Global Islamic Finance Report

CAMBRIDGE GIFR 2021

ISLAMIC FINANCE IN A POST-COVID WORLD

Joint Publication with
جامعة عجمان
AJMAN UNIVERSITY
AJMAN UNIVERSITY CENTER FOR EXCELLENCE IN ISLAMIC FINANCE (AU-CEIF)

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مركز جامعة عجمان للتميز في المالية الإسلامية

Produced by

CAMBRIDGE
INTERNATIONAL FINANCIAL ADVISORY

GIFR is the official publication of Cambridge Institute of Islamic Finance and is produced by Cambridge IFA. GIFR 2021 is jointly published with Ajman University Center for Excellence in Islamic Finance (AU-CEIF).

About Cambridge Institute of Islamic Finance

Cambridge Institute of Islamic Finance – Cambridge-IIF – is an independent research centre, specialising in the financial sectors of the countries wherein Islamic banking and finance is a significant activity. Leveraging upon the academic resources the city of Cambridge has to offer, Cambridge-IIF is well-positioned to undertake research projects to study the global phenomenon of Islamic banking and finance. Cambridge-IIF aims at conducting policy-oriented research to further spur growth in Islamic banking and finance, with a special focus on the Sustainable Development Goals (SDGs).

About Cambridge IFA

Cambridge IFA is a financial services intelligence house that specialises in developing and utilising powerful cutting-edge analytical tools to evaluate business data, assess macroeconomic indicators and understand market trends, leadership positioning and brand development relevant to the development of the financial services industry globally. For more information visit www.cambridge-ifa.net

About Ajman University Center for Excellence in Islamic Finance (AU-CEIF)

Formed by Ajman University in 2020, AU-CEIF aims at being a world leading source of information, education, training and applied industry research in the field of Islamic banking and finance. Through AU-CEIF, Ajman University actively pursues the agenda of provision of an excellent and innovatively inclusive learning environment for all stakeholders relevant to the entire Islamic finance ecosystem, in a socially responsible manner following highest standards of integrity.

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ACKNOWLEDGEMENTS

We are thankful to all the organisations and institutions that have supported this industry-building initiative of immense importance. Being the first global annual report on Islamic banking and finance, GIFR has played a pioneering role in providing Islamic financial intelligence to all the stakeholders in the industry. The following institutions deserve special appreciation for contributing to the success of this venture. Without their support, it would have been difficult for us to bring this edition of GIFR.

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ABOUT CAMBRIDGE ISLAMIC FINANCE LEADERSHIP PROGRAMME

The Cambridge Islamic Finance Leadership Programme (Cambridge-IFLP) is the first and only global leadership programme for mid to senior-level managers who are working in Islamic financial institutions or simply preparing for a leadership role in Islamic finance.

Designed and structured by Cambridge IFA, the programme is delivered by some of the most influential leaders in Islamic banking and finance.

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Five most outstanding attendees are chosen to receive the Cambridge Islamic Finance Leadership Awards.

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CONTENT DEVELOPERS

TABINDA HUSSAIN

Editor

Tabinda Hussain is the Editor of the Global Islamic Finance Report, ISFIRE and WOMAN*i* Report. She is also responsible for all publications and content creation at Cambridge-Edbiz Group of Companies. She has also hosted the prestigious Global Islamic Finance Awards and the Global Good Governance Awards ceremonies.

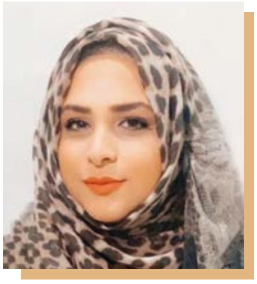
She is a gold medallist with degree in Media Studies and Journalism, and is a freelance writer and content manager for local, national and international clients. She has also been associated with Samaa TV and Express News as Production Associate. She is also a passionate educator for young minds, creating individualised curriculum in Urdu and English for differently-abled students.

DURDANA NAJAM

Associate Editor

Durdana Najam is responsible for content development and editing at Cambridge-Edbiz Group of Companies. She has been associated with broadcast and print media for the last twenty years. She writes regular weekly columns for Arab News, Express Tribune, and Roznama 92.

She also works as a social media communication strategist for independent clients for developmental and promotional purposes. She holds an MPhil in Public Policy and Governance. She has been associated with Dunya TV as a reporter, Daily Times as assistant editor, Pakistan Today as a feature writer on economic affairs, United Press International as a special correspondent, and J. Walter Thompson as an account executive.



SALWA JAMOUS

Editorial Assistant

Salwa Jamous is part of the team at Ajman University Center for Excellence in Islamic Finance (AU-CEIF) and works closely with its Director on its various projects. Salwa has been an assistant to the Editor-in-Chief of GIFR 2021, as part of the Editorial Team.

Salwa is currently pursuing a Doctorate in Business Administration at College of Business of Ajman University and has peer reviewed journal publication and conference papers to her credit as well. She did her Bachelor's degree in Management and an MBA in Marketing from the same college with distinctions and merit of Excellence.

DWI IRIANTI HADININGDYAH

Ministry of Finance, the Republic of Indonesia

Dwi Irianti Hadiningdyah is currently the Director of Islamic Financing at the Directorate General of Budget Financing and Risk Management, Ministry of Finance, the Republic of Indonesia. She earned a Bachelor' Degree in Law from Diponegoro University, Indonesia and a Master of Arts in Economics from the University of Delaware, USA. She is highly experienced in the field of Indonesia's capital market regulation and law, and is actively involved in the drafting of the Indonesia's Sovereign Islamic Securities (Sukuk Negara) Law and the implementation of its regulations since 1994.

She was also directly involved in developing Sukuk Negara since the very beginning, including the preparation contracts and legal documents used for issuances both in the domestic and international markets. She was also involved in the establishment of the Directorate of Islamic Financing. She is now the President Director of Sukuk Negara Issuing Company (SPV), whose is responsible for issuing the Republic of Indonesia (ROI) Global Sukuk and ROI Green Sukuk. She has been an active member of the Indonesian Association of Islamic Economist (IAEI).

DATO' ABU UBAIDAH KEMIN

Waqafa International Sdn Bhd, Malaysia

Abu Ubaidah Kemin graduated from the International Islamic University Pakistan with a Bachelor Degree in Da'wah Studies and is the founding President of BankWaqf International established in 2017. Abu Ubaidah believes that a holistic waqf system is the authentic Islamic economics and financial system. He also founded the WaqfCoin Digital Platform as a medium to accelerate waqf funds embedded with investment features. Abu Ubaidah practices what he preaches. He presides over a number of organisations and businesses, namely Al-Akhyar Educations Group Sdn. Bhd., Maahad Tahfiz al-Akhyar, Al-Akhyar International Foundation, and TDA Malaysia, to name a few. He strongly encourages Muslims all over the world to engage in waqf-embedded businesses, as it is a powerful way of reestablishing the glorious Islamic economy and social order of yesteryears; businesses that should be nourished, to benefit society in a sustainable manner.

PROFESSOR DR TARIQULLAH KHAN

Istanbul Zaim University

Tariqullah Khan (PhD Economics Loughborough University UK, MA & BA Economics Karachi University Pakistan) is currently a Professor of Islamic Economics and Finance at Istanbul Zaim University. Formerly, he was the President of International Association for Islamic Economics (2011-2019). He was also Professor and Program Director MSc & PhD Islamic Finance and Economy at Hamad Bin Khalifa University, Qatar Foundation (2009-2020). He also served as visiting scholar at Stanford University (2017) as well as at Harvard University (2011). During 2005 to 2009, he worked as Division Chief, Islamic Banking and Finance at Islamic Research and Training Institute of the Islamic Development Bank Group.

After starting as an academic in Gomal University, Pakistan (1976-81) and International Islamic University Islamabad (1981-83), for a long time in his early career, he worked as Principal, Lead, Senior Researcher and Researcher at Islamic Research and Training Institute of Islamic Development Bank Group (1983-2009). Apart from patronizing and spearheading policymaking, institution building and establishment of the Islamic finance industry on sound and sustainable footing, he has, over the years, written several papers, chapters, and books in many research areas of Islamic economics and finance.

His current areas of interest are healing ecology through economy, climate change and green finance, Islamic financial services, and Islamic economy and digital transformation. He reformed graduate programmes and introduced PhD programme at Hamad Bin Khalifa University, Qatar, centred on circular economy, sustainable finance and ESG impact investing at Hamad Bin Khalifa University Qatar. He also introduced graduate courses on sustainable development and circular economy at Istanbul Zaim University Turkey and established Ventureethica as a management consultancy firm to promote the vision of healing ecology through economy.

PROFESSOR DR AHAMED KAMEEL MYDIN MEERA

Waqafa International Sdn Bhd, Malaysia

Dr Ahamed Kameel holds a Ph.D. (Finance) degree from the University of North Texas and a Master's degree (Economics) from the International Islamic University Malaysia. He has taught, researched, published and consulted in Islamic finance, economics, money and payment systems, and is particularly known for his writings on real money systems. He is the author of the Islamic Gold Dinar, the Theft of Nations and Real Money. Currently, he is the Vice-President of Waqafa International Sdn. Bhd. that is dedicated to promote a unique waqf model, i.e., the Ubaid Waqf Economy Model, in order to realise the pristine Islamic economic system. He is also an advisor at the Z Consulting Group that provides multidisciplinary research and consultancy on inclusive wealth and sustainable socio-economic development, including affordable housing. Prof Ahamed Kameel is also the Chairman of the Movement for Monetary Justice Malaysia.

DEAN MURUVEN

World Wide Fund (WWF) International, Amsterdam – Netherland

Dean Muruven is currently the global policy lead for freshwater at WWF International. He holds an MBA from Maastricht University, a Master in Environmental Science from the University of South Africa and recently joined the University of Cambridge's Master of Social Innovation program. He has worked across the consulting and mining industry in Africa before joining WWF-South Africa to lead their source water protection program. Over the last 4 years Dean has led WWF global policy work on water; engaging with the private sector, UN agencies and governments across the world.

DR MOHAMMED OBAIDULLAH

Islamic Development Bank Group, Saudi Arabia

Dr Mohammed Obaidullah currently serves the Jeddah-based Islamic Development Bank Group as a Lead Research Economist. He has also served in several international and national institutions of repute, including the Islamic Economics Institute of the King Abdulaziz University, and the International Islamic University Malaysia, creating and sharing knowledge in the field of Islamic economics and finance with a focus on the application of blockchain, AI and other technologies to address development challenges.

He has held the 2nd Yayasan Tun Ismail Mohamed Berdafter (YTI) Chair Professorship in Islamic Finance at Universiti Sains Islam Malaysia. He has also published several papers, with over 2200 citations till date with an h-index of 24 and i10-index of 34. He is the author of the popular book Islamic Financial Services that has over 500 citations till date. He is a frequent speaker at international conferences and workshops on Islamic finance in general and Islamic social finance in particular. He was educated in India and holds a PhD and an MBA degree with specialisation in finance and certifications in microfinance, blockchain technology, digital finance and related areas. He is a qualified Certified Digital Finance Practitioner (CDFP), certified by the Fletcher School at Tufts University, USA. Among other things, he is the Founder of and volunteers for IBF Net (the Islamic Business and Finance Network) Group, which hosts the maiden online community in the field, with presence in Ireland, Malaysia and Singapore and is the winner of Global Islamic Finance Award 2021 as the Best Emerging Islamic Fintech Platform.

DR MOHAMED MAHEES RAHEEM

Effat University, Saudi Arabia

Mohamed Mahees Raheem is currently Assistant Professor of Finance in Effat University, Jeddah. He previously worked as an Economic Development Consultant at Z Consulting Group Sdn Bhd. His expertise lies in research and development of high-impact solutions for the advancement of sustainable socioeconomic growth, Islamic finance and education for the public and the private sector.

He possesses a PhD in Islamic Finance from the International Islamic University Malaysia, where his research topic specialises in providing alternative monetary solutions for small and medium enterprises. His main interests are in social finance, behavioural economics and social enterprises. His aim is to continuously design products and programmes that can sustainably enhance the current living standards while preserving the intergenerational wellbeing of the planet.

DR ABDUL RASHID

PROFESSOR

International Islamic University
Islamabad, Pakistan

Professor Dr Abdul Rashid is an icon of excellent research in Islamic banking and finance along with its conventional counterpart and was ranked among the world's best 2% researchers by Stanford University, USA. Currently, he is serving as the Director General of the esteemed International Institute of Islamic Economics (IIIE) at the International Islamic University Islamabad. He has completed his doctorate from the Department of Economics, University of Sheffield, United Kingdom. He is actively involved in research in applied econometrics, international finance, corporate finance, and Islamic finance and related disciplines.

He has published his work in Economic Inquiry, Empirical Economics, Small Business Economics, Energy, Energy Policy, Risk Management, Baltic Journal of Economics, Emerging Market Finance and Trade, Managerial Finance, Eurasian Business Review, International Journal of Finance & Economics, Portuguese Economic Journal, Journal of Economic Studies, Managerial Finance, Management Decision, Romanian Journal of Economic Forecasting, Economic Research-Ekonomska Istraživanja, Research in International Business and Finance, International Journal of Emerging Markets, Journal of Islamic Business and Management, Pakistan Development Review, Pakistan Business Review, The Lahore Journal of Economics, Business Review, and in several other well-reputed national and international journals. He is an author of more than 150 research papers and books' chapters, which have been published in National and International impact factor journals.

UNHCR- ISLAMIC PHILANTHROPY UNIT

United Nations High Commissioner for Refugees (UNHCR)

UNHCR's IP unit is part of Private Sector Partnerships team in MENA, based out of Dubai. The IP unit sets the organisational strategy for IP, and develops products and activities to engage IP stakeholders worldwide and build strategic partnerships to maximise the impact of IP in the humanitarian response to the displacement crisis.

DR SYED MUHAMMAD ABDUL REHMAN SHAH

University of Engineering & Technology
Taxila, Pakistan

Dr Syed Muhammad Abdul Rehman Shah is the Director of Academic Research & Policy, Development Foundation Islamabad, Pakistan; Assistant Professor at the University of Engineering and Technology (UET) Taxila, Pakistan; and a faculty member at NUST Business School, International Islamic University, and Quaid-i-Azam University Islamabad, Pakistan. He has over 10 years of experience in teaching and research in the domain of economics, banking, and Islamic finance. He is a PhD in "Monetary Policy Transmission Mechanism: Exploring the Role of Islamic versus Conventional Banks" and MS in Islamic banking & finance from the International Islamic University Islamabad, Pakistan, MSc (Economics) from Quaid-i-Azam University Islamabad, Pakistan, Ashahada tul Alimia (Dars e Nizami) from DMG Bhera, Sargodha, and MA (Islamic Studies) from the University of Sargodha, Pakistan.

He presented his research paper in an international conference at Kazguu University Astana, Kazakhstan; International Congress on Islamic Education at Marmara University Istanbul, Turkey. He also presented his research paper in conference organised by Ibn Sina University Khartoum, Sudan, and Islamic Research and Training Institute (IRTI) at Friendship Hall Khartoum, Sudan. He presented his research paper in the IIMEFC 2018 Conference organised by Bank Indonesia at Surabaya East Java, Indonesia.

He delivered a series of lectures at a workshop held in Al-Azhar University Cairo, Egypt. He won the 2nd best paper award at the 3rd Global Islamic Economic and Finance Conference (3rd WIEFC-2020) held at Minhaj University Lahore.

He has presented several lectures and research papers in local conferences, seminars, and workshops. He has authored more than 20 research papers, published in top international and national research journal indexed by SSCI & Scopus. Further, his 5 books' chapters are published by international publishers such as Springer (Palgrave Macmillan), Routledge (Taylor & Francis Group), YEKDER about Religious Education Academy & ICIE Turkey, and Springer Nature (Palgrave Macmillan).

MUGHEES SHAUKAT

Bank Nizwa, Oman

Mughees Shaukat is a renowned global financial/Islamic strategist, policy adviser and pioneer Head of Islamic Finance in the CBFS, under the Central Bank of Oman, Muscat, Sultanate of Oman. He is an internationally known FinTech specialist from MIT, USA. His focus includes, macroeconomic policies, multi-polar economy, political economy, behavioural and institutional economics, environmental economics, halal industry, China Pakistan Economic Corridor & governance among other.

Mughees is a prolific author and has over 50 publications, and has so far delivered over 100 policy talks, keynote addresses, expert sessions, high level presentations, and executive lectures, globally.

Alongside holding multiple key strategic and international advisory positions, Mughees is also the Vice Chairman Education Board, AAOIFI, Bahrain; a member of the Society of Advancement of Socio-Economics (SASE), France; a member of the Western Economic Association International (WEAI), USA.

He has been a member of the International Expert Panel created by the Central Bank of Bahrain for developing Islamic profit rate benchmark; a member of the BLOCKCHAIN Society, Oman; a Certified Shari'a Adviser and Auditor, AAOIFI & Vice Chairman Advisory Board of Fingel Global Inc. Toronto, Canada.

M. ABUBAKAR SIDDIQUE

International Islamic University
Islamabad, Pakistan

Dr Muhammad Abubakar Siddique is serving as lecturer at the International Institute of Islamic Economics (IIIE), International Islamic University Islamabad (IIUI), Pakistan. He holds a degree of MS Islamic banking & finance from IIUI, Pakistan, a degree of MSc Economics from Quaid-i-Azam University Islamabad, Pakistan. He also holds a degree of Masters in Shari'a. He has worked in Inclusive Recourse Management Limited, as Product Development Manager.

He has taught courses in various universities as Visiting Faculty and provides his services in field of training, product development and analytical review in field of Islamic banking and finance. His area of interest is Islamic law for business contracts, Islamic banking, Islamic economics and finance and Islamic jurisprudence. He also wrote several research papers in these areas published in well-reputed academic journals recognised by HEC, Pakistan. He has also presented his research paper in a conference organised by Ibn Sina University Khartoum, Sudan, and Islamic Research and Training Institute (IRTI) on in 2018.

