Yeoh (2006), explaining the challenges and sustainable banking paths; Tundys (2021) describes corporate social responsibility and sustainable value creation in the business models of banks and corporations; Schücking (2015) describes sustainability in Planet Bank; and Neitzert & Petras (2022) explain corporate social responsibility and bank risk.

Cluster 2: Management of Financial Risk and the Impact of the COVID-19

The second cluster also talks about Covid-19's effects and financial risk management. Research on this subject is very scarce. Nguyen & Hoang Dinh (2021) investigated whether ex-ante risk management may help businesses maintain financial stability amid the pandemic coronavirus disease 2019 (COVID-19). According to the study, businesses that published their risk management strategies in their 2019 annual reports fared better than the competition regarding asset usage and liquidity during the COVID-19 pandemic. However, companies that solely reveal their risk knowledge do not have more secure financial situations. Additionally, this research shows that debt management is the most widely used and successful tool for ensuring a company's financial health in a crisis.

A framework for estimating the economic losses brought on by the accumulation of climate, economic, and pandemic shocks was put up by Ranger et al. in 2021. The COVID-19 epidemic caused the greatest economic shock to the world since 1929. Although the scope and nature of this pandemic are unprecedented, complex shocks with multiple causes are common and perhaps more likely in today's linked globe. This study, in particular, suggests a new metric—the multiple risk multiplier—to gauge the magnitude of the amplification effect and discovers that it can reach a maximum of over 150%, meaning that the combined GDP impact of the shocks maybe 50% higher than the sum of the shocks' individual effects. The findings imply that failing to consider compounding hazards can be a significant blind spot in crisis planning. This emphasizes how crucial accounting is to managing financial, economic, and crisis risk shocks.

Additionally, Chang et al. (2020) examine COVID-19 risk and financial management in business, economics, and finance; Wu & Olson (2020) explain the COVID-19 pandemic and assess its impact on financial operations and supply chains; Moslehpour et al. (2022) evaluate the financial risk spillover and the effects of the COVID-19 panic on the European and Vietnamese stock markets.

Cluster 3: Financial Sustainability and Environment-Based Sharia Investment

Research that discusses related to the topic is still very limited. An example of relevant research is Praptiningsih et al. (2022) analyzes corporate governance, intellectual capital, and financial performance using two methods, namely the conventional method and the Maqashid Sharia Index (MSI), to examine the implementation of sustainable finance in Islamic banking in Indonesia. The banking industry's role is very important in the success of this initiative through the sustainable finance program. Sustainable finance is a global trend that has become a new paradigm in banking and other financial institutions, which supports sustainable development. Sustainable development is a development effort that focuses on three aspects, namely benefits, social welfare, and protection of natural resources and the environment.

The study results show that sustainable financial practices affect corporate governance, intellectual capital, and financial performance using conventional methods and the Maqasid Sharia Index (MSI). The independent variables studied included Good Corporate Governance (GCG) as measured by a composite self-assessment score from each Islamic Bank, value-added intellectual capital (VAIC), financial performance such as return on investment (ROA), net funding (NPF), and the Maqasid Sharia Index (MSI). Meanwhile, the dependent variable used to measure sustainable financing is the Financial Sustainability Ratio (FSR). Studies conducted at Islamic banks in Indonesia show that the GCG, VAIC, ROA, NPF, and MSI variables have a positive effect on the FSR variable, with an R-squared model value of 0.9959.

Cluster 4: The Role of Islamic Finance and Achieving the SDGs

Quite a lot of research has been carried out on this topic, among relevant studies, namely Mohammad & Abduh (2022) investigating the role of Islamic financing in achieving the Sustainable Development

Goals (SDGs), especially Goal 9. The results show that sukuk is important in supporting SGDs number 9 by financing infrastructure development projects that can produce sustainable industrialization and encourage innovation based on technological advances.

Othman et al. (2021) examine how zakat distribution affects Kedah's efforts to achieve sustainable development goals while taking into account the difficulties the Kedah State Amil Zakat Agency faces. All Muslims who qualify must pay zakat, a religious obligation. As a tool of Islamic social finance, zakat is crucial for funding particular initiatives that promote the social, political, and economic development of Muslim communities. The study's findings demonstrate that the zakat distribution in Kedah, Malaysia, complies with the Sustainable Development Goals (SDGs). Therefore, if zakat institutions pay attention and make specific adjustments to increase the effectiveness of zakat distribution to reach the stated SDGs targets, there is a great chance that the SDGs will be achieved. This achievement still hinges on zakat collection rates and improved management, in any case.

