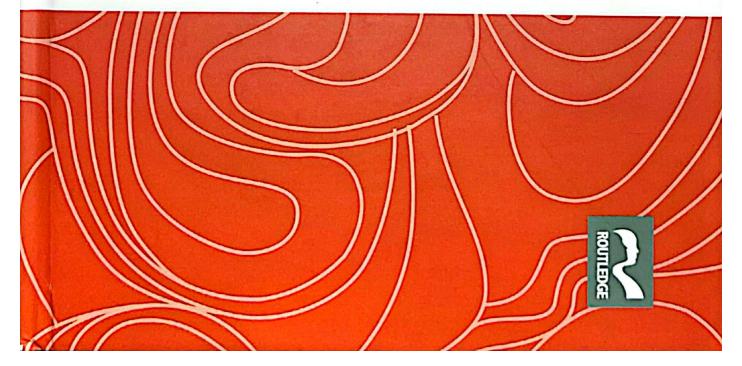


# ISLAMIC SUSTAINABLE FINANCE

POLICY, RISK AND REGULATION

Edited by Mohd Ma'Sum Billah, Rusni Hassan, Razali Haron and Nor Razinah Mohd Zain





#### Islamic Sustainable Finance

The central idea of sustainability in the modern world is intricate and ever-changing. Closely related to the realm of finance and socioeconomic discussion, the phrase "sustainable impact finance" has become increasingly popular among bankers, practitioners, financial analysts, investors and the relevant experts seeking an impactful connection between the best financing mechanisms or tools and sustainable development related investments or projects.

This book opens up the discussion by offering a Shari'ah-compliance perspective. It is a primer on how Islam addresses and offers solutions to the challenges facing us within the spirit of maqasid al-Shari'ah, among others, in tackling poverty, food supply, health and well-being, quality education, reducing inequalities, responsible consumption and production and climate action. It discusses the connection between Islamic sustainable finance and the Sustainable Development Goals (SDGs) and explains the strategic action-plan of Islamic banks towards achieving Islamic sustainable finance.

The book considers the relevant policies and regulations, evaluating the role of regulators, discussing jurisprudential solutions and focusing on the role of Islamic banking standards in relation to Islamic sustainable finance. Further, it explores the issue of risk mitigation and the effective role of Takaful. It presents a practical case study from the banking industry in Malaysia, which evaluates the carbon footprint of bank loans and climate change risk mitigation. Finally, it highlights sustainable finance innovations in an Islamic concept.

The book will appeal to advanced students, researchers and scholars of Islamic banking and finance, as well as those concerned with environmental social governance and Sustainable Development Goals research. Regulators, policy makers and Shari'ah-compliant practitioners will also find it to be a useful guide.

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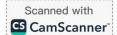


## Islamic Sustainable Finance

Policy, Risk and Regulation

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First published 2024 by Routledge 4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN and by Routledge 605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-032-49784-6 (hbk) ISBN: 978-1-032-49785-3 (pbk) ISBN: 978-1-003-39544-7 (ebk) DOI: 10.4324/9781003395447

Typeset in Times New Roman by Apex CoVantage, LLC

This book is dedicated to the remembrance of my most beloved parents Allamah Mufti Nur Mohammad (r) and Ustazah Akhtarun Nisa' (r) who have nourished me with their love and wisdom. May Allah (swt) shower them with His Love and Mercy and grant them Jannat al-Ferdaus. I would also like to dedicate this book to my lovely wife Dr Khamsiah Nawawi (Head, OSHE-Hospital UKM) and our heart-touching kids Dr Ahmad Mu'izz Billah (Head of Surgical Department and Medical officer at the Mukah Hospital, a Government hospital under the Ministry of Health, Malaysia), Ahmad Mu'azz Billah (OP-Cadet-RMC, BSc Hons. Formerly affiliated with the JPM. Putrajaya and currently serves at Accenture, Malaysia), Ahmad Muniff Billah (OP-Cadet-RMC. Winner of Gold Medal Award 2023 in his outstanding innovative research project and currently pursuing with his BSc Honors in Aviation Management and Piloting, MSU) and Akhtarun Naba' Billah (Pursuing with her LLB Honors, IIUM and Winner of Dean's List), for their continuous supports and sacrifices.

May all be blessed with Muwaddau Wa Rahmah, Qurratu A'yun and Mardhaati Allah (swt) in the life and the next.