EDITORIAL NOTES

STELLA COX CBE

Managing Director, DDCAP Group™

DDCAP Group™ (DDCAP) is, once again, honoured to be a Strategic Partner of the highly esteemed Global Islamic Finance Report, the oldest yearbook in Islamic banking and finance. Published by Cambridge Institute of Islamic Finance and produced by Cambridge IFA, the 2021 Global Islamic Finance Report marks the 12th year of its annual release. We value the opportunity to support these respected organisations in furtherance of this prestigious report which, after more than a decade, continues to play a vital role in providing Islamic financial intelligence to all industry participants.

Throughout the years of our Strategic Partnership, Cambridge IFA and DDCAP have worked together supporting, promoting and advocating the Islamic banking and finance industry. Our organisations have been at the forefront of policy development through collaboration on projects such as this Global Islamic Finance Report. As our valued partnership has flourished, together we have supported the Islamic finance industry to achieve several strategic objectives with regard to the empowerment of women, leadership development and in the dissemination of authentic Islamic financial intelligence.

We look forward to working with Cambridge IFA in the years to come as our industry pivots to addressing the needs of people and planet, mobilising financing to enable the transition to a lower-carbon economy and in the furtherance of preserving the natural environment and biodiversity. We have achieved much together and look forward to the work to come.

As the 12th annual Global Islamic Finance Report 2021 is launched at the Indonesia Sharia Economic Festival 2021, in Jakarta, Indonesia, we congratulate Cambridge Institute of Islamic Finance, Cambridge IFA and Professor Humayon Dar, as Founder & Managing Editor, on this outstanding achievement.

PROFESSOR HUMAYON DAR
PhD (CANTAB)

Director General, Cambridge Institute of Islamic Finance

Founder & Managing Editor of Cambridge Global Islamic Finance Report

Martin Luther King Jr. is believed to have said, “If you can’t fly, then run. If you can’t run, then walk. If you can’t walk, then crawl, but by all means, keep moving.” We have done all these but in the reverse order. When we started Global Islamic Finance Report in 2010, it was certainly a good move, as it was beginning of a new tradition in Islamic financial intelligence. Since then, many other reports have emerged, but they will always be considered to have followed the GIFR tradition that started in 2010. We have since then crawled, walked, run, and have now started flying in great colours. The current edition of the report is certainly consistent with the high standards it has set for itself.

This has certainly happened with the support of scores of individuals and numerous organisations. The success of Global Islamic Finance Report is, therefore, their success. In this respect, National Commercial Bank (now renamed as Saudi National Bank), Dubai Islamic Bank, CIMB Islamic, Finance Accreditation Agency, Khazanah Nasional Berhad and Bank Syariah Mandiri (now renamed as Bank Syariah Indonesia) must be named and acknowledged for their great support.

This is the second consecutive year that we have managed to publish Cambridge Global Islamic Finance Report (Cambridge-GIFR) amidst the ongoing global pandemic. This is an impressive achievement on part of all those who contributed to the timely publishing of the report. While other organisations – some of them otherwise generously endowed with the human resources – have failed to deliver on numerous projects, Cambridge Institute of Islamic Finance (Cambridge-IIF) and its associates have once again shown their resolve to continue to advocate for Islamic banking and finance through thick and thin, whether working from home or in traditional work environments.

The main theme of the report – Islamic Finance in a Post-COVID World – is timely. This follows our last year’s theme of “Islamic Finance for Socio-economic Inclusion and Sustainable Development.” It is a widely held belief that the post-COVID world would not be the same. Islamic banking and finance, therefore, will have to adapt itself to the changes not only in the financial markets but also in the general economic behaviour of various players on both the demand and supply side. In this respect, technology is going to play an even bigger role. Consequently, the nature of banking and finance – and even the treatment of money and its forms – must also change for it to remain relevant to the needs of the modern times.

Cambridge-GIFR 2021 makes this point aptly. We sincerely hope that the contents of this report will serve as guiding principles for those who would like to learn from the irreversible changes in the markets and economies, and accordingly change their business models for the benefit of all the stakeholders.

The previous editions of Cambridge-GIFR focused on an annual theme, including:

1. Size and growth of the Islamic financial services industry
2. Regulation of Islamic financial services
3. Islamic philanthropy and social responsibility
4. Islamic finance and halal industry
5. Human resource development for Islamic banking and finance
6. Leadership in Islamic banking and finance industry
7. Islamic financial policy
8. Leadership in Islamic banking and finance
9. Global Islamic economy and Islamic finance
10. Artificial intelligence and innovation in Islamic finance
11. Islamic finance for socio-economic inclusion and sustainable development

This year's report is jointly produced by Cambridge-IIF and Ajman University Center for Excellence in Islamic Finance, while Minhaj University Lahore has served as Special Knowledge Partner for the third consecutive year. With the increase in partnerships the project now benefits from, and with an ever-increasing quality of the content, the Cambridge-GIFR continues to be a global opinion-maker in favour of an authentic version of Islamic banking and finance. Encouraged by the success of these partnerships, we shall extend the scope of such partnerships for future editions of the report.

As this has always been an industry-building project, GIFR 2021 is supported by DDCAP Group and Qatar Financial Centre.

This year's report will certainly be treated as a treatise on the topic, with contributions from some of the most respected personalities in Islamic banking and finance. In particular, the chapters by Professor Tariqullah Khan and Dr Mohammed Obaidullah are very thought-provoking with future directions of the global Islamic financial services industry. I am also thankful to all other contributors who have shown their full commitment to the promotion of Islamic banking and finance. As the list of the previous contributors, first time included in this edition of GIFR, suggests, more than 100 industry leaders have contributed to the last eleven annual editions of the report. Without their support, it would have certainly been not possible to publish it on an annual basis.

Our Islamic Finance Country Index (IFCI) remains a hallmark of the report. As Chapter 2 presents, various countries have moved up and down the ranking over the last 10 years. In this respect, Indonesia has emerged as a serious player in the global Islamic financial services industry. While various factors have contributed to the success of Indonesia, it cannot be denied that the visionary leadership of President Joko Widodo played an important role in this respect.

As the Founding Editor-in-Chief and Managing Editor of this year's report, I would like to encourage libraries around the world to subscribe to all the 12 annual editions of GIFR, as they individually and jointly must serve as great reference point for researchers in the field of Islamic economics, banking and finance.

Before the COVID-19, GIFR was ably produced by our previous Editor-in-Chief, Dr Sofiza Azmi, whose contribution to the success of the report was invaluable. This publication has certainly been not what it has become today without her dedicated efforts to make GIFR an iconic publication in Islamic banking and finance.

At the end, I would like to extend my sincere thanks to the Government of Indonesia, especially Bank Indonesia, for its support to launch the report at the Indonesia Shari'a Economic Festival (ISEF), where President Joko Widodo will officially launch it for the benefit of the global Islamic financial services industry.

DR ADNAN AZIZ

Founding Director, Ajman University Centre for Excellence in Islamic Finance (AU-CEIF)

Editor-in-Chief of Cambridge Global Islamic Finance Report (GIFR)

As Editor-in-Chief of GIFR 2021, I am pleased to present to you the GIFR 2021. The theme for GIFR 2021 has been set as "Role of Islamic Finance in a Post-COVID World". This theme was chosen to highlight and discuss the role of Islamic finance during and after the COVID-19 crisis, and in the timely achievement of the UN's Sustainable Development Goals (SDGs).

This theme is not only relevant to the timely achievement of the UN's SDGs but also a must for sustainability of Islamic banking and finance (IsBF) in the longer term. I am sure that GIFR 2021 will give the readers yet another opportunity to benefit from the scholarly and informed positions of a multitude of contributing experts in the field. I am equally confident that the following brief on each chapter of GIFR shall entice your intellectual impulse and you would want to delve deeper into the reading of chapters in full.

Chapter 1 provides an overview of major developments in IsBF, amidst the ongoing COVID-related pandemic. It notes that the IsBF market remains healthy and the growth of Islamic AUM has started picking up, despite tough conditions in the markets. To maintain the momentum, however, a shift away from Islamic banking sector (in favour of other industry segments) is required. Islamic social finance may prove to be a viable contender to spur further growth in IsBF.

Chapter 2 is the GIFR's long-celebrated hallmark – Islamic Finance Country Index (IFCI). IFCI is the first ever multivariate analysis employed to rank about 50 countries with respect to the state of affairs of IsBF and their leadership role in the industry on a national and international levels. This year's IFCI is based on our 2011 index, with two major adjustments in the Methodology over the last 10 years. It uses data on the constituent factors for the year 2020 – the most recent data available at the time of analysis. To understand the methodology completely, GIFR strongly recommend to the readers to consult previous editions of GIFR. An update on the methodology is included in Chapter 2, however. In GIFR's view, IFCI remains the most robust measure of state of IsBF in the countries included therein.

The brainchild of Dato' Abu Ubaidah Kemin, Gold-Based Productive Waqf Model is described in Chapter 3 by Dato', Dr Meera and Dr Raheem. The chapter argues that while it is an ardent desire of many Muslims to witness the realization of a true Islamic economy that is benevolent to the community, the success of IsBF has not necessarily translated into uplifting society's socio-economic standards. In addition, the current financial systems have rendered economies and the environment unsustainable. Therefore, the need arises to look beyond traditional financial institutions and economic models to seek a sustainable and equitable system that will benefit all community sections. Towards this end, this chapter proposes an innovative waqf economy model that is being practiced in South East Asia and which is claimed to be capable of rendering that pristine Islamic economics and social system that is aspired.

In Chapter 4, Dr Obaidullah talks about potential applications of digital technology in Islamic social finance (IsSF). Use of digital services has become inevitable for the financial sector to enhance its coverage, especially when governments are promoting financial inclusion. IsSF has the potential to serve the financial inclusion agenda in a complementing and effective manner. Recognizing the importance of potential applications of digital technology in ISF, this chapter does the needful by focusing on potential applications of digital technology on zakat and awqaf, in particular. While a number of interesting dimensions have been discussed, a couple are worth mentioning here. AI can tell us whether or not the individual belongs to one of the eight categories of mustahiq or person eligible to receive zakat in the eyes of Shari'a. Similarly, a "smart ijara" or operating lease contract – that uses the blockchain and automates the periodic payment streams as well as reversion of leased assets to the waqf at the end of the lease period – could be a self-paying and self-executing instrument.

Through Dr Khan's contributed Chapter 5, GIFR 2021 provides a framework for the evolution of a coherent climate policy landscape in Islamic finance. More specifically, this chapter shows how climate change is perceived as the top substantial risk to the world economy and how post-COVID-19 green economic transformation (GET) can help achieve high human development. The chapter argues that the Islamic finance architecture and infrastructure must play a leading role in the movement of responsible and sustainable finance contribution.

Chapter 6 outlines opportunities to align the practice of IsBF with SDGs, in a Post-COVID world. Jointly contributed by Dr Shah, Dr Siddique, and Dr Abdul Rashid; the chapter explores SDG-aligned Islamic finance opportunities with a view to providing a relief to those affected by COVID in particular. This chapter's main objective is to draw attention of the policymakers in understating the role Islamic finance can play in achieving the SDGs within the framework of Islamic economics.

Contributed by Mr Muruven of WWF and Dr Aziz of AU-CEIF, Chapter 7 argues that very strong and sustainable synergies exist between IsSF and Bankable Nature Solutions (BNS). Building on the track record and specialised expertise of consortium members of Dutch Fund for Climate and Development (DFCD), chapter reflects on the informed potential and intended plan for creation and launch of Islamic Fund for Climate and Development (IFCD) to showcase to and encourage Islamic finance stakeholders globally to include IsSF and BNS in their core scheme of future plans.

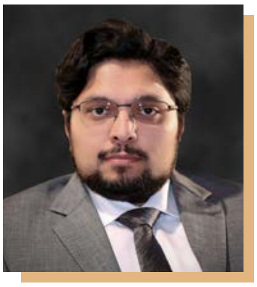
Contributed by Islamic Philanthropy Unit of UNHCR, Chapter 8 demonstrates as to how can IsSF achieve the SDGs in reality – this is done by learning from UN's own experience in the space of IsSF. However, it is acknowledged that the experience of UN agencies is still at the early stages, but the potential is immense for IsSF to create a real impact of social good across global communities in line with SDGs.

Contributed by Ms Hadiningdyah of the Ministry of Finance of Indonesia, Chapter 9 gives insights into the market leading role played by Indonesia's Sovereign Sukuk in a post-COVID-19 environment. It notes, for example, that the Retail Green Sukuk reached more than 24,000 individual investors from all provinces in Indonesia, the majority is millennial. Similarly, the 3G Best Green Initiative of the Year 2020 from Cambridge IFA was a testimony to the government's excellence in using green sukuk.

Chapter 10 provides an account of Indonesian experience of Islamic economic development. Shared by Bank Indonesia team, chapter draws relevance of moral values and halal sectors in an Islamic economy using the post-COVID policy of Bank Indonesia. In support of its policy and impact, chapter notes that there are more than 4,000 Islamic microfinance institutions following different microfinance business models, and that the Islamic social finance sector includes more than 500 Islamic social fund Institutions.

Chapter 11, contributed by Mr Shaukat, focuses on the role of risk-sharing Islamic finance in a post-COVID world. Chapter stresses that one of the strongest arguments in favour of globalization and ensuing multipolarity was improved risk sharing that would result from intensified human interaction across the world. However, it appears that the contribution of the present configuration of the Islamic finance industry to the growth of the real sector has fallen well short of expectations so far. It is argued that FinTech-driven version 2.0 of Islamic finance offers to reframe Islamic finance practice as per its original submitted mandates that currently are in an automatic match to UN SDGs.

There is more one can talk about from various contributions in the report. I would, however, let you enjoy reading rest of the report on your own.



DR HUSSAIN MOHI-UD-DIN QADRI

Deputy Chairman Board of Governors,
Minhaj University Lahore, Pakistan

Minhaj University Lahore, a chartered university, has been progressing on skills and training-based quality education. The university has several academic and allied blocs providing students with the facilities to ensure their participation in extra-curricular, co-curricular, and sports activities. A good number of research and state-of-the-art science labs are completely enriched with latest apparatuses and science instruments. Amidst the Pandemic, MUL attained a reputed position among top institutions of Pakistan in providing standard online education to students with fully trained faculty.

The mission of Minhaj University Lahore is to nurture the students in actualising their potential for intellectual and human development with exposure to new ideas and critical ways of thinking and learning. Future leaders need to be nurtured to be tolerant, humane, and productive beings to make a positive contribution to the nation and the international community. We believe that our students' character and attitude reflect their education. We are committed to creating a conducive learning environment that enables our students to embark on a journey of intellectual, social, spiritual and personal transformation. We will ensure that our alumni benefit society on a local, national and global scale. The university's unique system of education and training will offer a source of strength.

As Prof. Dr Muhammad Tahir ul Qadri aptly said, "Education is not meant to earn money but to create righteous humans with symbolic knowledge and sound characters". Indeed today, Minhaj University Lahore will be the natural reflection of Aligarh University, where students besides degrees are familiarized to serve humanity with the wisdom they earn through Education and Knowledge and securing spiritual altitudes.

Regarding Islamic economics & finance, MUL provides academic as well as practical experience to the students in this domain. Students have opportunities for internships at the university's technology house to create FinTech solutions, at the research centre, ICRIE to gain experience in research, at Al-Mawakhat Microfinance for practical work, and at the Minhaj Halal Pakistan for working on Halal industry.