Rifa'i et al. (2019) examine how Sharia financing can reduce poverty and accomplish the SDGs. According to the estimation results using panel data from 32 Indonesian provinces between 2014 and 2018, Sharia financing helps programs to reduce poverty by funding productive working capital. As a result, financing provided by Islamic banks aids in reaching SDG 1, eliminating poverty. The success of Islamic banks must be increased to provide funding and other forms of assistance to those at the bottom of society who live in poverty.

Other relevant research, namely Shah et al. (2020), explains the role of Islamic finance in achieving economic growth; Shahid et al. (2023) analyze the similarities between Islamic social finance and sustainable development goals; Zarrouk (2015) examines the role of Islamic finance in achieving sustainable development goals; Ahmed et al. (2015) discuss the Sustainable Development Goals and the role of Islamic finance; Khan (2019) examines Islamic financial reform to achieve sustainable development goals; and Khan & Hassan (2019) explain the Socio-Economic role of Awqaf (Waqf) in Bangladesh in financing the Sustainable Development Goals (SDGs).

CONCLUSION

This study aims to discover how far research development on the theme "ESG & Islamic Finance" has gone globally. The study results show that the number of research publications related to "ESG & Islamic Finance" is 44 journal articles indexed by Scopus. Furthermore, the analysis of the bibliometric author mapping shows that Ahmed A, Hassan M.K., and Chiaramonte I is the author with the most publications on the theme "ESG & Islamic Finance". Furthermore, developing research related to "ESG & Islamic Finance" based on the bibliometric keyword mapping is divided into 4 clusters, with the most used words being Islamic Finance, Islamic Bank, and Environment. Based on the keywords that are often used, they can be grouped into four research map clusters with topics that discuss Sustainable Banking and Corporate Social Responsibility (ESG), Management of Financial Risk and the Impact of COVID-19, Financial Sustainability and Environment-Based Sharia Investment and The Role of Islamic Finance and Achieving the SDGs.

REFERENCES

Ahmed, H., Mohieldin, M., Verbeek, J., & Aboulmagd, F. (2015). On the sustainable development goals and the role of Islamic finance. World Bank Policy Research Working Paper, (7266).

Aizada, Z., Saule, A., Parida, I., Aliya, S., & Faizulayev, A. (2023). Fueling Financial Sustainability in Emerging Markets: An Investigation of ESG Public Policy and Other Determinants in the Oil and Gas Industry through Effective Financial Planning. International Journal of Energy Economics and Policy, 13(4), 365.

Al Adawiyah, R. A., Nurasyiah, A., Utami, S. A., & Rosida, R. (2023). Bibliometric Computational Mapping Analysis of Publications on Sustainability and Islamic Finance. Jurnal Ilmiah Ekonomi Islam, 9(1), 540-553.

As-Salafiyah, A., Rusydiana, A. S., & Mustafa, M. I. (2021). Meta analysis on mosque economics. Library Philosophy and Practice, 0_1-14.

Bank of England. (2022, November 16). What is Islamic Finance? Retrieved from https://www.bankofengland.co.uk/explainers/what-is-islamic-finance

Becchetti, L., Bobbio, E., Prizia, F., & Semplici, L. (2022). Going Deeper into the S of ESG: A Relational Approach to the Definition of Social Responsibility. Sustainability. https://doi.org/10.3390/su14159668

Budiman, T., Febrian, E., & Azis, Y. (2022). The Effect of Geographical Factors on Islamic Banking

Sustainability Performance: An Instrumental Variable Quantile Regression Analysis. Asian Economic and Financial Review. https://doi.org/10.18488/5002.v12i2.4411

Bulyga, R.P., & Safonova, I.V. (2022). Business Audit in a Framework of ESG: Dialectic of Basic Categories of Verification Development. Accounting. Analysis. Auditing. https://doi.org/10.26794/2408-9303-2022-9-4-6-20

CFA Institute. (2019). ESG integration and Islamic finance: Complementary investment approaches. Retrieved from https://www.unpri.org/download?ac=9578