This book is also dedicated to the Ummah and the whole of humanity.

Mohd Ma'Sum Billah, PhD

A special dedication to my parents, my extended family, my teachers and Murabbi who inspired, guide and shape me to be the person I am today. A special thanks also to the Institute of Islamic Banking and Finance (IIUM) team members for their unwavering support in bringing the Institute to a higher level. May Allah provide us with the fortitude and dedication to contribute to the well-being of our institution and to the Ummah.

Rusni Hasan, PhD



Infinite gratitude to my loving parents, family and my teachers for their care and wisdom. May Allah (SWT) grant them the best reward. Also, for the endless support and trust entrusted in me by the Institute of Islamic Banking and Finance (IIUM) for their mission to be the Centre of Excellence.

Razali Haron, DBA

This book is dedicated to the loving memory of my parents, Sayiran Binti Hassan Raza and Haji Mohd. Zain Bin Haji Harun. My greatest gratitude goes to my husband, Mohd. Yusmadi Bin Mohd. Yunan for teaching me the value of being patience. Thank you also to all my respected teachers, especially Prof. Dr. Mohd Ma'Sum Billah and Prof. Dr. Engku Rabiah Adawiah Engku Ali. May Allah bless them always, Ameen.

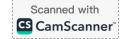
Nor Razinah Mohd Zain, PhD

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## Part III

## Islamic Sustainable Finance

Risk Mitigation



## 11 Risk Mitigation of Sustainable Finance and the Effective Role of Takaful

Rusni Hassan, Syed Ahmed Salman and Syarah Syahira Mohd Yusoff

#### Introduction

Aligning with the global trend, Takaful operators generally play an essential role, as they prioritize the sustainability of Islamic finance in many aspects by ensuring a sustainable economic environment (Muhmad et al., 2021). Takaful operators commit to addressing and protecting sustainability by delivering the highest quality Islamic insurance services to all its stakeholders (Mihardjo et al., 2020). They are committed to the principles of transparency and standards of institutional discipline that ensure them sustainable futures for the long term without compromising their ability for future generations to meet their own needs. Numerous features of Takaful lead to the sustainability and creativity of Takaful operators and incorporate the long-term sustainability of Islamic finance, their continuity policies, and practices. The operators of Takaful immensely focused on enhancing its awareness among their employees and customers to effectively contribute towards implementing Sustainable Development Goals in line with global Sustainable Development Goals (Ab Rahim & Amin, 2011). Takaful operators play a very pivotal role in ensuring Islamic sustainable finance, and they are also responsible for mitigating unexpected shocks and considering productive risks to generate economic opportunities. It is an attractive business because during the last few decades, they were able to build a lifelong relationship with its customers by providing them sustainable services in a more innovative, efficient, and ethical manner for enhancing its sustainability on both local and foreign Takaful market. To some extent, this theory has been used since the 1970s in Islamic financial contracts to manage the collected funds effectively and identify those factors that help contribute to its performance and ensure its sustainability. Consistent efforts are being made, like strengthening distribution channels to its customers to meet and exceed their expectations to result in the community's sustainability. No matter the scale, operators of Takaful have always been focusing on the right initiatives every year towards its outstanding performance and contribution to Islamic sustainable finance. These cultures profoundly impact their way of making a difference, where sustainability is considered very important.

Needless to submit that, it has been a transformational driver for profitable and sustainable growth to address tomorrow's challenges. Takaful operators have