PAST CONTRIBUTORS

(This list may cite the affiliations of contributors at the time of their contributions)

Dr Wail M. Love Aaminou
Managing Partner, Al Maali Consulting Group

Othman Abdullah
Chief Executive Officer, Islamic Banking and Innovative Services, Silverlake Group

Dr Mohammad Abdullah
Head of Shariah, Habib Bank AG Zurich (HBZ)

Jasani Abdullah
Chief Executive Officer, Hong Leong Islamic Bank BHD

Dr Moutaz Abojeib
Trainer and Islamic Finance Expert Researcher
International Shari'ah Research Academy for Islamic Finance (ISRA), Malaysia

Abdulazeem Aboozaid
Professor, Qatar Foundation

Iggi Achsien
Independent Commissioner, PT Pertamina (Persero)

Mufti Faraz Adam
Executive Director, Amanah Advisors

Nathif Adam
Former Managing Director, First Community Bank

Dr Ehsanullah Agha
Assistant Vice President (Shariah Compliance), Standard Chartered Bank

Oliver Agha
Counsel, Abdul Latif Jameel (ALJ)

Furqan Ahmad
Head of Ethical Banking (IB) Practice, Indra Technology Solutions Malaysia

Ehtisham Ahmad
Former Assistant Manager Design and Publications, Edbiz Consulting

Prof Habib Ahmed
Professor & Sharjah Chair in Islamic Law & Finance
Durham University

Shibeer Ahmed
Partner, Squire Patton Boggs

Alaa Alaabed
INCEIF

Dhafer Salih Alqahtani
Founder & Chief Executive Officer, BIDAYATECH Crowdfunding

Prof Dr Engku Rabiah Adawiah Binti Engku Ali
Professor, Institute of Islamic Banking and Finance (IIiBF), International Islamic University Malaysia (IIUM)

Ijlal Ahmed Alvi
Chief Executive Officer, International Islamic Financial Market (IIFM)

Dr Amer AlZaidi
Vice President for Academic Affairs, Umm Al-Qura University

Mohammed Amin
Chairman of the Islam & Liberty Network

Maria Ata
Chief Technology Officer For Data

Haroun Atallah
Director Finance and Support Services, IDLO - International Development Law Organization

Mehreen Mahmood Awan
Trained Corporate Lawyer & Partner, Mall 94

Nadi Serhan Aydin
Asst Prof (Chair), İstinye Üniversitesi, Department of Industrial Engineering

Dr Zeid Ayer
Product Specialist, Penske Automotive Group

Dr Wan Nursofiza Wan Azmi
Strategic Thinker

Ahmad Hafiz Abdul Aziz
Financial Sector Specialist, Global Knowledge and Research Hub in Malaysia, World Bank Group

Imam Nur Aziz
Indonesian Waqf Board

Dr Syed Marwan Mujahid Bin Syed Azman
Assistant Professor, International Islamic University Malaysia (IIUM)

Yerlan Baidaulet
Director General - Islamic Organization for Food Security (OIC specialized institution)

Dr Abderrazak Belabes
Researcher, Islamic Economics Institute

Dr Ahmed Belouafi
Researcher, Islamic Economics Institute

Ajmal Bhatty
Board Advisor, iPORTAL.Live

Ahmed Bibars
Executive Director, Products & Digitalization
National Bonds

Tricia Boutros
Vinson & Elkins LLP

Don Brownlow
International Banking Systems

Greget Kalla Buana
Islamic Finance Specialist, UNDP

Nadir Burnashev
Financial Institutions Association of Kazakhstan

Assist Prof Dr Mustafa Çakir
Vice Dean, Faculty of Business and Management Sciences, Istanbul Sabahattin Zaim University

Peter Casey
Consultant, Islamic Financial Services Board

Dr Valentino Cattelan
Lecturer in Law, Birmingham City University

Sara Carmody
Legal Director, Dubai Green Fund (DGF)

Ismail Chaib
FinTech | Inclusion | Open Banking | Open Finance | Venture Capital

Jennifer Chang
Partner, PwC Malaysia

Rahul Chatterji
Partner, Shearman & Sterling LLP

Dr Jamshaid Anwar Chattha
Advisor, Islamic Finance Policy, Risk Management & Supervision; Regulator QCB and CBK

Dr Muhammad Chaudry
President and Chief Executive Officer, Islamic Food and Nutrition Council of America (IFANCA)

Dr Tariq Cheema
Founder, MuslimFunders

Cheuk-Yin Cheung
Head of Structured Products – Middle East Clifford Chance

Prof Dr Murat Cizakca
INCEIF

Dennis W Cox
Chief Executive Officer, Risk Reward Ltd

Stella Cox CBE
Managing Director, DDCAP

Dr Mansoor Durrani
Senior Vice President & Head of Project Finance, National Commercial Bank (NCB)

Noeleen Goes-Farell
Partner, Mayer Brown

Dr Mohammad Omar Farooq
Economist; Educational management and consultancy; Islamic finance expert

Tushar Garg
Independent Researcher

Badlisyah Abdul Ghani
Group Chief Executive Officer, Mara Corporation (Mara Corp)

Ezzedine Ghlamallah
Executive Director, SAAFI

Dr Wafica Ghoul
Independent Finance Researcher

Rihab Grassa
Faculty Member, Higher Colleges of Technology, UAE

Simon Gray
Head of Business Development and Marketing
BVI Finance Limited

Dr Nihat Gumus
Consultant - Policy Specialist at UNDP and Assistant Professor of Finance

Dr Farrukh Habib
Co-Founder Alif Technologies (Dubai) & Shariah Experts (London)

Dr Muliaman Darmansyah Hadad
Former Chairman, Indonesian Financial Services Authority (OJK)

Rafe Haneef
Chief Executive Officer of Group Transaction Banking
CIMB Group

Dr Mian Farooq Haq
Director, BankIslami

Dr Zulkifli Hasan
Deputy Rector (Student Development and Community Engagement), IIUM

Prof Kabir Hassan
Professor of Finance, University of New Orleans

Prof Dr Ashraf Bin Md Hashim
Chief Executive Officer, ISRA Consultancy

Walid M. Hassouna
Chief Executive Officer, EFG Hermes Finance

Anouar Hassoune
Chief Executive Officer, West Africa Rating Agency (WARA)

Usman Hayat
Independent Consultant

Andrew Henderson
Partner, Macfarlanes

Gerrit Heyns
Board of Trustees of the Islamic Reporting Initiative

Dr Nunung Nurul Hidayah
Associate Professor, University of Southampton

Madzlan Mohamad Hussain
Independent Director, Prudential BSN Takaful Berhad

Syed Tajammul Hussain
Founder & Chief Executive Officer, Love For Data (LFD)

Dr Zamir Iqbal
Head of World Bank Global Islamic Finance Development Center

Lee Irvine
Associate, Latham & Watkins LLP

Hylmun Izhar PhD
Senior Economist, Islamic Development Bank (IDB)

Sohail Jaffer
Partner and Head of Int. Business Development
FWU Group

Kashif Jahangiri
Senior Executive Director, Deloitte Middle East

Abdullatif Mohamed Janahi
Board Member and Chief Executive Officer, Venture Capital Bank

Dr Ahmed Tahiri Jouti
Group Co-CEO and General Manager, Al Maali Group

Alexandr Kamchatnyy
Islamic Finance Specialist, National Bank of Kazakhstan

Lidia Kamleh
Associate, King & Spalding LLP

Noripah Kamso
Co Chairman Islamic Finance Industry Council, Malaysia U.S. Chamber of Commerce

Rizwan Kanji
King & Spalding LLP

Harun Kapetanovic
Economic Adviser, Department of Economic Development, Government of Dubai

Adiwarman Karim
Karim Business Consulting

Oliver Karius
Partner, LGT Venture Philanthropy Foundation

Jhordy Kashoogie
Economist, Central Bank of Indonesia

Ayman Abdel-Khaleq
Partner, Morgan, Lewis & Bockius LLP

Noman Khalid
Founder and Chief Data Architect, Love For Data

Mujtaba Khalid
Head of Islamic Finance Center, The Bahrain Institute of Banking and Finance (BIBF)

Ayub Khan
Sr Credit Assessment Officer, ANZ

Hussain Khan
K&L Gates LLP

Dr Nida Khan
Chief Executive Officer & Co-founder, Nash fintechX

Omer Khan
Senior Associate, PricewaterhouseCoopers

Saleem Ullah Khan
Executive Director, State Bank of Pakistan

Sajjad Khoshroo
Counsel, Allen & Overy

Rosie Kmeid
Global Vice President, Corporate Communications & Marketing, Path Solutions

Dr Jarmo Kotilaine
Bahrain Economic Development Board

Mohammed R. Kroessin, PhD
Head of Islamic Microfinance, IRW

Yew Kuan Kuok
Senior Manager, PwC Hong Kong

Prof Dr Ahcene Lahsasna
Deputy Director for the Centre of Research and Publication, INCEIF

Dr Akram Laldin
Executive Director, International Shari'a Research Academy (ISRA)

Qudeer Latif
Partner (Global Head of Islamic Finance) Clifford Chance

Jonathan Lawrence
Partner, K&L Gates

Ruggiero Lomonaco
Fund Manager, Rasmala Long Income Fund

Dr Siti Mashitoh Mahamood
Director of UM Awqaf and Senior Lecturer Department of Syariah and Law, University of Malaya

Datin Maznah Mahbob
Investment and Finance Professional

Raja Teh Maimunah
Managing Director Wholesale Banking, AmBank Group

Dr Rizwan Malik
Head - Standards Implementation and Strategic Developments, AAOIFI

Asfand Zubair Malik
Shari'ah Compliance | Shari'ah Audits | AAOIFI Master Trainer | Islamic Product Development

Moinuddin Malim
Founder and Managing Partner at AIMS - Alternative International Management Services

Dr Amat Taap Manshor
Chief Executive Officer, Finance Accreditation Agency

Merlyn Maria
Independent Researcher

Suresh Marimuthu
Partner, Deloitte and Touche LLP

Dr Shehab Marzban
Chief Executive Officer and Founder, DFin

Michael J.T. McMillen
Partner, Curtis, Mallet-Prevost, Colt & Mosle LLP

Dr Hamed Hasan Merah
Chief Executive Officer, Saudi Center for Commercial Arbitration

Kader Merbouh
Director of the Islamic Finance Department Financia Business School

Neil D. Millers
Global Head of Islamic Finance, Linklaters

Imran Hussain Minhas
IBF & Islamic Capital Markets Expert (Regulator/Banker)

Dr Hela Miniaoui
Associate Professor
Qatar University

Prof Dr Abbas Mirakhor
INCEIF

Umar Moghul
Partner, Roberts Moghul & Partners

Dr Hazik Mohamed
Managing Director, Stellar Consulting Group

Prof Dr Saadiah Mohamad
Honoray Professor of Economics, Universiti Selangor (UNISEL)

Dr Magda Ismail Abdel Mohsin
Associate Professor, INCEIF

Ahmed Moola
Managing Director, Absa Islamic Banking

Daniel Morler
Managing Partner & Member Board of Directors, R.J. Fleming & Co.

Peter Morton
Partner, K&L Gates LLP

Habib Motani
Lawyer, Clifford Chance LLP

Amman Muhammad
Chief Executive Officer, FNB Islamic Banking

Dr Aishath Muneeza
Associate Professor, International Center for Education in Islamic Finance (INCEIF)

Muhamad Fahmi Mustafa
Islamic Digital Economy, Silverlake Group

Zakariya Mustapha
Doctoral Candidate, University of Malaya

Dr Mahmoud Sami Nabi
Professor of Economics, University of Carthage

Professor Asmadi Mohamed Naim
Uni SHAMS

Philippe Neefs
International Tax Partner, KPMG Luxembourg

Craig Nethercott
Latham & Watkins LLP

Prof Dr Volker Nienhaus
Professor of Economics, University of Bochum

Dr Shariq Nisar
Managing Director, ShariahCap Advisors LLP

Mian Muhammad Nazir
Managing Director, Dar Al Shari'a

Assist Prof Dr Zeyneb Hafsa Orhan
International Trade and Finance Department, Istanbul Sabahattin Zaim University, Turkey

Dr Aida Othman
Partner at Zaid Ibrahim & Co. and a Director with ZICO Shari'a Advisory Services Sdn Bhd.

Prof Dr Ismail Ozsoy
Professor, Fatih University

Mohammed Paracha
Head of Middle East, Norton Rose Fulbright

Dr Zahid Parvez
Rector, Markfield Institute of Higher Education

Rehan Pathan
Managing Director and Head of Client Coverage, Shuaa Capital

Nicholas Payne
Rexiter Capital Management

Philip Pfeffer
Partner, Herbert Smith Freehills

Thom Poulson
Director of Investment, Pentavirate

Dien Lukita Purnamasari
Group Head, PT Bank Syariah Indonesia, Tbk

Dr Hussain Mohi-ud-Din Qadri
President of Minhaj-ul-Quran International (MQI) and Deputy Chairman of the Board of Governors, Minhaj University Lahore

Saïd Qaceme
Corporate Governance & Business Model Assessments, Commission de Surveillance du Secteur Financier (CSSF)

Dr Muhammad Qaseem
Country Head of Shari'a, Dubai Islamic Bank Pakistan Ltd

Carina Radford
Partner, White & Case LLP

Azmat Rafique
Independent Islamic Finance Expert

Abdessamad Raghibi
Equity Research - Energy I Researcher on Corporate Finance, Sustainable Finance and Islamic Finance

Harj Rai
Partner, Latham & Watkins LLP

Michael Rainey
Partner, King & Spalding LLP

Rizwan Rahman
Legal and Strategy Associate, Biotricity Inc.

Deborah Resch
Director, Markets Legal, Citigroup

Imran Riaz
International Tax Director, Baker Hughes

Dr Edana Richardson
Lecturer of Law, Maynooth University, Ireland

Abu Bakr Rieger
European Muslim Union

Tariq Al-Rifai
Advisor on Financial Policy and Economic Development

Robert Rilk
Head Governance and Quality, University Medical Center Freiburg

Dr Ahmed Rufai
Head of Compliance, International Islamic Financial Market (IIFM)

Dr Auwal Adam Sa'ad
Assistant Professor at the Institute of Islamic Banking and Finance, International Islamic University Malaysia (IIUM)

Dr Irum Saba
Assistant Professor, Department of Economics and Finance, IBA

Ahmad Sabree
Shariah Auditor, SHARIYAH REVIEW BUREAU

Shehzaad Sacranie
DLA Piper, Middle East

Isam Salah
Partner, King & Spalding

Dr Imam Teguh Saptono
Indonesian Waqf Board

Dato' Sri Zukri Samat
Chief Executive Officer, Bank Islam Malaysia Berhad

John Sandwick
General Manager, Safa Investment Services

Ali Seghir
Commodity Trading Company

Bushra Shafique
Joint Director, State Bank of Pakistan

Dr Zurina Shafii
Professor in Islamic Finance, Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia (USIM)

Reem El Shafaki
Partner, Dinar Standard

Assoc Prof Dr Mohamed Eskandar Shah
Associate Dean, School of Graduate and Professional Studies, INCEIF, Financial Sector Specialist, World Bank

Omar Shaikh
Managing Director and Advisory Board Member, UKIFC's (United Kingdom Islamic Financial Council)

Kamran Khalid Sherwani
Head - Internal Shari'ah Control, Abu Dhabi Commercial Bank

Bishr Shiblaq
Managing Director, Nomilux

Rafi-uddin Shikoh
Manging Director, Dinar Standard

Harisman Sidi
Director at ICDIF, Indonesian Banking Development Institute (LPPI)

Prof M. Nejatullah Siddiqi
Independent Research Professional

Shahzad Siddiqui
Shahzad Siddiqui Professional Corporation

Yousuf Siddiqui
Head Shari'a Training, ADIB - Abu Dhabi Islamic Bank

Edib Smolo
Vice-Dean for Scientific and Research Activities International University of Sarajevo

Dr Ludwig Stiftl
Head, Centre of Competence for Retakaful, Munich Re

Fadzlan Sufian
Assistant Vice President, Khazanah Nasional Berhad

Randi Swandaru
Head of Zakat Utilization Division, BAZNAS, the Republic of Indonesia

Dr Luqyan Tamanni
Deputy Director, Komite Nasional Ekonomi dan Keuangan Syariah (KNEKS)

Dr Hendri Tanjung
Vice-Director of the Post Graduate School, University of Ibn Khaldun, Bogor

Ahmad Soekro Tratmono
Executive Director of Islamic Banking, Department, Indonesian Financial Services Authority (OJK)

Dr Hatim El-Tahir
Director, Deloitte & Touche

Dr Luqyan Tamanni
Deputy Director, Komite Nasional Ekonomi dan Keuangan Syariah

Dr Marco Tieman
Founder & Chief Executive Officer, LBB International

Priya Uberoi
Founder & Managing Partner, Oberoi Capital Partners Limited

Ilyas Vaguine
International Tax Associate B.V

Roustam Vakhitov
International Tax Professional

Dr Asyraf Wajdi Dato' Dusuki
International Shari'ah Research Academy (ISRA)

Dr Jonathan A J Wilson
University of Greenwich

Paul Wouters
Chief Executive Officer, PT Senturiyon Global

Aydin Yanbali
Participation Banks Association of Turkey

Joel Ow Yang
Specialised in PMO and Credit Risk

Naazish YarKhan
Chief Executive Officer, Writers Studio

John Yip
Senior Vice President, Islamic Bank of Asia

Etsuaki Yoshida, PhD
Project Associate Professor, Kyoto University

Yusry Yusoff
Chief Executive Officer, IBFIM

Asst Prof Dr Nor Razinah Mohd. Zain
IIUM Institute of Islamic Banking and Finance, International Islamic University Malaysia

Nurazalia Zakaria
Lecturer, Universiti Sains Islam Malaysia

Zeineb Zouari
University of Sousse

TABLE OF ACRONYMS

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
ADIB	Abu Dhabi Islamic Bank
ADIF	Association of Islamic Finance Development
AFED	Arab Forum for Environment and Development
AI	Artificial Intelligence
ANNs	Artificial Neural Networks
ASI	Artificial Superintelligence
ATM	Automated Teller Machine
AUM	Assets Under Management
BAZNAS	Indonesian National Board of Zakat
BCBS	Basel Committee on Banking Supervision
BIBF	Bahrain Institute of Banking and Finance
BNM	Bank Negara Malaysia (the Central Bank of Malaysia)
BNS	Bankable Nature Solutions
BOD	Board Of Directors
BOT	Build- Operate-Transfer
BSI	Bank Syariah Indonesia
BWI	Badan Waqf Indonesia (Indonesian Waqf Board)
CBT	Climate Budget Tagging
CBUAE	Central Bank of the United Arab Emirates
CCAF	Cambridge Centre for Alternative Finance
CFA Franc	Official currency of Communauté Economique et Monétaire de l'Afrique Centrale (CEMAC) and the West African Economic and Monetary Union (WAEMU)
CIBAFI	General Council for Islamic Banks and Financial Institutions
CICERO	Center for International Climate Research
CIS	Commonwealth of Independent States
CSR	Corporate Social Responsibility
CWLS	Cash Waqf-Linked Sukuk
DIB	Dubai Islamic Bank
DIFC	Dubai International Financial Centre
DMI	Dar al-Maal al-Islami Group
ECL	Expected Credit Losses
EF	Ecological Footprints
EMDEs	Emerging and Developing Economies
ERP	Enterprise Resource Planning

ESG	Environmental, Social and Governance
FAB	First Abu Dhabi Bank
FinTech	Financial Technology
FSAP	Financial Sector Assessment Programme
FX	Foreign Liabilities
G20	Premier forum for international economic cooperation
GBPs	Green Bond Principles
GCC	Gulf Cooperation Council
GDP	Gross domestic product
GE Capital	Financial services division of General Electric
GET	Green Economic Transformation
GFC	Global Financial Crisis
GHGs	Greenhouse Gas Emissions
GHOS	Group of Central Bank Governors and Heads of Supervision
GIFR	Global Islamic Finance Report
GIFA	Global Islamic Finance Awards
HDI	UN Human Development Index
HOSs	Higher Objectives of Shari'a
IAP	Investment Account Platform
IASB	International Accounting Standards Board
IBFIs	Islamic Banks and Financial Institutions
IC	Identification Cards
ICD	Islamic Corporation for the Development of the Private Sector
ICIEC	Islamic Corporation for the Insurance of Investment and Export Credit
ICT	Information and Communication Technology
IDPs	Internally Displaced Persons
IFCI	Islamic Finance Country Index
IFRS	International Financial Reporting Standards
IFSAP	Islamic Financial Sector Assessment Programme
IFSB	Islamic Financial Services Board
IIFM	International Islamic Financial Market
IMB	Ijara Muntahiya Bittamlik
IMF	International Monetary Fund
INCEIF	International Centre for Education in Islamic Finance
IPCC	UN Intergovernmental Panel on Climate Change
IRR	Investment Risk Reserve