Chan, Y., & Hsieh, M. (2022). An Empirical Study on Higher Education C-ESG Sustainable Development Strategy in Lower-Birth-Rate Era. Sustainability. https://doi.org/10.3390/su141912629

Chang, C. L., McAleer, M., & Wong, W. K. (2020). Risk and financial management of COVID-19 in business, economics and finance. Journal of Risk and Financial Management, 13(5), 102. https://doi.org/10.3390/jrfm13050102

Damak, M., Roy, D., Bendersky, C. B., & La Gorce, N.D. (2023). Islamic Finance And ESG The Missing 'S'. S&P Global. Retrieved from https://www.spglobal.com/en/research-insights/articles/islamic-finance-and-esg-the-missing-s-

Dugar-Zhabon, R., & Zeinalov, A.E. (2022). FROM SUSTAINABLE DEVELEPMENT TO GREEN ECONOMY AND ESG INVESTING. Scientific Papers Collection of the Angarsk State Technical University. https://doi.org/10.36629/2686-7788-2022-1-302-305

Fadzillah. (2023). The potential of ESG sustainability in Islamic Finance. Retrieved from https://ethis.co/blog/the-potential-of-esg-sustainability-in-islamic-finance/

Ferri, G., & Acosta, B.A. (2019). Sustainable Finance for Sustainable Development.

Galletta, S., Mazzù, S., & Naciti, V. (2022). A bibliometric analysis of ESG performance in the banking industry: From the current status to future directions. Research in International Business and Finance, 62, 101684. https://doi.org/10.1016/j.ribaf.2022.101684

Halawi, A. (2023). Sustainable Shariah-compliant investment is a win-win. Refinitiv. Retrieved from https://www.refinitiv.com/perspectives/market-insights/sustainable-shariah-compliant-investment-is-a-win-win/

Hamidi, M.L. (2021). A Framework for Islamic Social Banking. https://doi.org/10.25904/1912%2F4063

Hammod, S. (2022). The ESG potential of Islamic finance. Thomson Reuters. Retrieved from https://www.thomsonreuters.com/en-us/posts/news-and-media/islamic-finance-esg/

Hassan, M. K., Bashar, A., Rabbani, M. R., & Choudhury, T. (2022). An insight into the fintech and islamic finance literature: A bibliometric and visual analysis. In FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance (pp. 131-156). Cham: Springer International Publishing.

Hassan, M. K., Khan, A., & Paltrinieri, A. (2021). Islamic finance: a literature review. Islamic Finance and Sustainable Development: A Sustainable Economic Framework for Muslim and Non-Muslim Countries, 77-106.

Jawad, A.S., & Abdulla, Y. (2022). ESG scores in MENA banks. 2022 International Conference on Sustainable Islamic Business and Finance (SIBF), 69-73. https://doi.org/10.1109/SIBF56821.2022.9939932

Kashi, A., & Shah, M. E. (2023). Bibliometric Review on Sustainable Finance. Sustainability, 15(9), 7119. https://doi.org/10.3390/su15097119

Khairunnisa, H. L. (2020). Islamic Financial Literacy: Developing Instruments. *Ekonomi Islam Indonesia*, *2*(1).

Khan, F., & Hassan, M. K. (2019). Financing the sustainable development goals (SDGs): the socio-economic role of Awqaf (Endowments) in Bangladesh. Revitalization of Waqf for Socio-Economic Development, Volume II, 35-65. https://doi.org/10.1007/978-3-030-18449-0_3

Khan, T. (2019). Reforming Islamic finance for achieving sustainable development goals. Journal of King Abdulaziz University: Islamic Economics, 32(1).

Kurniasari, R., Usman, B., & Purba, Y. E. (2023). Impact Analysis of the Implementation of Sustainable Credit Governance and Corporate Social Responsibility (CSR) During the Covid-19 Pandemic at Bank X and Bank Y. Journal of

Social Research, 2(4), 1086-1099. https://doi.org/10.55324/josr.v2i4.721

Lawrence, J., & Hewitt, D. (2022). Finance Alert. Retrieved from https://www.klgates.com/ESG-Finance-and-Islamic-Finance-9-13-2022

Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research progress and future prospects. Sustainability, 13(21), 11663. https://doi.org/10.1016/j.indic.2022.100218

Luthfi, H., & Uula, M. M. (2022). Islamic Financial Planning. *Fara'id and Wealth Management*, *2*(2).