DOI: 10.4324/9781003395447-15



reassured their commitment and tend always to remain passionate about advocating its benefits in the contribution and development of Islamic finance for the Islamic economy worldwide. Broader aspects of Takaful are discussed and attracted many Islamic and non-Islamic finance enthusiasts, including college students, teachers, and researchers, as it is essential to protect their well-being. Takaful operators can incorporate concern, managing their impact to integrate sustainability for achieving peace and prosperity among their customers to encourage and incentivize everyone for Islamic sustainable finance collective success (Mukhlisin et al., 2020). While these steps seem small, they have a substantial aggregate effect on Islamic sustainable finance. They contribute to disaster risk management to minimize the negative impact caused by catastrophic risks by promoting different energy efficiency investments for designing better disaster response programs (Orlando & Bace, 2021). Step-by-step guidance is being put forward to accomplish the desired result. It will assist them in having a worthwhile influence on our society and encourage people to attain prosperity. The pandemic brought about too many uncertainties and pressures in our lives, while Takaful aimed to provide financial security who were in need continuously. In response to such disasters, they also implement extensive relief measures for those financially distressed by the COVID-19 pandemic. It allowed these policyholders to share their uncertainties and, therefore, voluntarily protect each other from any damage or loss through cooperation and donation (Hasim, 2014). These kinds of Islamic insurance are collectively becoming very popular in most Muslim countries to safeguard against the risk of different uncertainties in our modern world. Such operators also target low-income populations by offering them adequate insurance coverage through micro-Takaful funds to achieve Sustainable Development Goals (Ahmed, 2016). Introducing new tools and technology has also led them to teach and embrace technology in all operations, sales, and marketing strategies. Such advancements helped them achieve cost efficiency and encouraged them to improve productivity to tap into new markets and increase revenue. In the end, we will also discuss how it motivates individuals to save and encourage them to acquire well-planned and well-organized savings plans. Takaful offers broad support and protection against the loss of different goods and property in many ways, which will be highlighted later in the present research (Nico & Pieter, 2010). This method of finance is highly stable and productive to attain sustainable Islamic finance that could eventually contribute to economic growth.

#### Research Objectives

- To determine the role of takaful operators in Islamic sustainable finance.
- · To ascertain the impact of takaful operators on Islamic sustainable finance.

#### Literature Review

Takaful is in the process of creating lifelong relationships by embracing our diversity. Its sustainability is essential because it continuously builds a comfortable world for its customers while protecting our environment and financial wellness.



Consistent and continuous efforts and innovative Takaful solutions are embedded to achieve a brighter and more secure sustainable future. Takaful operators have a crucial role while managing significant risks, systems, and processes so that the chances are well-managed to thrive towards sustainable Islamic finance (Reyazat, 2012). Islamic finance is very well suited to help countries in both the emerging and developed world, which allows them to move towards a more sustainable future. Takaful helps to gain trust and confidence among both the operator and customers with ethics and integrity in a fair and transparent environment. The sustainability of Takaful is essential because they ensure the safety and well-being of all employees, enhancing opportunities for self-development while achieving Islamic sustainable financial goals. It is based on Shari'ah or Islamic religious law; consequently, it is regarded as a code of ethical conduct and principal guidelines for all Muslims. It is contemplated as a crucial branch of the Islamic financial system and a well-built tool by the operators concerning managing every individual risk and their business overturn. Takaful is prevalent among Muslims and derived from the theory of trusteeship, brotherhood, and cooperation encouraged by Islam beliefs (Herman, 2021). Therefore, its sustainability is a widely discussed topic today to help this industry integrate value-based initiatives seamlessly to deliver positive and meaningful impacts. They follow Islamic principles to pool different resources, including welfare, shared responsibility, and cooperation. Due to the rapid development in trade and commerce, term insurance has become essential and significant globally (Al Mahi et al., 2017).

Takaful operators collect, collate, and publish numerous statistics and other relevant information related to Islamic sustainable finance to their customers about Takaful (Yusof et al., 2022). It is an emerging industry with a vast scope to raise its performance and accelerate the development of innovative factors for Takaful sustainability. They facilitate and promote a conducive environment that helps to develop affordable micro-insurance and micro-Takaful products for customer protection which will eventually meet all distinct financial needs of all citizens against unexpected adverse events. Operators of Takaful are creating a stable and conducive environment for all customers to flourish with a resilient and robust regulatory infrastructure, including its development towards Islamic sustainable finance (Husin, 2019). These operators are essential, as they help to provide new investment options to the Islamic financial system, which is a transformative opportunity for value-based investing. The Takaful industry aims to enhance its sustainable awareness and learnings to be a strong and competitive industry today. Operators have taken a comprehensive approach by emphasizing all core components of the Islamic financial system that will help meet the numerous financial needs of all customers, including the underserved. Takaful plays a significant role as a natural insurer that helps Takaful operators contribute towards economic stability and provide financial relief that continuously contributes to sustainable finance. They act and consistently listen to their concerns for areas of improvement that are important in their business for gain. Islamic sustainable financial goals are built under effective and accountable principles of Takaful to ensure compliance with Shari'ah rules and regulations.