IRTI	Islamic Research & Training Institute
IsBF / IBF	Islamic Banking and Finance
IsDB	Islamic Development Bank
IsFI	Islamic Financial Institutions
ISRA	International Academy for Sharia Research in Islamic Finance
IsSF	Islamic Social Finance
IsSFIs	Islamic Social Finance Institutions
ITS	International Turnkey Systems
KFH	Kuwait Finance House
KMO	Kaiser-Meyer-Oklin
KNEKS	Komite Nasional Ekonomi dan Keuangan Syariah
KYC	Know Your Client
LCR	Liquidity Coverage Ratio
M&A	Mergers and Acquisitions
MCB	Mualaf Center BAZNAS
MDBs	Multilateral Development Banks
MDEC	Multimedia Development Corporation
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
MFIs	Microfinance Institutions
ML	Machine Learning
MMFA	Master Murabaha Financing Agreement
MSMEs	Micro, Small and Medium Sized Enterprises
MUIS	Majlis Ugama Islam Singapore
NADRA	National Database & Registration Authority
NGO	Non-Governmental Organisation
NLP	Natural Language Processing
NPF	Non-Performing Financing
NSFR	Net Stable Funding Ratio
NSS	National Savings Scheme
OECD	Organisation for Economic Co-operation and Development
OIC	Organisation of Islamic Cooperation
OJK	Otoritas Jasa Keuangan (Financial Services Authority of Indonesia)
PD	Product Development
P2P	Peer to Peer
PHEIC	Public Health Emergency of International Concern

PII	Personally Identifiable Information
PISIFI	IFSB Prudential and Structural Islamic Financial Indicators
PSEs	Public Sector Enterprises
QCB	Qatar Central Bank
QR	Quick Response code
SAMA	Saudi Central Bank
SANZAF	South Africa National Zakah Fund
SBP	State Bank of Pakistan
SDGs	UN Sustainable Development Goals
SEC	Securities and Exchange Commission
SMEs	Small and Medium Sized Enterprises
SMEDA	Small and Medium Enterprises Development Authority
SPAC	Special Purpose Acquisition Company
SPV	Special Purpose Vehicle
SRI	Socially Responsible Investing
UAE	United Arab Emirates
UK	United Kingdom
UKM	National University of Malaysia
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNHCR	UN High Commissioner for Refugees
UNICEF	The United Nations Children's Fund
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
US	United States
USD	United States Dollar

PART 01

OVERVIEW OF THE GLOBAL ISLAMIC FINANCIAL SERVICES INDUSTRY

CHAPTER 01

> The real thing about Islamic finance is that it is not only about Islamic finance. Islamic finance is in reality a peaceful contribution to a wider set of efforts aimed at the renaissance of Islam as a modern religion that has to co-exist in the modern world, with a multitude of interdependence of communities and mutuality of faiths.

GIFR 2010, p. 26

OVERVIEW OF THE

Global Islamic Financial Services Industry

Since 2010, GIFR has reported briefs on the state of affairs of the global Islamic financial services industry as an opening chapter of the annual report. During the last 11 years, the industry has gone through significant changes, particularly with reference to its growth. Following the tradition, this chapter provides an overview of major developments in Islamic banking and finance during the ongoing COVID-related pandemic[1].

COVID-19 has proven to be an extra ordinary correction – dubbed as Great Reset by some observers – not only in the global markets but also as a phenomenon that has shaken the very basic fabric of the society – individual. Keeping aside the cynicism contained in the Great Reset thinking, everyone and everything in between has been affected by this disruption. While income disparities have apparently increased (with 120 million people pushed into extreme poverty and rather paradoxically increase in wealth of billionaires[2]), gender diversity is at stake, child poverty has gone up, the future generations are going to feel the scars of the wounds it has inflicted on education. Loss of human lives will keep on reminding many who have been directly hit by this calamity. It may well be needed to reset a new date for achieving Sustainable Development Goals (SDGs). If not, the world would require lot more resources to be utilised more efficiently and timely manner to be even close to achieving the targets by 2030, let alone achieving the SDGs in entirety or individually.

Yet, it has so far caused only the second largest global recession in the history, after the Great Depression of the 1930s!

The term disruption had variedly been used to refer to technological advancement, financial innovation and the price changes but COVID-19 has for sure given the true meanings to it. It is certainly the biggest disruption Islamic banking and finance (IsBF) has witnessed since the 1970s when it emerged as a formal phenomenon in some national financial markets. The oil shock of the early 1970s has by many been attributed as the real impetus to the birth of IsBF. It has since then experienced neo-colonisation of the Arab world, with the occupation of Iraq and Afghanistan and increased influence of the Western powers in many Arab countries (see below for specific example of what has recently happened in Sudan). The so-called Arab Spring proved to be an impetus to birth and subsequent growth of IsBF in the countries affected by this phenomenon. The North African regimes had historically been hostile to IsBF. It is only after the Arab Spring that IsBF has started thriving in Libya, Algeria, Morocco and Tunisia. Furthermore, IsBF witnessed significant progress in countries like Syria and Iraq, which were not friendly towards it before the ongoing conflicts. Also, constitutionally secular states like Turkey and Indonesia are now explicitly vowing to be global centres of excellence for IsBF.

It has also survived the Global Financial Crisis (GFC) of the 2008-09. It not only survived during the GFC but its credentials as a sustainable financial system were further accentuated in its aftermath[3].

The disruption is the most comprehensive this time, with the two holiest mosques of Muslims nearly completely shut making it hard for the pilgrims to perform the rituals they have undertaken for centuries[4]. Micro and small and medium enterprises (SMEs) have been very badly hit by the lockdowns. It is fair to assert that apart from public sector employees, almost everyone is hit hard by the pandemic. In some cases, national responses and plans to combat the adversary seem completely disoriented, and it seems as if the statement, “Everyone has a plan until they get hit,” by the famous boxer Mike Tyson aptly describes the situation. Malaysia – an important Islamic financial market – is a good example in this respect. The populace therein is completely bewildered by the inconsistencies in the government response to COVID-19. While the initial response of the Malaysian government was hailed as one of the best, its later treatment can at best be described as directionless, if not complete chaos. Obviously, it had implications for growth and development of IsBF therein.

1. While this chapter is self-contained, serious researchers are encouraged to consult opening chapters of the previous editions of GIFR (2010-2020) in conjunction with this chapter to take a historical view on the developments in IsBF as regards its size and growth.

2. Ferreira, F. H. G. (2021) Inequality in the Time of COVID-19. Finance and Development (June 2021), p. 20-23.

Everyone has a plan until they get hit

- Mike Tyson

Sudan – one of the two countries with a full-fledged Islamic economic system – announced re-introduction of the dual banking system, hence abandoning its long-standing policy of allowing only Islamic banks and financial institutions to operate in the country. The decision by the Sovereign Transitional Council is radical, as it may pave the way for re-emergence of an interest-based economic system. If that happens, this will be a major setback for the global movement of Islamisation of economies of the member countries of the Organisation of Islamic Cooperation (OIC).

Interestingly, no official response has so far come from industry-building infrastructure bodies like Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI), Islamic Financial Services Board (IFSB), International Islamic Financial Market (IIFM) and General Council for Islamic Banks and Financial Institutions (CIBAFI). IsDB has also opted to keep quiet on the matter. This confirms the fact that IsBF lacks a formal global advocacy platform and that it does not enjoy political support on a global level.

The lack of response to this anti-development may have far-reaching implications for further acceptance and adoption of IsBF by multilateral institutions like the World Bank, International Monetary Fund (IMF) and regional development banks. The initial enthusiasm of the multilateral institutions towards IsBF has already started receding, and the announcement by the Sudanese authorities as regards introduction of a dual banking system will certainly not help in this respect.

One should look at the future engagements of the multilateral institutions in Sudan to see if the new regime uses Islamic financial structures or opts for conventional arrangements while negotiating financial packages with them.

The need for a global body with an exclusive focus on advocacy is now paramount. Admittedly, CIBAFI was founded in 2001 for: (1) Advocacy of Islamic finance values and related policies and regulations; (2) Research and innovation; and (3) Training and professional empowerment. Over the years, the focus has moved to the last two stated objectives, with only a marginal focus on advocacy. As a body set up by IsDB and affiliated with the OIC, it possessed huge promise that has yet to be realised. There are hundreds of training providers, and the likes of Islamic Development Bank Institute are spearheading R&D in IsBF, a body like CIBAFI should exclusively focus on the advocacy of IsBF to play a more meaningful role as an industry infrastructure body.

3. Obviously, it cannot be denied that the GFC had an adverse effect on innovation in IsBF, as stated below.

4. It must be clarified that the Kingdom of Saudis Arabia is being hailed as a country that has taken the pandemic most seriously, with very strict measures taken and assurance that they were religiously observed as well.

The need for a global body with an exclusive focus on advocacy is now paramount

The problem with all the industry infrastructure bodies – not just CIBAFI – is that everyone is trying to do everything without any coherent and consistent approach. By way of example, AAOIFI has a growing training emphasis, something that could have been offered by another body like INCEIF and even Bahrain Institute of Banking and Finance (BIBF). It should not have been the function of AAOIFI to get involved in training at all beyond a limited training of trainers programme. AAOIFI should have an exclusive focus on standards development – accounting & auditing and Shari'a standards – and have a proactive role in pushing external providers to offer specific training programmes to promote their standards. Similarly, Islamic Financial Services Board (IFSB) must continue to focus on standards development in the area of regulation and supervision. So far, IFSB has proven to be most focused, and it may be due to the fact that it is headquartered in Kuala Lumpur that enjoys a more professional ecosystem for IsBF than many other cities/countries. IIFM has also in the last 10 years or so focused on standardisation of Islamic financial contracts. However, even in this case, publishing an annual Sukuk Report seems like stretching its scope too much.

Hence, it is recommended that a global advocacy forum should be developed comprising the representatives of various stakeholders, namely, IsDB, infrastructure bodies (AAOIFI, IFSB, CIBAFI and IIFM, etc.), national bodies like KNEKS in Indonesia, and market players (Islamic banks and other Islamic financial institutions). It is also important to engage other think tanks like Cambridge International Financial Advisory (Cambridge IFA), media specialists like Thomson Reuters, Redmoney and others that have been championing the cause of IsBF. It is also important to engage the academic community (which has by and large been sceptical of the IsBF practices). In this respect, the role of Cambridge IFA is commendable. It has been publishing this report – GIFR – since 2010 on an annual basis, which has advocated IsBF effectively. Furthermore, its Global Islamic Finance Awards (GIFA) has successfully engaged top political leaders – Prime Ministers and Presidents – by way of presenting to them Global Islamic Finance Leadership Awards. Similarly, there are a number of other smaller players in this domain, which should be brought on board to create an effective global advocacy platform.

How has the Industry Responded to the Pandemic?

There are certainly some positive developments associated with the outbreak of the pandemic and its persistence. The use of technology is a big win. It has allowed remote working not only possible, but it has now become a preferred choice for many employers and employees. The long-term effects of this on productivity have yet to be assessed and quantified.

5. For a preliminary analysis of the effect of COVID-19 on stability of IsBF, readers are directed to GIFR2020, p. 47-51.

6. See, for example, Global Islamic FinTech Report 2021, published by Dinar Standard and Elipses.

COVID-19, however, has not dinted the industry uniquely or unevenly, as IsBF has reacted to the pandemic as well (or as bad) as its counterparts in the global and national financial markets[5]. The contribution of FinTech to the industry growth admittedly remains marginal. The industry pundits are, however, buoyant about the Islamic FinTech. There are quite a few reports focusing on the Islamic FinTech[6]. These are good examples of presenting the Islamic Fintech landscape in specific countries and world-wide.

Careful readings of these documents reveals that there is no Islamic FinTech initiative that may pose a serious threat to the traditional Islamic banks and financial institutions. Huge enthusiasm towards an Islamic cryptocurrency has now receded, bringing down the expectations of those who would like to jump up at the sight of any new thing on the horizon. Similarly, attempts to create Islamic Amazons have also licked the dust. Consequently, we have now more realistic expectations towards the role of FinTech in IsBF.

The contribution of FinTech to the industry growth remains marginal

Amidst the mediocrity of thought and limitations on size and location, there are some promising FinTech initiatives that may revolutionise Islamic FinTech. Given that Islamic FinTech market has yet to come out of infancy, it is difficult to draw an authentic list of top performers in this field. ETHIS is perhaps the best example of an Islamic FinTech initiative that has grown organically since its inception. With 30,000+ members from over 50 countries, ETHIS has not only grown slowly but has also played an effective advocacy role.

FAIR is another emerging brand in Islamic FinTech. Based in the USA, it has impressive plans to implement an innovative strategy to create value. If successful, FAIR will offer a good example to emulate in other parts of the world. Central to the plan is a SPAC (Special Purpose Acquisition Company) that will serve as an engine for value creation[7]. As the COVID-19 is unique in many respects, it caught IsBF unprepared to respond to it. Consequently, the industry followed what the financial sector regulators prescribed for all the financial players in given markets and what governments rolled in out in terms of support programmes. Subsequent to enthusiasm in the likes of UAE, Bahrain and Malaysia in the pre-COVID era, KSA has emerged as a new focal player in Islamic FinTech amidst the pandemic. These markets, however, are limited by their size. The countries with dense populations (e.g., Indonesia, Pakistan, Bangladesh, Nigeria and to some extent Egypt) have huge potential for growth of Islamic FinTech. Indonesia is perhaps the most promising market in this respect, while other aforementioned countries have yet to witness any significant developments in Islamic FinTech.

7. For further details, read an interview of FAIR founder in ISFIRE, June 2021 issue.

Response to the COVID-19 in Pakistan – An Interesting Example

The COVID-19 has not dinted the industry uniquely or unevenly, as IsBF has reacted to the pandemic as well (or as bad) as its counterparts in the global and national financial markets[8].

Let us look at Pakistan[9] – one of the top 10 Islamic financial markets according to our Islamic Finance Country Index (IFCI) as reported in Chapter 2. The country recorded 30% growth in Islamic banking assets in 2020[10], along with growth of 27.8% in deposits. This was the highest annual increase in assets since 2012 and in deposits since 2015, withering away the impact of the pandemic. Financing by Islamic banking institutions – both fully-fledged Islamic banks and Islamic banking windows of conventional banks – also grew by 16%.

Meezan Bank – the largest Islamic bank in the country – registered 46% growth in profit after tax, with the end of the year 2020 profit of PKR22.17 billion as compared to the 2019 end of the year figure of PKR15.23 billion. This is obviously a stellar performance in the wake of the pandemic. However, other Islamic banks around the world have not been that lucky as they reported significant drop in their profitability.

Table 1.1 reports profitability of randomly selected 10 Islamic banks.

Table 1.1
Reported Profits of Selected Islamic Banks in 2020

	Profit 2019	Profit 2020	Change
Meezan Bank	PKR15.23 billion	PKR22.17 billion	+46%
Abu Dhabi Islamic Bank	AED2.6 billion	AED1.6 billion	-38.4%
Dubai Islamic Bank	AED5.1 billion	AED3.16 billion	-38%
Qatar Islamic Bank	QAR3,055 million	QAR3,065 million	0.32%
Al Rajhi Bank	SAR10,159 million	SAR10,596 million	+4.3%
Kuwait Finance House	KD251 million	KD148.4 million	-40.9%
Boubyan Bank	KD62.68 million	KD34.4 million	-45%
Bank Islam Brunei Darussalam	B$155 million	B$136 million	-14.2%
TAJ Bank	-	N845 million	First reporting
Amana Bank Sri Lanka	LKR460.9 million	LKR463.7 million	+1%

Note: The data presented in this table is in local currencies, as the real intent here is to show movements in profitability.

8. For a preliminary analysis of the effect of COVID-19 on stability of IsBF, readers are directed to GIFR2020, p. 47-51.

9. For further details, see Islamic Finance Country Note (IFCN) on Pakistan.

10. It must be noted that in our global estimate, Pakistan's (or for that matter any other country with deteriorating exchange rate) contribution is far less than 30%, as the national currency depreciated significantly in the reported period.

Meezan Bank tops the list in terms of profitability. While there is some visible drop in reported profitability of Islamic banks, it is primarily because of increased provisions in the wake of uncertainties owing to the length of the pandemic and its aftermath. This is certainly the case for Abu Dhabi Islamic Bank (ADIB), Dubai Islamic Bank (DIB) and Boubyan Bank as the banks' other performance indicators showed improvement in the reported period. Most of these banks reported increase in assets, deposits and financing, reflecting on the health of fundamentals of their operations. As the focus in this section is on Pakistan, Table 1.2 provides a snapshot of profitability and provisioning in the five fully-fledged Islamic banks in the country.