Marlina, L., Rusydiana, A. S., Hidayat, P., & Firdaus, N. (2021). Twenty years of Islamic banking in Indonesia: A biblioshiny application. Library Philosophy and Practice (e-journal), 4999.

Mishra, P., & Sant, T. G. (2023). Examine the level of environmental, social and governance disclosure in sustainability report–a study of the Indian banking sector. International Journal of Innovation Science. https://doi.org/10.1108/ijis-08-2022-0136

Mohammad, M. S., & Abduh, M. (2022). The Role of Islamic Finance in Achieving the SDG Number 9: Build Resilient Infrastructure, Promote Sustainable Industrialization and Foster Innovation. IQTISHADIA, 15(1), 89-106. https://doi.org/10.21043/iqtishadia.v15i1.13747

Moslehpour, M., Al-Fadly, A., Ehsanullah, S., Chong, K. W., Xuyen, N. T. M., & Tan, L. P. (2022). Assessing financial risk spillover and panic impact of Covid-19 on European and Vietnam stock market. Environmental Science and Pollution Research, 29(19), 28226-28240.

Mustafida, R., & Fauziah, N.N. (2021). IMPLEMENTING ESG CONCEPT IN SHARIA STOCK SCREENING PROCESS. https://doi.org/10.26487/hebr.v5i1.2549

Neitzert, F., & Petras, M. (2022). Corporate social responsibility and bank risk. Journal of Business Economics, 92(3), 397-428. https://doi.org/10.1007/s11573-021-01069-2

Nguyen, A. (2023, May). Theoretical Framework for the Influence of Crucial Factors on Green Banking Strategy Implementation. In International Conference on Emerging Challenges: Strategic Adaptation in The World of Uncertainties (ICECH 2022) (pp. 253-269). Atlantis Press. https://doi.org/10.2991/978-94-6463-150-0_18

Nguyen, L. T. M., & Hoang Dinh, P. (2021). Ex-ante risk management and financial stability during the COVID-19 pandemic: a study of Vietnamese firms. China Finance Review International, 11(3), 349-371. https://doi.org/10.1108/CFRI-12-2020-0177

Niswah, I. D. (2022). Meta-Analysis on Zakat Index. *Tamkin Journal*, *1*(1).

Othman, Y. H., Yusuff, M. S. S., & Moawad, A. M. K. (2021). Analyzing zakat as a social finance instrument to help achieve the sustainable development goals in Kedah. Studies of Applied Economics, 39(10). https://doi.org/10.25115/eea.v39i10.5346

Pengelly, R. (2022). Global Islamic finance sector moves towards incorporating ESG concerns. Retrieved from https://salaamgateway.com/story/global-islamic-finance-sector-moves-towards-incorporating-esg-concerns

Praptiningsih, P., Nastiti, H., & Nopiyanti, A. (2022). Analysis of Corporate Governance, Intellectual Capital, and Financial Performance Using Conventional Methods and Maqashid Sharia Index (MSI) on the Implementation of Sustainable Finance in Sharia Banking in Indonesia. Dinasti International Journal of Economics, Finance & Accounting, 3(4), 391-411. https://doi.org/10.38035/dijefa.v3i4.1430

Pratama, A., Jaenudin, E., & Anas, S. (2022). Environmental, Social, Governance-Sustainability Disclosure Using International Financial Reporting Sustainability Standards S1 in Southeast Asian Companies: A Preliminary Assessment. International Journal of Energy Economics and Policy, 12(6), 456.

Puspita, A. T. (2022). Islamic Personal Finance: A Review using Biblioshiny-R. *Fara'id and Wealth Management*, *2*(1).

Puspita, A. T., & Kartikawati, D. R. (2022). A Review on Islamic Micro-insurance Studies. *Tamkin Journal*, *1*(1).