Numerous functions are undertaken for Takaful sustainability, such as the risk management team undergoes various risks assessments on all aspects of risk exposures that help to reduce the livelihood and severity of impact and stress towards reduction in usage of paper by preferring to receive data electronically. The accepted data analysis is eventually more efficient to attain its sustainability in the future. Affordable Takaful products are available that protect their customers from those who belong to low-income backgrounds. Such consequences for Takaful sustainability also cover a specific group of women, contractors, and foreign workers. Takaful agents work very closely with their customers and avail them of all kinds of information in straightforward language in all their forms, documents, and policies so that lengthy information is provided to them clearly and concisely (Muhammad et al., 1970). Takaful industry also offers many internship programs for different undergraduates from several universities, and they help them to learn new kinds of skills to improve their personal development (Malom & Nasrul, 2020). For its sustainability, they often organize development programs to groom their employees and allow them to work for Takaful sustainability by achieving a high-performance culture (Bakhtiari, 2013). Various operators all over the world are focused on Takaful and Islamic sustainability finance. It also enables them to keep pace with their conventional counterparts in a structured manner to withstand financial shocks. Thus, it helps them increase Islamic sustainable finance's overall stability. Takaful operators actively support the Islamic capital market through their active participation to generate attractive investments, which help with long-term financing needs (Dikko, 2016). They ensure adequate protection of these funds, so they are not depleted through improper usage and unsound investments.

Takaful operators' representatives are making extensive efforts to understand the needs of different customer segments by building better customer relationships and addressing their preferences. A wide range of products, such as medical and health products, annuities, and many investment-linked assets based on customers' preferences, are available to meet customers' needs. The encouraging success towards its sustainability and its wider acceptance among many Muslim and non-Muslim people have facilitated the opening of many overseas ventures worldwide through equity and management participation as well as by sharing technical knowledge and expertise (Beekun & Badawi, 2005). It is a valuable source for boosting economic growth and development in many Islamic countries. They help motivate people and aid them in acquiring well-planned and well-organized savings plans to reduce the need to save for emergencies and protection. Such financial institutions can potentially improve the financial market's effectiveness. This cooperation also offers broad support and protection in many ways against losing goods and property. Takaful is considered a unique innovation in Islamic finance since it combines protection and investment. It is the beginning of such insurance because it will likely flourish in the insurance sector. Introducing information and communication technology into the Takaful sector helped all the operators undergo a last change that put Islamic finance in a good position (Muhamat et al., 2022). This sector, for many decades, has faced difficulties in achieving extensive scalability in distribution and raising more customers. However, technology has helped

these institutions to overcome these barriers. It has provided these Islamic financial institutions with a new capability to reach and service their customers across different physical locations or boundaries. Increased customers and members being more comfortable with online payment methods and face-to-face interactions via other forms of video calls have helped these operations enter an exciting period of change that will eventually be the driver of growth. The pandemic has also significantly accelerated opportunities for digital transformation and its engagement in this industry. COVID-19 has provided numerous opportunities to deliver for Takaful operators for overcoming issues of scale, distribution, and relevance for achieving Islamic sustainable finance (Benamraoui, 2021). During the pandemic, many economic lockdowns impacted the livelihood of many people, especially those who belonged to low-income groups.

According to research conducted by International Labour Organisation (ILO), around 1.6 billion workers worldwide suffered severe damage to their capacity to earn a living. Therefore, these institutions played a critical role by ensuring these people generate economic opportunities by investing huge capital over longerterm horizons. These ineffective options can create multiple jobs, infrastructure development, fuel growth, and encourage innovation. To some extent, it has also affected these financial institutions, yet it also created various new chances for managing these risks. Their role during the pandemic was immensely highlighted in Islamic Financial Services Boards reports of 2020-2021. It also suggested that these Takaful operators must adjust their budgets during these unprecedented times to withstand these resulting shocks (Bacha, 2021). They highlighted that these financial institutions must improve, streamline, simplify, and digitize their operations to claim their smooth functioning. Thus, the Takaful operator plays the role of a risk manager, not a risk taker. These financial industries are proliferating, and their products are comparable to conventional insurance counterparts because of their innovative marketing strategies (Hassan et al., 2021).