Table 1.2
Reported Profits and Provisions in Fully-fledged Islamic Banks in Pakistan

		2020 (PKR Million)	2019 (PKR Million)
Albaraka Bank Pakistan	Net Profits	764.2	-191.7
	Provisions	1,207.9	1,190.4
	Sum	1,972.1	998.7
Bank Islami Pakistan	Net Profits	1,703.1	1,087.3
	Provisions	2,601.0	2,798.6
	Sum	4,304.1	3,885.9
Dubai Islamic Bank Pakistan	Net Profits	2,893.9	3,345.6
	Provisions	2,135.2	721.6
	Sum	5,029.1	4,067.2
Meezan Bank	Net Profits	22,166.0	15,232.0
	Provisions	8,210.0	4,186.0
	Sum	30,376	19,418
MCB Islamic Bank	Net Profits	208.3	-243.6
	Provisions	15.2	199.8
	Sum	223.5	-43.8

Table 1.2 presents a very healthy state of affairs of Islamic banking in Pakistan, as all the fully-fledged Islamic banks have improved their profitability during the pandemic so far. Given the prudent provisioning, it is expected that Islamic banks will the pandemic whither away without leaving any bad assets on their balance sheets.

Future of IsBF in the Post-COVID Era

This report focuses on the future of Islamic finance in the post-COVID era. While it will take a long time to assess the real impact of COVID-19 on the global economy and its constituents, a lot of literature has already startedstarting emerging on the assessment of consequences of the pandemic on IsBF. Although most of the studies are rudimentary in nature, there are some documents that are worth reading to have a preliminary understanding of the issue. IsDB published a comprehensive report on the response of IsDB to the COVID-19 crisis. However, it is more like a theoretical framework than a script on policy response. Yet, it is a good reading.

What is the future of IsBF?

The cynic would not find any worthwhile value in IsBF. For them, it should have already gone into oblivion. But it hasn't!

The captive user of Islamic financial services would present scores of reasons to argue in favour of sustainability of IsBF. The most convincing argument, however, is based on the statistical evidence. The industry has gone from strength to strength since its inception (see the next section). This must reflect on the bright future of IsBF. This report attempts to explore the future of IsBF in wake of growing interest in Islamic social finance. It is safe to assume that the pandemic will make IsBF more sensitive to the global social agenda. The present decade will see more emphasis on SDGs before the deadline of 2030, and Islamic banks and financial institutions are expected to show their commitment to these goals to garner wider appeal beyond their captive markets.

Size and Growth of the Global Islamic Financial Services

The global Islamic financial services industry nearly touched the historical milestone of US$3 trillion at the end of 2020. The estimated Islamic financial AUM as of December 31, 2020, was US$2.941 trillion, exhibiting annual growth of 7.61% (see Table 1.3), which is also the highest annual increase in the last 5 years. This is interesting, as the industry managed to pull up the growth rate from the previous year's growth of 5.48%, despite the international restrictions on mobility and national lockdowns of economies. This may tentatively suggest that the pandemic has not (at least as yet) affected the industry unfavourably.

The GFC killed Islamic financial innovation, hence limiting the growth of the industry

This is in contrast to the previous such shocks like the GFC of 2008-09, which certainly dragged the growth of the industry, compelling the industry observers to revise their forecasts for the industry size of US$6.5 trillion to less than half of it[11]. The GFC actually killed any significant trends in Islamic financial innovation, hence limiting the growth of the industry. Arguably, the industry must have doubled its current size had it not been hit by the GFC.

11. Khaleej Times, September 11, 2016. Googling "Islamic finance $6.5 trillion" will generate a string of sources mentioning the optimistic forecast.

The current pandemic, on the other hand, has widened the scope of innovation by way of pushing the Islamic finance think tank to start looking into new avenues of growth, especially in areas like Islamic social finance. It is expected that the sukuk related with CSG, Green, SDG and COVID-19 Response will play an important role in the next five years.

Table 1.3
The Global Islamic Financial Services Industry: Size & Growth

	AUM (US$ Billion)	Growth (Annual %)	Average accumulative growth (%)
2007	639		
2008	822	28.64	28.64
2009	1,036	26.03	27.34
2010	1,139	9.94	21.54
2011	1,357	19.14	20.94
2012	1,631	20.19	20.79
2013	1,813	11.16	19.18
2014	1,981	9.27	17.77
2015	2,143	8.18	16.57
2016	2,293	7.00	15.51
2017	2,431	6.02	14.56
2018	2,591	6.58	13.83
2019	2,733	5.48	13.14
2020	2,941	7.61	12.71
Average growth (2009-20)			11.38
Average growth (2009-15)			14.84
Average growth (2016-20)			6.54

Figure 1.1 depicts an interesting story. Since 2019, the global Islamic financial services industry has on average grown by 11.38% per annum, which itself seems impressive. However, the major contribution to it has come from the earlier years (2009-15 when the average growth was 14.84% per annum). However, the industry has significantly slowed down in the last five years, achieving only 6.54% annually. Is it something to worry about?

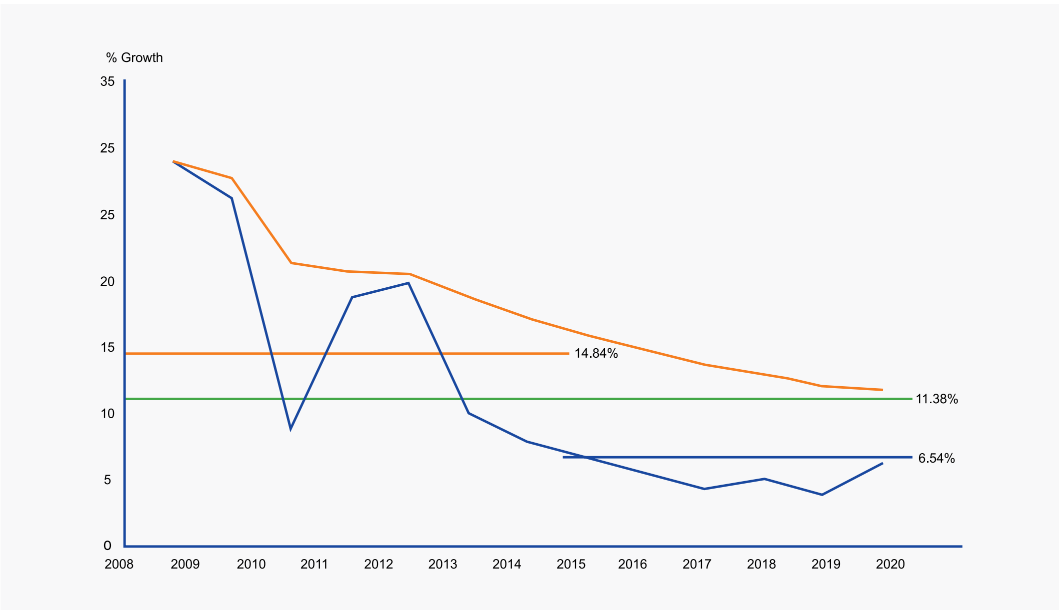
The current pandemic has widened the scope of innovation, especially in areas like Islamic social finance

The previous editions of GIFR have reported various reasons for the slowdown in the growth[12]. The main reasons reported previously were:

- Political conflicts in a number of Muslim countries;
- Low oil prices;
- Receding interest of Western financial institutions in IsBF;
- Structural issues;
- Stifled innovation (which actually started in the aftermath of the GFC);
- Wider macroeconomic factors; and
- Maturity of the industry; and
- Shari'a authenticity deficit.

In addition, in GIFR 2020, we alluded to the possible adverse effect of COVID-19 on IsBF, suggesting that it could put a drag on the growth of the industry in the years to come. However, 2020 statistics do not confirm any negative effect on the growth, as Islamic banks and financial institutions continue to grow despite very difficult market conditions. The good news is that there are greater prospects of growth, presented by an increased focus on FinTech and through it on financial inclusion. Despite having become visible segments of financial services sectors in a number of countries, IsBF has yet to become a dominant force in most of the countries where it exists with a degree of significance. Looking at the Islamic financial sectors of the countries comprising the Gulf Cooperation Council (GCC), we find that IsBF in these countries has yet to surpass 50% market share in the region excluding Saudi Arabia.

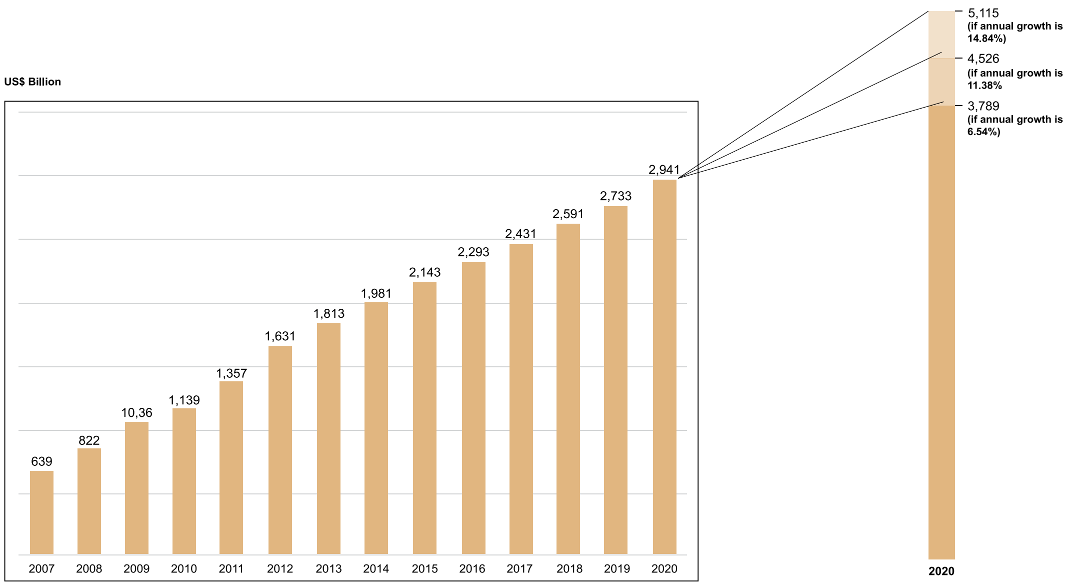
Figure 1.1
Growth of Global Islamic Financial Services: Overall (2009-20); Initial (2009-15); Latest (2016-20)



12. See GIFR 2016, p. 38-43; GIFR 2018, p. 71-74; and GIFR 2020, p. 44-45.

There are three purely statistical forecasts of the size of the global Islamic AUM in 2025. If the industry recaptures pre-2015 annual growth rates (highly unlikely, given the current market conditions), the global Islamic AUM is expected to stand at US$5.115 trillion by the end of 2025. The size will be US$4.526 trillion if the industry grows annually with average growth rate of 11.38% (2010-20). This is a likely outcome. However, if the growth remains consistent with the last five years' annual growth rate, the industry size is expected to be US$3.789 trillion (highly likely). Another realistic forecast could be based on the weighted average of the annual growth rates in 2010-15, 2010-20 and 2016-20, with respective weights of 0.2, 0.3 and 0.5. This gives forecasted figure of US$4.275 trillion.

Figure 1.2
Forecast of the Size of the Industry: 2025



So, in the worst scenario, the industry will still continue to grow, albeit at a slower rate. From this viewpoint, there is little to worry about. However, as we have pointed out in previous editions of GIFR, the gap between actual Islamic AUM and potential Islamic AUM[13] will continue to grow. The volume of the size gap must indicate of failure of the industry to meet all of the potential demand for IsBF.

Global Islamic financial services industry is segmented into:

- Islamic banking: fully-fledged Islamic banks and Islamic windows of conventional banks;
- Islamic capital market: sukuk and Islamic asset management;
- Takaful and retakaful;
- Islamic microfinance; and
- Others: miscellaneous activities including Islamic financial technology firms (Islamic FinTech)

Which segment has contributed most to the growth of global Islamic AUM?

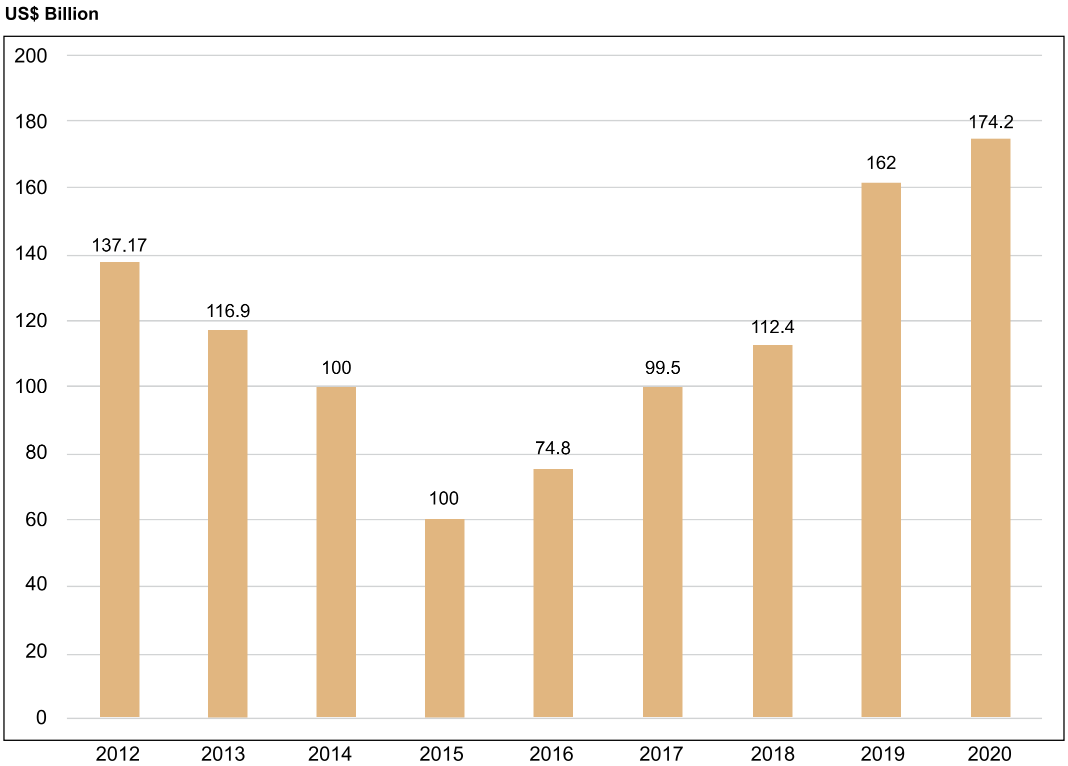
Interestingly, the industry grew more in 2020 (during the pandemic) than immediately before the advent of COVID-19. The Islamic capital markets contributed the most to growth of Islamic financial assets during 2020, particularly sukuk issuance remained resilient to the pandemic.

13. Potential size of the global Islamic financial services industry can be defined as the assets under management of the institutions offering Islamic financial services to all those who would like to have access to such services, and to all those who would like to use Islamic financial services but have excluded themselves voluntarily from the financial services because such services are not available.

Improvement in reporting of IsBF in a number of countries (e.g., Indonesia and Pakistan) has contributed to visible increase in share of Islamic capital markets in the global Islamic AUM. Nevertheless, the value of sukuk outstanding at the end of 2020 was noted to be US$572.6 billion, up from US$476 billion reported for 2019 in GIFR 2020 (an annual growth of 16.9%). This has also resulted in the share of sukuk in the global Islamic AUM from 17% at the end of 2019 to 19.47% at the end of 2020.

The sukuk issuance experienced another bumper year, following the record volume of issuance in 2019 (US$162 billion), making a new record of annual issuance of US$174.2 billion in 2020.

Figure 1.3
Sukuk Issuance: 2012-20

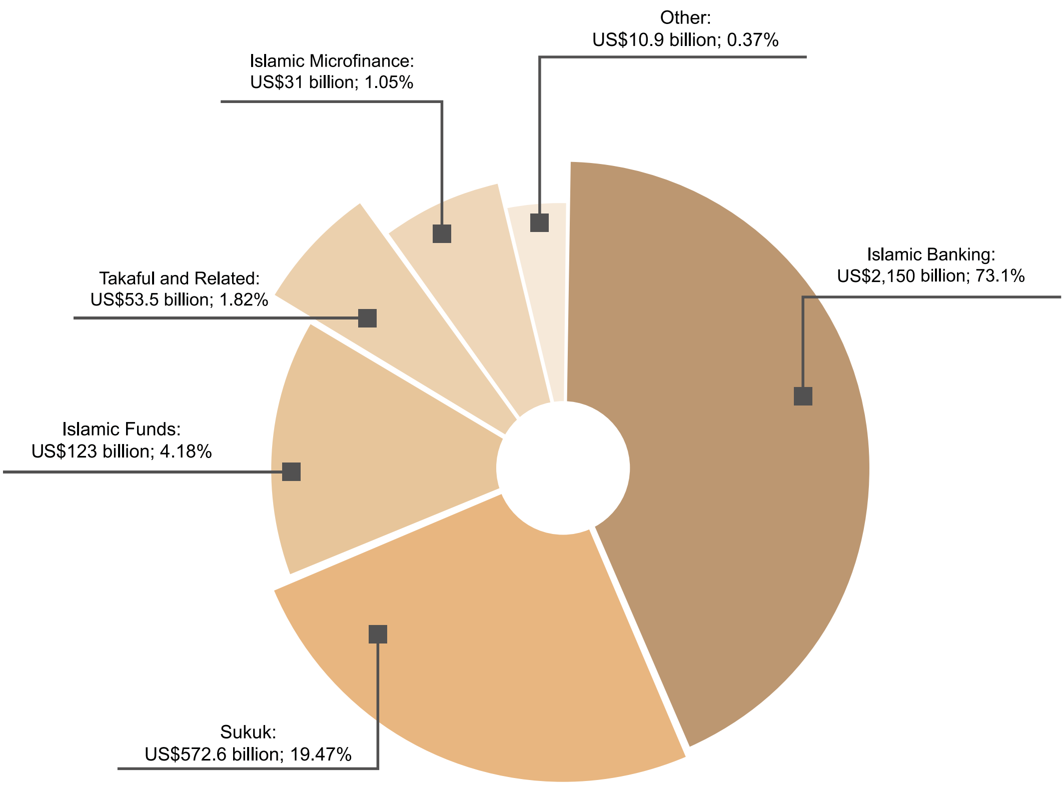


This was followed by Islamic banking assets, which totalled US$150 billion at the end of 2020 and contributed slightly over 73% to the global Islamic AUM. Figure 1.4 also shows that the shares of Islamic asset management, takaful and Islamic microfinance remain low or negligible.