PWC. (2022). Islamic Finance & ESG investing, Ready for convergence?. Retrieved from https://www.pwc.com/m1/en/publications/documents/islamic-finance-and-esg-investing.pdf

Qudah, H., Malahim, S., Airout, R., Alomari, M., Hamour, A. A., & Alqudah, M. (2023). Islamic Finance in the Era of Financial Technology: A Bibliometric Review of Future Trends. International Journal of Financial Studies, 11(2), 76. https://doi.org/10.3390/ijfs11020076

Rahayu, S., & Irfany, M. I. (2022). Waqf on Environmental Issue: A Systematic Review. *International Journal of Waqf*, *2*(1).

Ranger, N., Mahul, O., & Monasterolo, I. (2021). Managing the financial risks of climate change and pandemics: What we know (and don't know). One Earth, 4(10), 1375-1385. https://doi.org/10.1016/j.oneear.2021.09.017

Rifa'i, A., Ayu, P., & Listiono. (2019). Encouraging Islamic financing to achieve SDGs through poverty alleviation. Journal of Islamic Finance, 8(2), 10-20.

Rusydiana, A. S., As-Salafiyah, A., Sanrego, Y. D., & Marlina, L. (2021). Fiqh on finance: a scientometric analysis using bibliometrix. Library Philosophy and Practice (e-journal), 5436.

Rusydiana, A. S., & Bahri, M. S. (2022). Green economy and some relevancies from Islamic finance perspective. *Journal of Islamic Economic Literatures*, *3*(1).

Schücking, H. (2015). Sustainability on Planet Bank. In Responsible Investment Banking: Risk Management Frameworks, Sustainable Financial Innovation and Softlaw Standards (pp. 427-438). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-10311-2_28

Shah, S. M. A. R., Raza, K., & Shaherbano. (2020). The Role of Islamic Finance in Achieving Economic Growth: An Econometric Analysis of Pakistan. Enhancing Financial Inclusion through Islamic Finance, Volume II, 241-258. https://doi.org/10.1007/978-3-030-39939-9_10

Shahid, M., Sulub, Y. A., Mohtesham, M. M. J., & Abdullah, M. (2023). Analyzing the commonalities between Islamic social finance and sustainable development goals. International Journal of Ethics and Systems. https://doi.org/10.1108/ijoes-04-2022-0082

Taqi, M., Rusydiana, A. S., Kustiningsih, N., & Firmansyah, I. (2021). Environmental Accounting: A Scientometric using Biblioshiny. International Journal of Energy Economics and Policy, 11(3), 369-380.

Trisnowati, Y., Achsani, N. A., Sembel, R., & Andati, T. (2022). The effect of ESG score, financial performance, and macroeconomics on stock returns during the pandemic era in Indonesia. International Journal of Energy Economics and Policy, 12(4), 166-172.

Tsygalov, Y.M., & Strizhov, S.A. (2022). ESG-transformation Policies and Procedures for Russian Companies. Administrative Consulting. https://doi.org/10.22394/1726-1139-2022-7-88-95

Tundys, B. (2021). Corporate Social Responsibility and Sustainable Value Creation. In Sustainability in Bank and Corporate Business Models: The Link between ESG Risk Assessment and Corporate Sustainability (pp. 67-110). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-72098-8_4

Turner, L.E., & Weirich, T.R. (2022). Expanding the Concept of Materiality-to ESG: Audit Issues and Implications. Current Issues in Auditing. https://doi.org/10.2308/ciia-2022-010

Uula, M. M. (2022). Research on Zakat Governance. *Islamic Social Finance*, *2*(2).

Van Eck, N.J., & Waltman, L. (2007). Bibliometric mapping of the computational intelligence field. International Journal of Uncertainty, Fuzziness and Knowledge-based Systems, 15(5), 625-645.

Verma, R., & Mohnot, R. (2023). Relative Impact of the US Energy Market Sentiments on Stocks and ESG Index Returns: Evidence from GCC Countries. International Journal of Energy Economics and Policy, 13(2), 290.

Wu, D. D., & Olson, D. L. (2020). Pandemic risk management in operations and finance (Vol. 10, pp. 978-3). Springer International Publishing. https://doi.org/10.1007/978-3-030-52197-4

Yeoh, P. (2006). Sustainable Banking: Challenges and the Way Forward. J. Corp. L, 1097, 1123. https://doi.org/10.54648/bula2022022

Zarrouk, J. (2015). The role of Islamic finance in achieving sustainable development. Development Finance Agenda (DEFA), 1(3), 4-5.