Recent years have recorded a slight upward trend, and better results were observed against the same period in 2019 in both the Takaful and insurance sectors (Alshammari et al., 2019). Takaful in Malaysia has been growing faster than insurance. To increase the consumer base, Takaful operators expanded digitally enabled healthcare and preventive services such as wellness applications, telemedicine, and wearables (Gunputh, 2014). It is expected that they have a massive potential for their growth. These findings also showed a higher acceptance and possibility of Takaful in non-Muslim countries like Singapore, India, Canada, the United States of America, and Australia due to their attractive features. It has been recognized through various studies that despite of small Muslim percentage in Australia compared to other different nations, these Islamic financial services are growing and are on the rise, including Takaful. In the upcoming years, if there is a rise in the Muslim population, it will become viable to introduce these Islamic financial services regarding mutual and profit financial institutions. On the other hand, they still deliver insurance and healthcare benefits at a meagre value. It also helps to enhance urban-rural linkages by increasing their accessibility to quality education and Takaful sustainability financial services. Action taken by these operators underlines the importance of making these financial



protections available to all individuals and businesses, which can bring potential effects that affect their trustworthiness and sustainability in the eyes of their customers and representative members (Kader et al., 2014). Their policies and guidelines are aimed at providing relief to all operators. Takaful operators aim to be honest, responsible for delivering their promises, wise, patient, and dedicated. They also play a decisive role while acknowledging Takaful as the best solution for Islamic sustainable financial management (Salleh et al., 2012). These operators have played a significant role and reasonably well in managing its sustainability by keeping their operations solvency ratios and capital adequacy levels at a certain level. The global Takaful financing insurance market is estimated to be roughly valued at around USD 25.1 billion in 2021. Thus, it is anticipated to grow with a healthy growth rate and reaches USD 55.6 billion by 2021–2028 (Coskun et al., 2021).

Intermediaries in the Takaful industry organize various market training programs by equipping every individual with the right skills, knowledge, and competencies to manage environmental impacts effectively. Over the recent years, Takaful operators have been working on several initiatives to support, protect, and conserve our ecological resources to encourage Takaful sustainability. The Takaful industry is continuously looking forward to building and strengthening Islamic sustainability finance as the Takaful industry sails through the rapidly changing socioeconomic landscape. Takaful strives to bring positive change in all aspects by bringing difference in the lives of underprivileged communities by extending various assistance predominantly in all areas of their education. However, sustainability is a continuous process of availing of new opportunities. The authorities also committed to supporting all efforts to enhance and expand the old and profitable insurance market in the forecasted period.

#### Methodology

This study is descriptive, as it establishes the relationship among the variables derived from the rigorous review of the existing literature (Malhotra, 2010; Cooper & Schindler, 2003). Primary data were obtained by surveying the 211 experts in Islamic finance and Takaful. The minimum desired sample size for applying factor analysis is ten times the total number of items (Chawla & Sondhi, 2011). In this study, there are 15 items; hence, with the current sample size, i.e., 211, the minimum requirement is fulfilled. The data of this study were collected through the "convenient sampling method" and analyzed by "Explanatory Factor Analysis [EFA]" and "multiple regression analysis [MLR]" to get the results. MLR has been recommended as a suitable technique to measure the impact (Paul et al., 2016).

#### **Findings**

The next table shares the respondent's general details. Of the 211 respondents, 79.6% are male and females are 20.4%. Among them, 28.0% are below 34 years of age, 41.2% are between 34-44 years of age, and the rest, 30.8%, are above 44 years of age. 29.4% of the respondents have a work experience of fewer than eight years, 37.4% are working for 8-12 years, and the rest, 33.2%, are working for more than 12 years in the area of Islamic finance or Takaful.



Table 11.1 General Details

Variables	Respondents	Percentage
Gender		
Male	168	79.6
Female	43	20.4
Total	211	100
Age (years)		
Below 34	59	28.0
34-45	87	41.2
Above 45	65	30.8
Total	211	100
Work experience		
Less than eight yrs.	62	29.4
8–12 yrs.	79	37.4
More than 12 yrs.	70	33.2
Total	211	100

#### Factor Analysis

Kaiser-Meyer-Olkin Measure of	Sampling Adequacy	.884
	Approx. Chi-Square	3022.996
Bartlett's Test of Sphericity	df	105
,	Sig.	.000

In the previous table, "KMO and Bartlett's Test", the KMO value found is 0.884.