While sukuk continue to capture greater share in the global Islamic AUM, and hence growing importance in the industry, some concrete measures must be taken to grow other sectors. As mentioned above, Islamic social finance is a perfect fit in the present pandemic-hit environment. GIFR 2020 focused on this aspect, and this year's theme of the report – Islamic Finance in the Post-COVID Era – attempts to re-emphasise this point.

Moving the industry from the worst scenario in 2025 (US$3.785 trillion) to the best (US$5.115 trillion) would require re-orientation of the industry in favour of Islamic social finance. Otherwise, Islamic banking will continue to feature prominently in IsBF.

Figure 1.4
Global Islamic Financial assets decomposed into various segments



IsBF, Crises and Growth

Is there something inherent in IsBF that makes it excel when facing a serious challenge?

Contrary to some popular views held by the enthusiastic advocates of IsBF[14], there is little inherent to it that makes it stronger, more stable and superior to its conventional counterpart. At least in practice if not in theory!

The recent growth in Islamic financial assets may be explained with reference to the developments in Islamic capital markets: an accentuated focus on mergers and acquisition (M&A) and the issuance of sukuk (already discussed above). Also, improvements in Islamic financial intelligence have brought more information on the Islamic financial practices that were not previously captured by the reported data (see below an example of Indonesia).

14. See M. R. Rabbani et. al. (2021) Exploring the Role of Islamic Fintech in Combating the Aftershocks of COVID-19: The Open Social Innovation of the Islamic Financial System. J. Open Innovation: Technology, Markets and Complexity. 2021,7,136. https://doi.org/10.3390/joitmc7020136.

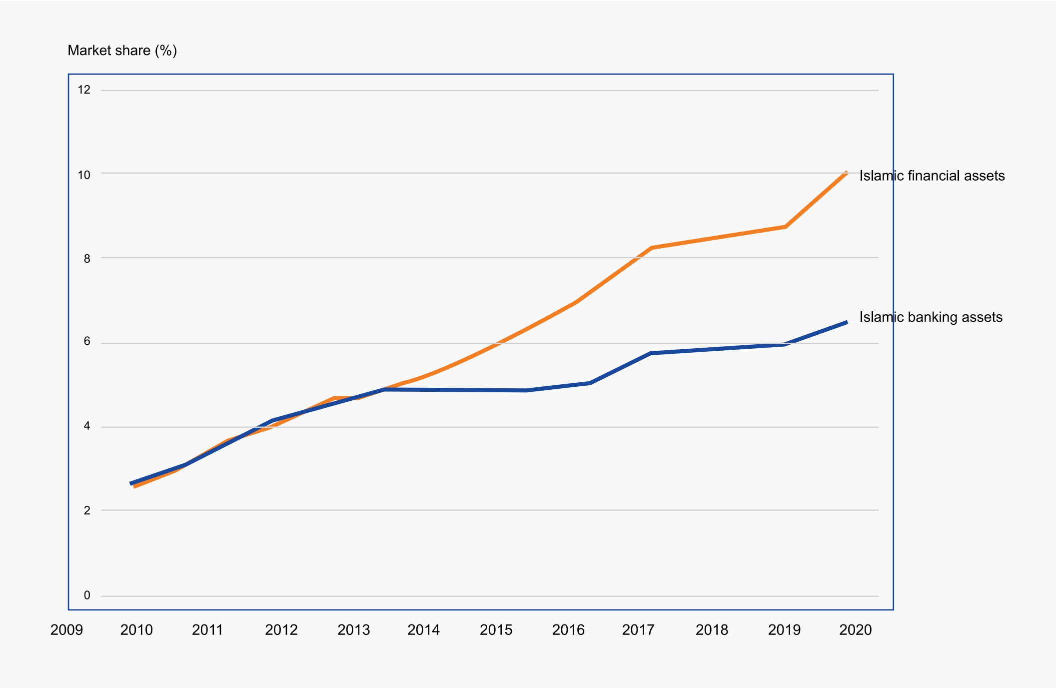
M&A and Consolidation in IsBF

Perhaps the most phenomenal M&A activity in IsBF during the reported period has been witnessed in Indonesia where three Islamic banks were merged in an attempt to eventually create a potential 'mega Islamic bank' in the Far Eastern region. Before that, Dubai Islamic Bank (DIB) completed full acquisition of Noor Bank to empower DIB as an influential Islamic financial player in the GCC region. There are some other high-profiled M&A deals are in the pipeline, which have inevitably been delayed due to the ongoing crisis. The merger of three state-owned Islamic banks– BNI Syariah, Bank Syariah Mandiri and BRI Syariah – to form Bank Syariah Indonesia (BSI), Indonesia's largest Islamic bank, was a hallmark of 2020. This gave prominence to Islamic banking in the country, as BSI emerged as one of the top 10 banks in Indonesia and one of the top 10 Islamic banks in the world (in terms of market capitalisation).

However, M&As are not a source of growth in Islamic banking or overall Islamic financial assets. With the moves like BNI-BSM-BRI merger, Indonesia merely consolidated Islamic financial assets. In case of Indonesia, the boost to growth has come from other sectors, particularly capital markets. Also, a systematic approach to hajj-related savings has also boosted Indonesia's ambition to capture higher Islamic finance market share.

Figure 1.5 depicts this phenomenon. Since 2009, there has been a graduate increase in Islamic banking assets in Indonesia but since 2017 (when statistics on overall Islamic financial assets in the country started becoming more readily available), there has been a significant growth in overall Islamic financial assets. This phenomenon may be referred as 'publicity of Islamic financial intelligence.' Saudi Arabia is another example of a country where publicity of Islamic financial intelligence has started emerging, following a concerted focus on Islamic banking by the Saudi Central Bank. There is a need to highlight the importance of publicity of Islamic financial intelligence in other markets like Pakistan that has so far focused on reporting Islamic banking assets and related statistics only, maintaining a relative neglect of reporting on Islamic capital market therein.

Figure 1.5
Shares of Islamic Banking Assets and Overall Islamic Financial Assets in Indonesia



Conclusion

The IsBF market remains healthy. The growth of Islamic AUM has started picking up, despite tough conditions in the markets. To maintain the momentum, a shift away from Islamic banking sector (in favour of other industry segments) is required. Islamic social finance may prove to be a viable contender to spur further growth in IsBF.

Although our previous suggestions in GIFRs 2010-2020 to devise a global strategy for growth of IsBF have not received any favourable response from various stakeholders, it must be reiterated that in the absence of such a strategy – or global roadmap – boosting growth in IsBF will remain a challenge. National roadmaps and strategies have worked in some cases but they have not been able to bring a significant change on the global horizon.

The closure of Dubai Centre of Islamic Banking and Finance is one example of failure of a national approach to benefitting from the global Islamic financial services industry. There is no better institution than IsDB to spearhead such a global strategic framework for growth of IsBF, with a special focus on its 57 member countries.

CHAPTER 02

IFCI is a trailblazer - the first-ever multivariate analysis employed to rank about 50 countries with respect to the state of affairs of Islamic banking and finance and their leadership role in the industry on a national level and benchmarked to an international level.

Humayon Dar
Founding Editor-in-Chief of GIFR

Islamic Finance Country Index

IFCI 2021

This year's Islamic Finance Country Index (IFCI) is based on our 2011 index, with two major adjustments in the methodology over the last 10 years. It uses data on the constituent factors for the year 2020 – the most recent data available at the time of analysis. To understand the methodology completely, we strongly recommend to the readers to consult previous editions of GIFR. This will also allow the keen researchers to consider how different countries have evolved in terms of their leadership role and potential in IsBF over the last decade. An update on the methodology is included in this chapter. In our view, IFCI remains the most robust measure of state of IsBF in the countries included therein.

Developed by Edbiz Consulting in 2011, Islamic Finance Country Index (IFCI) is the oldest index for ranking different countries with respect to the state of Islamic banking and finance (IsBF) and its relative importance in a national context and benchmarked to an international level. IFCI has evolved over the last 11 years, with two adjustments in 2018 and 2019. These adjustments aimed at normalising the data over the time series, and to reflect on our increased intelligence into some key IsBF markets (see Box 1 on Data and Methodology).

The IFCI was initiated with the aim to capture the growth of the industry, and to provide an annual assessment of the state of IsBF in each country. With 50 countries included, the index is based on a multivariate analysis providing a comprehensive assessment of the state of affairs of IsBF in the countries included in the sample. It doesn't claim to capture the whole of global Islamic financial services industry. Nevertheless, it is a useful snapshot of the industry as a whole. The important variables, as identified by the multivariate analysis, provide an accurate assessment of IsBF in each country.

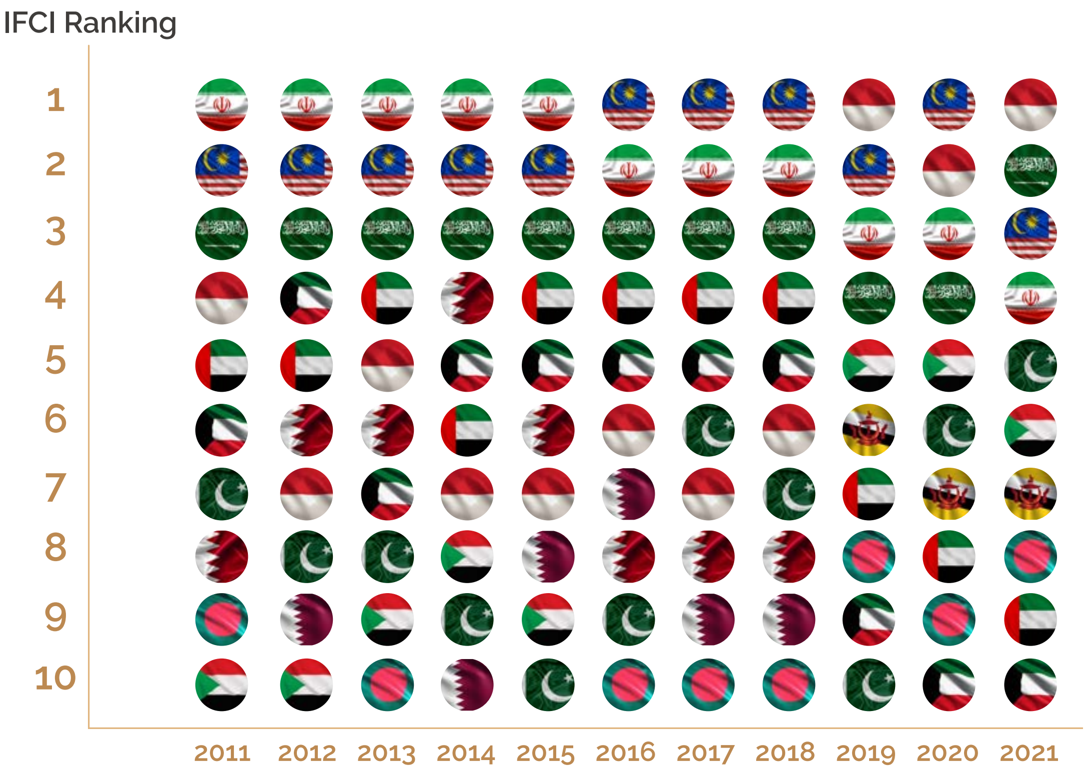
With the 10-year data since its inception, IFCI can now be used to compare the countries not only each year but also over time. As more countries open up to IsBF, the index will provide a benchmark for nations to track their performance against others. Over time, the individual countries on the index should also be able to track and assess their own performance. Figure 2.1 presents the top 10 countries on IFCI since its inception.

Following are some of the important observations evident in Figure 2.1:

- Given that there are only 12 countries featuring in the Top 10 IFCI countries over the period of 11 years, the IsBF as a global phenomenon remains highly concentrated in these countries[1].
- The Top 3 IFCI countries were not challenged by anyone of those below in the ranking except lately when Indonesia captured the first position in 2019. Indonesia is now considered as a player with potential to lead the global Islamic financial services industry[2,3]. In addition, we believe that Bangladesh and Pakistan must remain on the watch-list of the keen observers of the industry, as an increase in advocacy and the government action in these countries can push them up the rankings in the years to come.
- Iran is the largest contributor to the global Islamic financial assets. Nevertheless, its isolation from the international financial markets (due largely to the international sanctions) and its rather conservative approach to communicating major developments in its national sector have contributed to its sliding down the IFCI ranking.
- The upward movement of Indonesia started happening after the establishment of KNEKS and personal patronage of the president and vice president of the country (see below for further details).
- Interestingly, the representation of the countries comprising the Gulf Cooperation Council (GCC) is decreasing, as IFCI is becoming more inclusive in its results. The likes of Indonesia, Iran, Pakistan and Bangladesh (the countries with the larger Muslim populations[4]) have started dominating the ranking.
- Having said that, Saudi Arabia is a rising start, as explained later in this chapter.

1. According to the IMF's definition of 'systematically important' Islamic financial markets, there are 12 countries that have more than 15% market share of Islamic banking, which include Iran and Sudan with 100% market shares. Brunei Darussalam and Saudi Arabia are two markets with the dual banking system and more than 50% market shares. Other countries include Kuwait, Qatar, Bahrain, Malaysia, Bangladesh, Pakistan, Oman, Djibouti. All these countries are included in the Top 10 IFCI countries over the last 10 years.
2. Given that Indonesia is the largest economy in the OIC block, and its emerging global leadership in IsBF, it is all set to develop a multilateral framework parallel to (or in addition to) Islamic Development Bank to play a global leadership role in the Muslim world.

Figure 2.1
Top 10 Countries on IFCI: 2011-21



The Case of Malaysia

In this respect, Malaysia has emerged as an interesting case. It instructs us that the regulators (and other public bodies) are instrumental in developing and sustaining growth of IsBF. Malaysia has featured prominently in IFCI, sitting mostly on the first two positions, only to fall down to the third position this year. Malaysia attempted to become an unrivalled global leader in IsBF, but of late there are clear signs of fading of the leadership role of the country in the global Islamic financial services industry. What factors are responsible for this phenomenon? While COVID-19 is certainly a big disruptor, the explanation must go beyond it. Also, it must be kept in mind that Malaysia continues to earn very high score on IFCI. It is actually the other competitors that have done better than it to challenge its leadership role. Given the increase in competition, there is no room for complacency by anyone wishing to remain on top.

Malaysia Compared with the Main Challengers

Malaysia's leadership has seriously been challenged by an unusual and unsuspected rival – Indonesia. Saudi Arabia has also surpassed it in terms of ranking this year. At least three factors may be cited to have contributed to this result.

3. In recognition of the Indonesia's leadership role, President Joko Widodo was presented with Global Islamic Finance Leadership Award 2016, followed by this year's prestigious award presented to Vice President Ma'ruf Amin.
4. It must, however, be clarified that the factor Muslim Population contributes only 7.2% in the construction of IFCI, as explained in Box 1. It is, therefore, would be wrong to conclude that IFCI favours the countries with large Muslim populations disproportionately and unfairly.

The Role of Regulators

Bank Negara Malaysia (BNM) – under leadership of long-reigning governor Dr Zeti Akhtar Aziz – not only provided a level-playing field to Islamic banking and finance, but also emerged as an advocate and champion of IsBF globally. The successive governors of BNM after Dr Aziz have, however, seemingly not maintained such a strong interest in IsBF. This is certainly a factor that has contributed to stagnation of IFCI score for Malaysia.

In the neighbouring Indonesia, however, President Joko Widodo has since 2016 maintained a very strong interest in IsBF. The establishment of KNEKS and initially chairing it by himself, the President showed his resolve to develop IsBF as part of the overall halal ecosystem that country aims to develop as part of its national strategy for increasing its competitiveness in the halal economy, in general, and the halal tourism, in particular. There seems to be proper planning in this respect. Now, the Vice President Ma'ruf Amin is given the additional responsibility of being chairman of KNEKS, which has been provided with dedicated annual budget.

In case of Saudi Arabia, the main financial regulator, Saudi Central Bank (SAMA), has now become very active in developing a comprehensive framework for regulation and supervision of Islamic banks in the country. The incumbent governor of SAMA takes very keen interest in IsBF and has appointed a dedicated deputy governor who oversees the Islamic financial sector, in addition to his other responsibilities. Saudi Arabia, despite being the largest Islamic financial market in terms of assets (excluding Iran), lagged Malaysia primarily due to a less robust regulatory framework for Islamic banking and finance. This report does not attempt to criticise the historical regulatory approach adopted by Saudi Arabia towards IsBF, as there is ample evidence that it actually worked for growth and development of IsBF in the country. One may, however, argue that the new approach is visibly better than the previous one.

The legacy situation is being fast rectified in Saudi Arabia. SAMA has since 2019 issued several directives for Islamic banks. It has now issued its long-awaited Shari'a Governance Framework (SGF) which has since February 2020 been enforced. This is an excellent document that is consistent with other such frameworks introduced in other countries. Yet it has introduced some country-specific requirements.

The COVID-19 as a Disruption

Surprisingly, Malaysia created a mess for itself during the middle part of the COVID-19 pandemic. Consequently, all sectors in the country – including IsBF – suffered. Saudi Arabia, on the other hand provided one of the best – if not the best – responses to the COVID-19. The strict regime it created in this respect helped all the sectors in the country to continue to focus on their main activities. This has resulted in better performance of Saudi Arabia on the IFCI, as compared to Malaysia where the response went from excellent to bad to eventually manageable.

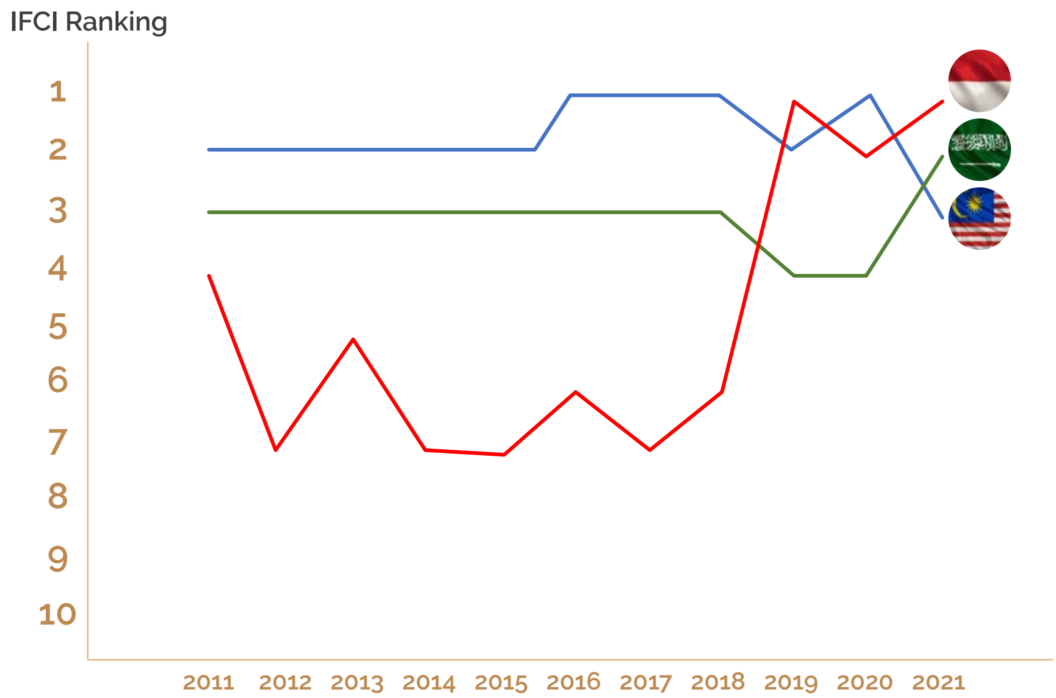
However, one may argue that the COVID-19 is not going to be a sustainable disruptor and that Malaysia may rebound vis-à-vis IFCI, post-COVID.

Political Uncertainty

Malaysia has for the last three years faced huge political uncertainty, with rapid changes in the government. This may have contributed to a less focused approach to IsBF. In Indonesia and Saudi Arabia – the main two contenders for the top slot – the political situation was not only stable but remained progressively in favour of IsBF.

Figure 2.2 provides a comparison of IFCI rankings for the three countries over the 2011-21 period. It is already embedded in Figure 2.1, but it was intended to explicate the comparison by way of a separate graph.

Figure 2.2
Changes in IFCI Rankings of Malaysia, Indonesia and Saudi Arabia: 2011-21



IFCI 2021

Table 2.1 presents the latest IFCI scores and ranks. It must be reported that the average IFCI score improved by 1.31 points or 6.5%, implying an improvement in the global Islamic financial services despite the challenges of the COVID-19. The most significant factor that contributed to the increase in quantitative and qualitative improvement in the industry is government action. As reported in Chapter 1, the global Islamic financial assets grew by 7.61% (Table 1.3), IFCI's 6.5% increase suggests that other aspects of development of IsBF (i.e., education, regulation and Shari'a assurance) did not witness as much advancement.

The most significant factor that contributed to the increase in quantitative and qualitative improvement in the industry is government action

The COVID-19 slowed down a lot of socio-economic and political activities around the world. Therefore, there is nothing sinister about less contribution of qualitative factors to the growth of IsBF than what quantitative factors contributed. Although there was a shift in education of IsBF in favour of the technology[5], it did not improve the situation in terms of quantitative impact of initiatives like training and awareness. However, it must have indirectly led to improvement in quantitative measures of the size of the industry.

Table 2.1
Latest IFCI Scores and Ranks

Countries	2021 Score	2020 Score	Change in Score 2020-21	% Change in Score 2020-21	2021 Rank	2020 Rank	Change in Rank
Indonesia	83.35	82.01	1.34	1.61	1	2	+ 1
Saudi Arabia	80.67	66.01	14.66	18.17	2	4	+2
Malaysia	80.01	83.33	-3.32	-4.15	3	1	-2
Iran	79.73	79.99	-0.26	-0.33	4	3	-1
Pakistan	60.23	53.12	7.11	11.80	5	6	+1
Sudan	59.01	61.08	-2.07	-3.51	6	5	-1
Brunei Darussalam	55.01	52.89	2.12	4.00	7	7	0
Bangladesh	48.56	47.06	1.5	3.09	8	9	+1
United Arab Emirates	47.94	47.84	0.1	0.21	9	8	-1
Kuwait	44.04	43.47	0.57	1.29	10	10	- 1
Turkey	33.45	33.32	0.13	0.39	11	11	+ 2
Bahrain	32.09	32.00	0.09	0.28	12	12	- 1
Qatar	32.01	31.03	0.98	3.06	13	13	- 1
Oman	29.67	25.45	4.22	14.22	14	15	- 1
Jordan	28.82	23.89	4.93	17.11	15	16	- 1
Egypt	21.92	18.77	3.15	14.37	16	17	- 1
Kazakhstan	20.89	26.67	-5.78	-27.67	17	14	-3
United Kingdom	18.18	10.07	8.11	44.61	18	18	0
Nigeria	18.11	7.85	10.26	56.65	19	21	+2
Afghanistan	10.01	8.17	1.84	18.38	20	19	-1
Morocco	9.99	8.12	1.87	18.72	21	20	- 1
Tunisia	8.89	5.57	3.32	37.35	22	23	+1
Lebanon	8.56	4.00	4.56	53.27	23	26	+3
United States of America	7.77	6.11	1.66	21.36	24	22	-2
Kenya	7.46	4.99	2.47	33.11	25	24	-1

5. Mushrooming of rather novice training providers through Zoom and Teams to capture their shares in Islamic financial education and trainings kept the industry virtually visible. However, the initial enthusiasm has now started showing signs of receding.

Sri Lanka	7.33	4.01	3.32	45.29	26	25	-1
Senegal	7.19	3.24	3.95	54.94	27	27	0
South Africa	7.11	2.25	4.86	68.35	28	28	0
Yemen	6.98	1.99	4.99	71.49	29	33	+4
Switzerland	6.01	2.22	3.79	63.06	30	29	-1
Singapore	5.67	2.15	3.52	62.08	31	30	- 1
Algeria	5.45	2.11	3.34	61.28	32	31	- 1
Azerbaijan	4.77	2.09	2.68	56.18	33	32	- 1
The Kyrgyz Republic	3.23		3.23	100.00	34		New
Canada	3.01	1.99	1.02	33.89	35	34	- 1
Thailand	2.89	1.98	0.91	31.49	36	35	- 1
Palestine	2.67	1.89	0.78	29.21	37	36	-1
India	2.23	1.81	0.42	18.83	38	37	-1
Australia	1.99	1.50	0.49	24.62	39	38	- 1
Tajikistan	1.81		1.81	100.00	40		New
Russian Federation	1.76	1.45	0.31	17.61	41	39	-2
Syria	1.49	1.00	0.49	32.89	42	40	-2
Germany	1.47	1.00	0.47	31.97	43	41	-2
The Philippines	1.32	1.89	-0.57	-30.14	44	42	-2
Ghana	1.22	0.90	0.32	26.23	45	43	-2
Mauritius	1.01	0.89	0.12	11.88	46	44	-2
China	0.78	0.67	0.11	14.10	47	45	-2
France	0.76	0.67	0.09	11.84	48	46	-2
Gambia	0.7	0.62	0.08	11.43	49	47	-2
Spain	0.55	0.35	0.2	36.36	50	48	-2

Following are some of the important observations:

- Indonesia has regained its number one position, with 83.35 score, overtaking Malaysia – an important contender for the top spot along with Saudi Arabia that appears to be aspiring to be a global hub for Islamic banking and finance in the most comprehensive way. Malaysia had dominated the index since 2011, being number one in 2016, 2017 and 2018 and 2020. Before that, Iran held the coveted position. However, despite the large domestic financial sector, Iran is experiencing stagnation in its approach to developing a vibrant Islamic financial sector with a global relevance. In 2019, Indonesia jumped 5 positions up to capture the top position, and it has once again successfully challenged Malaysia to recapture the top slot.
- Saudi Arabia is emerging as a serious contender for the first position and all those countries in the race must be aware of the potential of the country to play a leadership role in the global Islamic financial services industry.
- There is no change in ranks of four countries (Brunei Darussalam, United Kingdom, Senegal and South Africa) but apart from Brunei Darussalam, these countries and all others in the sample have witnessed improvement in their score. This is a significant variation in the last year's sample wherein seven countries did not move places. 44 countries moved up or down this year, as compared to last year when 42 countries that witnessed changes in their IFCI scores. This year, 9 countries moved up while 34 countries went down in their rankings, as compared to 41 going up last year while only one, India, going down.

- Two new countries were included in the sample, namely the Kyrgyz Republic and Tajikistan, which captured 34th and 40th positions, respectively, in IFCI.
- Although Yemen jumped up 4 positions, the real beneficiary in this year's ranking is Saudi Arabia, which climbed up two places to capture the second position on IFCI. Saudi Arabia presents an interesting case, as the new leadership at the Saudi Central Bank (also known as SAMA in its abbreviated from drawn from its previous name) seems more committed to explicitly provide a level-playing field to Islamic banking and finance in the country. There is no doubt that the successive political regimes let Islamic banking and finance to continuously grow organically, without favouring it or disadvantaging it unnecessarily. The current leadership, however, has explicitly recognised the importance of the IsBF sector, and seems willing to promote it to target certain legitimate economic targets. In recognition of this role, SAMA was recognised as the Best Islamic Central Bank for the year 2021 by Global Islamic Finance Awards (GIFA).

Saudi Arabia climbed up two places to capture the second position on IFCI

- Another beneficiary is Pakistan that climbed one position to become the fifth most important Islamic financial market in the world. This is continuation of an impressive performance, given that the country climbed up four slots last year to sit on the 6th position.
- It seems as if Sudan has started receding on the leadership front. Having been one of the two countries claiming to have a fully-fledges Islamic economic system (including Shari'a-compliancy of the financial sector), the new political regime in Sudan shocked the IsBF circles by announcing its intention to allow conventional financial institutions to operate along with the existing Islamic financial institutions. This is clearly a policy shift in favour of a dual banking system that is an adopted model in most of the countries where IsBF exists. Sudan's sliding off the ranking by one position is reflective of this new development in the country.
- A general remark on the ranking must emphasise the fact that IFCI ranking has a clear discontinuity after the first four countries, namely, Indonesia, Saudi Arabia, Malaysia and Iran. It suggests that these countries collectively are the market leaders. This point is further explicated in the next section.

Classification of Countries with Respect to IFCI

Table 2.2 presents a summary of classification of the countries included in terms of their significance.

Table 2.3 provides the latest IFCI scores, along with that of the previous 10 years. Based on the scores, the table classifies the sampled countries into six groups:

1. **Insignificant:** The countries with the latest IFCI score of less than or equal to 10 (IFCI ≤ 10);
2. **Marginal:** The countries with the latest IFCI score of more than 10 but less than or equal to 20 ($10 < \text{IFCI} \leq 20$);
3. **Moderate:** The countries with the latest IFCI score of more than 20 but less than or equal to 30 ($20 < \text{IFCI} \leq 30$);
4. **Significant:** The countries with the latest IFCI score of more than 30 but less than or equal to 40 ($30 < \text{IFCI} \leq 40$);
5. **Exceptional:** The countries with the latest IFCI score of more than 40 (IFCI > 40); and
6. **Highest[6]:** The country that tops the list (in this case, Indonesia, which has an IFCI score of 83.35).

Table 2.2
Summary of Classification of Countries in Terms of Significance

Classification	Number of Countries	
	2019	2021
Insignificant	32	31
Marginal	3	3
Moderate	2	4
Significant	2	3
Exceptional	9	9
Highest	Indonesia	Indonesia

This means that there are only 19 countries where IsBF has assumed meaningful relevance to the mainstream banking and finance. It is an important observation, and the likes of IMF must take note of this for its Financial Sector Assessment Programme (FSAP) for the countries with significant Islamic banking shares. As stated earlier, there are only 12 countries that fulfil the 15% Islamic banking threshold of the IMF. There is a need to extend this list to at least 19 for such purpose. In addition to the IMF, Islamic Development Bank (IsDB) must also devise an Islamic Financial Sector Assessment Programme (IFSAP) for its member countries for which IFCI rankings may be relevant. It is also high time that other industry infrastructure bodies (like AAOIFI and IFSB) must start taking note of IFCI, given its time series benefits emanating from it being the oldest index of its kind.

There are only 19 countries where IsBF has assumed meaningful relevance to the mainstream banking and finance

6. One may like to consider 5 categories, as Highest is in fact included in the Exceptional category.

Table 2.3
Classification of Countries in Terms of Significance

Countries	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Afghanistan		1.28	1.33	1.31	1.30	1.70	1.71	1.75	5.01	8.17	10.01	Marginal
Algeria		1.30	1.53	1.51	1.52	1.24	1.24	1.25	2.01	2.11	5.45	
Australia			0.62	0.61	1.26	1.25	1.22	1.23	1.22	1.50	1.99	
Azerbaijan	2.50	0.00	1.02	1.19	1.23	1.11	1.15	1.17	2.01	2.09	4.77	
Bahrain	16.00	19.41	18.77	22.18	23.93	21.90	21.95	22.35	30.09	32.00	33.09	Significant
Bangladesh	12.00	5.16	9.19	9.97	11.11	16.14	16.72	17.18	43.01	47.06	48.56	Exceptional
Brunei Darussalam	3.30	2.81	3.24	3.03	2.89	5.85	8.85	10.11	49.99	52.89	55.01	Exceptional
Canada		0.24	0.25	0.24	1.90	1.87	1.82	1.83	1.99	1.99	3.01	
China	1.00	0.01	0.46	0.57	0.57	0.56	0.57	0.56	0.67	0.67	0.78	
Egypt	8.00	5.07	5.69	5.11	7.34	9.02	9.99	10.01	11.00	18.77	21.92	Moderate
France		0.57	0.83	0.82	0.81	0.80	0.78	0.57	0.67	0.67	0.76	
Gambia		0.57	0.40	0.40	0.58	0.57	0.57	0.58	0.62	0.62	0.70	
Germany		0.45	0.66	0.65	0.59	0.62	0.66	0.67	0.88	1.00	1.47	
Ghana		0.00	0.00	0.00	0.38	0.38	0.39	0.41	0.77	0.90	1.22	
India		0.82	1.04	1.00	1.73	1.27	1.30	1.29	1.88	1.81	2.23	
Indonesia	22.00	15.60	20.22	19.82	22.45	24.21	23.96	24.13	81.01	82.01	83.55	Highest
Iran	46.00	51.71	68.31	75.24	77.93	77.39	78.37	79.01	79.03	79.99	79.73	Exceptional
Jordan	4.00	2.70	3.60	3.08	3.98	7.98	10.29	13.01	18.33	23.89	28.82	Moderate
Kazakhstan		0.50	1.08	1.26	1.13	1.20	1.32	2.12	5.71	26.78	20.89	Moderate
Kenya	3.20	2.35	2.02	1.97	2.32	2.28	2.85	2.85	3.39	4.99	7.46	
Kuwait	19.00	21.78	16.79	21.38	33.40	35.51	35.18	37.67	40.90	43.47	44.04	Exceptional
The Kyrgyz Republic											3.23	
Lebanon	3.40	2.16	2.64	2.42	2.39	2.67	2.64	2.70	3.30	4.00	8.56	
Malaysia	30.00	32.36	42.69	49.53	73.09	77.77	79.20	81.01	81.93	83.33	80.01	Exceptional
Mauritius		0.05	0.22	0.00	0.24	0.23	0.24	0.24	0.68	0.89	1.01	
Morocco									5.30	8.12	9.99	
Nigeria	3.50	0.67	1.07	1.45	1.24	2.35	2.32	2.34	2.29	7.85	18.11	Marginal
Oman		1.44	1.847	1.30	2.55	.91	6.41	7.01	19.21	25.45	29.67	Moderate
Pakistan	19.00	11.27	14.15	11.49	13.38	18.89	24.30	24.01	36.88	53.12	60.23	Exceptional
Palestine	9.00	1.12	1.89	1.11	1.10	1.10	1.10	1.11	1.32	1.89	2.67	
Qatar	8.00	9.74	8.88	10.44	19.04	22.02	21.93	20.01	29.88	31.03	32.01	Significant
Russian Federation		0.00	0.20	0.00	0.20	0.19	0.21	0.22	1.01	1.45	1.76	

Saudi Arabia	26.00	29.88	41.38	42.21	66.94	66.98	65.86	66.66	60.65	66.01	80.67	Exceptional
Senegal	3.10	0.59	0.68	0.48	0.49	0.48	0.50	0.55	0.57	3.24	7.19	
Singapore	1.00	1.31	1.72	2.10	2.13	2.05	1.94	1.81	2.01	2.15	5.67	
South Africa	2.00	1.26	2.47	1.66	2.066	1.73	1.74	1.99	2.01	2.25	7.11	
Spain		0.00	0.00	0.00	0.05	0.05	0.06	0.05	0.35	0.35	0.55	
Sri Lanka	2.60	1.33	2.00	1.84	2.72	2.96	3.78	3.77	3.89	4.99	7.33	
Sudan	11.00	9.35	13.42	13.34	14.24	14.04	15.69	17.09	55.71	61.08	59.01	Exceptional
Switzerland		0.50	0.51	0.51	2.10	1.97	1.93	1.89	2.21	2.22	6.01	
Syria	4.10	2.28	2.51	2.06	2.03	1.49	0.92	0.88	0.99	1.00	1.49	
Tajikistan											1.81	
Thailand	2.30	1.17	1.20	1.57	1.73	1.70	1.69	1.71	1.90	1.98	2.89	
The Philippines		0.20	0.63	0.62	0.61	0.63	0.65	0.55	1.32	1.89	1.32	
Tunisia		1.79	1.49	0.48	1.76	2.00	2.27	3.01	4.09	5.57	8.89	
Turkey	7.50	5.21	6.48	7.23	8.83	8.95	12.16	13.01	20.77	33.32	33.45	Significant
United Arab Emirates	19.00	21.06	20.64	20.27	34.57	36.68	37.99	39.78	45.31	47.84	47.94	Exceptional
United Kingdom	7.00	7.84	8.15	5.94	6.13	5.96	5.88	6.33	4.37	10.07	18.18	Marginal
United States of America	4.01	2.18	2.58	2.44	2.45	2.09	2.03	2.00	1.99	1.99	6.98	
Yemen	4.01	2.18	2.58	2.44	2.45	2.09	2.03	2.00	1.99	1.99	6.98	
Average	10.12	6.03	7.25	7.58	9.87	10.57	11.03	11.35	16.14	18.80	20.14	Moderate

It is interesting to note that overall the global Islamic financial services industry has now moved from ‘Marginally’ relevant to the global financial system to ‘Moderately’ relevant (as evidenced by improvement of the sample average of IFCI score from 18.80 in 2020 to 20.14 this year. This is confirmed by the growing recognition of IsBF amongst the multilateral institutions like the UN, World Bank, IMF and the regional development banks like Asian Development Bank and African Development Bank.