#### **Factor Development**

Sustainability and environmental problems are factors that include the variables. Takaful operators believe in sustainable finance that will help future generations to thrive, contribute to disaster risk management to minimize the negative impact caused by calamitous risks, and integrate value-based initiatives seamlessly to deliver positive as well as meaningful effects. Takaful operators help to manage risks posed by climate change and help to implement relief measures to those who were financially distressed by the COVID-19 pandemic. Corporation and protection and the associated variables. Takaful operators have a mutual agreement on loss amid each other. They behold the responsibility to contribute money into a pool system, show volunteer cooperation, donate to protect each other from any damage or loss, and facilitate through paying interest-free loans if there is a deficit. The third factor is the collection and management of joint funds, which consist of variables like Takaful operators bringing social and economic benefits that include all kinds of modern insurance coverage, making sure that funds are suitably managed within the undertaken "risk management framework" and working the collected amount of money into a common fund and using it to pay its benefits from these funds. The last factor is managing risk, and the associated variables are Takaful operators help all and provide a way to manage risks in different businesses. "Market and credit risks" are



Table 11.2 Total Variance Explained

"Component"	onent" "Initial Eigenvalues"			"Rotation Sums of Squared Loadings"			
	"Total"	"% Of Variance"	Cumulative %	"Total"	"% Of Variance"	Cumulative %	
1	7.376	49.173	49.173	4.203	28.019	28.019	
2	2.111	14.070	63.244	3.360	22.402	50.421	
3	1.631	10.876	74.120	2.540	16.934	67.355	
4	1.471	9.810	83.929	2.486	16.574	83.929	
5	.422	2.814	86.743				
6	.361	2.404	89.147				
7	.311	2.076	91.223				
8	.288	1.923	93.145				
9	.227	1.512	94.657				
10	.211	1.407	96.064				
11	.174	1.162	97.226				
12	.158	1.053	98.279				
13	.123	.818	99.096				
14	.077	.516	99.613				
15	.058	.387	100.000				

Table 11.3 Rotated Component Matrix<sup>a</sup>

S. No.	Statements	Factor Loading	Factor Reliability
	Sustainability and environmental problems		.955
1.	Takaful operator believes in sustainable finance that will help future generations to thrive in	.875	
2.	Contributes to disaster risk management to minimize the negative impact caused by calamitous risks	.866	
3.	Integrate value-based initiatives seamlessly to deliver positive as well as meaningful impacts	.861	
4.	Takaful operators help to manage risks posed by climate change	.854	
5.	Helps to implement relief measures for those who were financially distressed by COVID-19 pandemic	.796	
	Corporation and protection		.930
6.	Takaful operators have a mutual agreement on loss amid each other	.878	
7.	They behold the responsibility to contribute money to a pool system	.873	
8.	Shows volunteer cooperation and donates to protect each other from any damage or loss	.847	
9.	Facilitates through paying interest-free loans if there is a deficit	.836	
	Collection and management of common funds		.891

S. No.	Statements	Factor Loading	Factor Reliability
10.	Takaful operators bring social and economic benefits that include all kinds of modern insurance coverage	.885	
11.	Ensure funds are suitably managed within the undertaken "risk management framework"	.846	
12.	Manage the collected amount of money into a common fund and use it to pay its benefits from these funds	.842	
	Management of risk		.892
13.	Takaful operators help all and provide a way to manage risks in different businesses	.900	
14.	"Market and credit risks" are easily managed with the help of takaful operators	.866	
15.	Safeguard the risk of different uncertainties and help the "low-income population" by offering them satisfactory insurance cover	.862	

Table 11.4 Reliability Statistics

"Cronbach's Alpha"	"N of Items	
.919	15	

easily managed with the help of takaful operators, safeguarding the risk of additional uncertainties and helping "low-income population" by offering them with satisfactory insurance cover. The reliability of sustainability and environmental problems is 0.955, corporation and protection (0.930), collection and management of common funds (0.891), and management of risk showing factor reliability (0.892).

The total reliability found is 0.919, which includes 15 items.

#### Regression Analysis

To know the impact of sustainability and environmental problems, corporation and protection, collection and management of joint funds, and management of risk on "Islamic sustainable finance", multiple regressions were applied in which the R square value is 0.438.

Table 11.7 shows that all the factors of sustainability and environmental problems, corporation and protection, collection and management of joint funds, and managing risk significantly impact "Islamic sustainable finance".

#### **Findings**

The study applied "exploratory factor analysis", in which the KMO value found is .884. The variance explained by the first factor is 28.019%, followed by the



Table 11.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. The Error in the Estimate
1	.662ª	.438	.428	.61769

Predictors: (constant), sustainability and environmental problems, corporation and protection, collection and management of joint funds, and management of risk

Table 11.6 ANOVA\*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.374	4	15.344	40.215	.000b
	Residual	78.597	206	.382		
	Total	139.972	210			

DV: Overall impact of Takaful operators on Islamic sustainable finance

Table 11.7 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	3.782	.043		88.939	.000
Sustainability and environmental problems	.435	.043	.533	10.213	.000
Corporation and protection	.143	.043	.175	3.353	.001
Collection and management of common funds	.098	.043	.120	2.300	.022
Management of risk	.270	.043	.330	6.326	.000

DV: Overall impact of Takaful operators on Islamic sustainable finance

second factor with 22.402%, the third factor having 16.934%, and the fourth factor explains 16.574% of the variance. The total reliability that includes a total of 15 variables is 0.919. One or more of the independent variables significantly influence the dependent variable, which is the "Overall impact of takaful operators on Islamic sustainable finance". The study analysed the impact of Takaful operators on Islamic sustainable finances in which it was found that there is the highest impact of factor sustainability and environmental problems with a Beta value of 0.533 on Islamic sustainable finance followed by management of risk (0.330), corporation and protection (0.175), and collection and management of common funds with a Beta value of 0.120.

b Predictors: (constant), sustainability and environmental problems, corporation and protection, collection and management of joint funds, and management of risk

#### Discussion

Operators of the Takaful industry have positively optimized the consumption of resources for Takaful sustainability to produce quality professionals for long-term Islamic sustainable financial goal objectives. The Takaful operators have done exceptionally well in managing their insurance industry despite reduced business and increased claims in several classes of business, as highlighted in the findings of our study (Manokaran et al., 2018). The involvement of digital technology in our Takaful industry has encouraged the clients to move towards a paperless environment to strengthen our Takaful sustainability practices. Digital technology provides an attractive and inclusive work environment to all for boosting their productivity and creating great working experiences. Although it was noticed that these financial institutions were less customer-centric than conventional institutions. Therefore, such financial institutions are significant to attain Islamic sustainable finance that contributes to and ensures the sustainability of the Takaful industry. The Takaful sector needs to focus more on sustainability and environmental problems, as people are more affected by these problems and need financial help to overcome the situation and move on in their life and business. It is also essential to manage risk in Islamic sustainable finance, which can be in the business sector or market and credit, where financial insurance can come forward and safeguard the risk of different uncertainties targeting low-income populations by offering them adequate insurance coverage. The sustainability of Takaful is still likely to grow and be progressive shortly because it is gaining high public awareness because of its ethics and benefits. Most importantly, this research has marked the beginning of a new approach towards Islamic sustainable finance that aims to promote a culture of industry-driven research.

#### Conclusion

Takaful institutions are generally young compared to established insurance institutions; they have higher management expenses to grow to a larger mass (Karbhari et al., 2018). It has been found that a dramatic rise in its demand is because of its ethical nature among Muslims. However, the Takaful institutions are tiny compared to different forms of conventional insurance counterparts. The present paper has also made us realize that it is not only for Muslims, as it has attracted many non-Muslim communities. They also need help with immature banking infrastructure and awareness compared to the traditional insurance market. These findings also summarize that these Takaful operators' role is vital to put in perspective that results in practical experiences. Therefore, they play a significant role in sustainable Islamic finance, as they spread the objectives of Takaful to the public. At the same time, they deliver their spirit into the heart of numerous people, mainly Muslims (Waluyo, 2020). Ultimately, these Islamic insurance institutions have a great opportunity simultaneously to fulfill their social responsibility to different communities. The study explored the different role of Takaful operators in Islamic



sustainable finance and found that takaful operators help in sustainability and environmental problems where they believe in sustainable finance that will help future generations to thrive and contribute to disaster risk management to minimize the negative impact caused by calamitous risks. They help corporations and protection. in which Takaful operators have a mutual agreement on loss amid each other and show volunteer cooperation and donate to protect each other from any damage or loss. Another critical role is the collection and management of common funds in which Takaful operators bring the social and economic benefits that include all kinds of modern insurance coverage and manage the collected amount of money into a common fund and use it to pay its benefits from these funds. They also manage risk and help all and provide a way to manage risks in different businesses. The researchers also analyzed the impact of Takaful operators on Islamic sustainable finance and concluded that Takaful operators significantly impact Islamic sustainable finance. The study will help the financial sector customize and rebuild its banking and products for the benefit of ordinary people and the financial insurance sector.

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