IFCI Compared with the Islamicity Index

The Islamicity Index ranks a large number of countries in the world in terms of their Islamicity, the extent to what these countries fulfil Islamic objectives in terms of economic affairs, legal and governance, human and political rights, and international relations.

Although limited in scope and given that the two indices are based on different factors and variables, the comparison should indicate similarities and differences between the two. Table 2.4 reproduces the Islamicity Index for 2020 from its website.

Table 2.4
Islamicity Index and its Constituents for 2020

Country	Overall Index		Economy		Legal and Governance		Human and Political Rights		International Relations	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
New Zealand	1	9. 08	3	8.65	5	9.55	4	9. 28	7	8.51
Iceland	2	9.03	2	8.66	12	9. 15	9	9.03	1	9.87
Netherland	3	8.93	1	8.67	9	9.34	3	9.35	22	7.25
Sweden	4	8.91	6	8.51	6	9.51	1	9.47	33	6.66
Norway	5	8.88	5	8.53	1	9.7	2	9.45	51	5.89
Denmark	6	8.85	4	8.58	3	9.66	10	9	25	7.09
Ireland	7	8.81	10	8. 34	17	8.85	8	9.13	3	8.97
Switzerland	8	8.78	13	8.24	2	9.66	6	9.22	34	6.66
Canada	9	8.71	11	8.32	11	9.16	11	8.97	15	7.81
Finland	10	8.7	7	8.49	4	9.6	7	9.17	63	5.46
Germany	11	8.66	9	8.4	14	9.05	13	8.82	13	7.88
Australia	12	8.64	17	8.03	8	9.37	5	9.22	35	6.62
Luxembourg	13	8.58	23	7.58	7	9.47	12	8.92	9	8.21
Austria	14	8.53	14	8.22	10	9.19	20	8.43	10	8.18
United Kingdom	15	8.44	8	8.46	13	9.07	16	8.65	48	6.09
Japan	16	8.39	19	7.75	16	8.87	19	8.54	6	8.54
Belgium	17	8.3	16	8.08	20	8.56	18	8.58	21	7.38
Estonia	18	8.07	18	7.84	19	8.61	15	8.71	70	5.13
Slovenia	19	8.04	22	7.59	26	7.95	14	8.8	28	6.92
Malta	20	8	26	7.48	30	7.8	24	8.14	2	9.6
Portugal	21	7.9	34	7	23	8.45	17	8.58	29	6.82
Czech Republic	22	7.81	21	7.66	28	7.89	28	7.96	18	7.55
France	23	7.81	24	7.56	21	8.53	22	8.28	72	5.07
Spain	24	7.71	31	7.16	25	8.02	21	8.3	37	6.46
Hong Kong	25	7.7	20	7.68	18	8.72	30	7.78	77	4.93
United States	26	7.57	15	8.2	22	8.5	27	7.97	137	1.92
Korea, Rep.	27	7.51	25	7.54	27	7.94	23	8.22	108	3.84
Singapore	28	7.47	12	8.31	15	8.96	49	6.42	83	4.87
Italy	29	7.38	41	6.57	32	7.62	25	8.06	30	6.79
Lithuania	30	7.22	37	6.93	24	8.09	32	7.52	80	4.87
Mauritius	31	7.21	39	6.71	34	7.5	40	6.94	4	8.94
Latvia	32	7.21	36	6.93	33	7.57	33	7.51	48	6.09
Chile	33	7.06	48	6.12	29	7.86	29	7.81	67	5.23
Slovakia	34	7.05	30	7.19	40	7.06	37	7.17	44	6.23
Poland	35	7.02	28	7.29	39	7.11	38	7.14	61	5.56
Cyprus	36	6.97	29	7.25	37	7.17	31	7.6	118	3.38
Uruguay	37	6.9	59	5.52	31	7.66	26	8.04	70	5.13

Costa Rica	38	6.87	68	5.13	35	7.35	34	7.47	5	8.77
Hungary	39	6.71	33	7.01	48	6.57	45	6.57	31	6.69
Croatia	40	6.59	49	6.11	45	6.72	36	7.18	59	5.6
Greece	41	6.38	55	5.58	38	7.17	35	7.33	115	3.51
Israel	42	6.31	32	7.09	41	6.99	42	6.81	149	0.46
Malaysia	43	6.27	35	6.95	42	6.79	70	5.05	24	7.22
Bulgaria	44	6.26	46	6.17	50	6.44	48	6.46	66	5.4
Romania	45	6.25	52	5.82	47	6.7	46	6.52	62	5.46
Jamaica	46	6.19	66	5.4	53	6.15	43	6.81	39	6.46
United Arab Emirates	47	6.14	27	7.45	36	7.31	77	4.66	95	4.5
Panama	48	6.01	60	5.49	63	5.19	47	6.47	12	8.01
Montenegro	49	5.88	57	5.53	51	6.31	44	6.58	116	3.44
Trinidad and Tobago	50	5.87	84	4.62	59	5.46	41	6.92	27	6.95
Qatar	51	5.84	38	6.86	44	6.75	81	4.56	77	4.93
Georgia	52	5.83	47	6.14	43	6.76	57	5.64	120	3.25
Albania	53	5.76	58	5.52	70	5.04	50	6.25	36	6.59
Argentina	54	5.66	99	3.9	61	5.37	39	7.08	31	6.69
Serbia	55	5.66	61	5.47	56	5.68	51	6.11	92	4.6
Macedonia	56	5.43	50	5.97	64	5.17	62	5.43	97	4.47
Armenia	57	5.29	51	5.88	55	5.92	67	5.3	136	1.92
Peru	58	5.28	64	5.41	77	4.67	55	5.75	85	4.74
Kazakhstan	59	5.26	42	6.29	69	5.11	78	4.63	85	4.74
Mongolia	60	5.2	76	4.95	75	4.79	53	5.86	91	4.67
Botswana	61	5.18	88	4.36	46	6.7	71	4.91	85	4.74
Indonesia	62	5.17	63	5.45	66	5.14	86	4.29	20	7.45
Oman	63	5.13	43	6.26	52	6.26	92	3.97	126	2.95
Ghana	64	5.11	89	4.34	67	5.14	74	4.89	11	8.15
Kuwait	65	5.08	53	5.69	60	5.45	79	4.59	104	3.97
South Africa	66	5.02	92	4.09	57	5.56	61	5.49	84	4.8
Mexico	67	4.97	65	5.4	95	3.82	63	5.37	68	5.2
Brazil	68	4.97	97	3.92	71	5.02	52	5.94	94	4.57
Moldova	69	4.96	54	5.58	86	4.04	76	4.78	50	5.99
Dominican Republic	70	4.94	85	4.43	94	3.84	58	5.57	26	7.05
Namibia	71	4.87	106	3.67	49	6.49	75	4.88	98	4.37
Thailand	72	4.83	45	6.22	82	4.39	85	4.38	119	3.28
Sri Lanka	73	4.8	81	4.75	80	4.51	68	5.28	105	3.94
Bosnia and Herzegovina	74	4.77	91	4.19	91	3.96	56	5.65	65	5.43
Bahrain	75	4.75	40	6.59	73	4.97	93	3.92	142	1.62
Colombia	76	4.72	72	5	81	4.4	64	5.34	130	2.55

Belarus	77	4.61	56	5.54	78	4.63	84	4.39	131	2.55
Paraguay	78	4.59	95	3.98	102	3.56	65	5.32	37	6.46
El Salvador	79	4.58	82	4.71	98	3.66	69	5.1	89	4.7
Guyana	80	4.57	112	3.29	79	4.61	66	5.3	56	5.73
China	81	4.56	74	4.96	68	5.14	97	3.69	79	4.9
Philippines	82	4.54	71	5.06	100	3.62	80	4.58	69	5.17
Belize	83	4.51	117	3.25	85	4.11	60	5.55	57	5.66
Jordan	84	4.51	62	5.45	58	5.48	106	3.43	124	3.01
Tunisia	85	4.44	90	4.25	72	5	83	4.42	111	3.68
Rwanda	86	4.41	70	5.06	54	6.08	130	2.49	73	5.03
India	87	4.29	77	4.89	62	5.2	105	3.45	122	3.18
Suriname	88	4.29	132	2.79	89	4.01	59	5.57	74	5
Azerbaijan	89	4.28	43	6.26	90	3.96	103	3.55	141	1.66
Ecuador	90	4.28	134	2.75	97	3.66	54	5.82	74	5
Senegal	91	4.27	103	3.75	76	4.7	94	3.89	46	6.13
Ukraine	92	4.2	80	4.8	96	3.77	72	4.9	145	1.06
Saudi Arabia	93	4.14	73	4.97	65	5.16	102	3.56	144	1.13
Kyrgyzstan	94	4.11	67	5.19	114	2.99	89	4.06	107	3.87
Kenya	95	4.11	83	4.62	99	3.64	96	3.77	76	4.97
Morocco	96	4.1	69	5.08	74	4.96	119	2.94	123	3.11
Vietnam	97	4.08	79	4.88	87	4.02	99	3.59	113	3.58
Guatemala	98	4.01	87	4.37	118	2.69	87	4.14	55	5.73
Benin	99	3.92	126	3	84	4.12	90	4.02	53	5.83
Turkey	100	3.88	75	4.95	83	4.25	104	3.54	146	0.93
Malawi	101	3.83	128	2.97	92	3.87	100	3.57	22	7.25
Russia	102	3.79	78	4.89	101	3.58	91	3.98	150	0.4
Nepal	103	3.75	94	3.98	111	3.03	108	3.39	46	6.13
Lesotho	104	3.73	130	2.84	88	4.02	101	3.56	43	6.29
Honduras	105	3.7	100	3.88	122	2.52	88	4.11	89	4.7
Papua New Guinea	106	3.67	117	3.25	108	3.09	98	3.64	39	6.46
Côte d'Ivoire	107	3.64	101	3.84	107	3.14	114	3.19	51	5.89
Sierra Leon	108	3.63	119	3.16	117	2.76	111	3.31	8	8.28
Tanzania	109	3.62	109	3.58	93	3.84	126	2.72	41	6.39
Bolivia	110	3.6	137	2.65	123	2.45	73	4.89	88	4.74
Zambia	111	3.58	113	3.28	104	3.45	125	2.81	19	7.52
Madagascar	112	3.58	122	3.06	125	2.3	95	3.8	17	7.62
Liberia	113	3.51	120	3.1	120	2.58	113	3.29	16	7.78
Lebanon	114	3.49	86	4.43	130	2.1	82	4.48	147	0.73
Burkina Faso	115	3.36	114	3.28	103	3.52	115	3.06	100	4.27
Uzbekistan	116	3.34	102	3.78	118	2.69	108	3.39	116	3.44
Tajikistan	117	3.23	115	3.27	121	2.57	118	2.96	54	5.76

Uganda	118	3.21	104	3.75	110	3.06	127	2.62	102	4.07
Laos	119	3.21	108	3.61	106	3.18	140	2.04	45	6.16
Bangladesh	120	3.18	105	3.71	133	1.93	121	2.93	59	5.6
Algeria	121	3.13	110	3.44	109	3.07	112	3.31	139	1.72
Gabon	122	3.1	121	3.06	124	2.43	106	3.43	109	3.74
Cambodia	123	3	96	3.93	134	1.91	121	2.93	121	3.21
Togo	124	2.99	123	3.02	115	2.96	124	2.83	113	3.58
Niger	125	2.97	111	3.34	116	2.79	135	2.41	100	4.27
Eswatini	126	2.96	141	2.27	105	3.2	141	1.98	14	7.85
Guinea	127	2.93	107	3.66	131	2.07	133	2.44	92	4.6
Egypt	128	2.91	98	3.92	113	2.99	138	2.26	135	1.92
Mozambique	129	2.87	139	2.3	127	2.23	116	3.04	58	5.63
Turkmenistan	130	2.84	131	2.79	135	1.72	120	2.93	63	5.46
Nicaragua	131	2.74	127	2.98	136	1.64	117	3.03	110	3.74
Iran	132	2.73	132	2.79	128	2.21	110	3.34	140	1.69
Ethiopia	133	2.71	125	3.01	112	3	145	1.74	95	4.5
Pakistan	134	2.65	93	4.06	126	2.29	139	2.15	143	1.13
Nigeria	135	2.63	129	2.88	137	1.59	129	2.51	80	4.87
Mali	136	2.52	124	3.01	132	1.93	132	2.44	128	2.78
Cameroon	137	2.25	138	2.59	140	1.26	142	1.93	80	4.87
Haiti	138	2.24	147	1.73	141	1.09	137	2.32	41	6.39
Zimbabwe	139	2.24	145	1.95	139	1.4	131	2.47	98	4.37
Mauritania	140	2.2	135	2.72	129	2.11	144	1.79	133	2.28
Iraq	141	2.2	116	3.26	142	1.06	128	2.53	148	0.66
Libya	142	2.05	146	1.89	144	0.98	136	2.4	103	4.01
Congo, Rep.	143	1.97	144	1.96	143	1.06	134	2.41	129	2.72
Angola	144	1.88	149	1.58	138	1.51	143	1.91	112	3.58
Venezuela	145	1.85	151	1.29	149	0.66	123	2.86	127	2.95
Burundi	146	1.79	136	2.67	145	0.96	148	1.28	125	2.98
Chad	147	1.54	142	2.22	147	0.72	147	1.31	132	2.35
Congo,Dem.Rep.	148	1.51	150	1.53	150	0.6	146	1.46	105	3.94
Sudan	149	1.4	143	2.18	148	0.67	150	1.08	134	1.99
Afghanistan	150	1.4	140	2.28	146	0.93	151	0.84	138	1.85
Syria	151	1.06	148	1.72	151	0.5	149	1.18	151	0.07
Median Rank and Score for Muslim Countries	107.5	3.66	99.5	3.86	107.5	3.13	103.5	3.55	101	4.17

Source: http://islamicity-index.org/wp/latest-indices-2020/

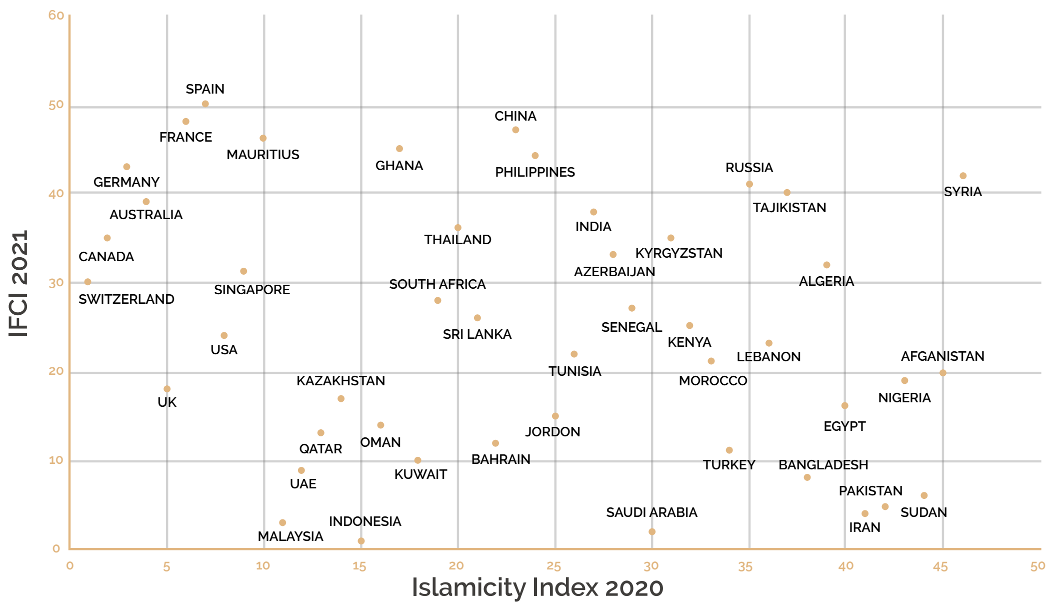
Table 2.5 presents the relevant values of Islamicity Index and IFCI for the countries that are common in the two indices. As shown in Figure 2.3, there is no correlation between the Islamicity Index and IFCI, suggesting that IsBF is an independent phenomenon of any political and legislative efforts in the countries that may remotely be deemed as Islamist.

Table 2.5
Islamicity Index (2020) and IFCI (2021)

Country	Islamicity Rank 2020	Adjusted Islamicity Rank 2020	IFCI 2021
Switzerland	8	1	30
Canada	9	2	35
Germany	11	3	43
Australia	12	4	39
United Kingdom	15	5	18
France	23	6	48
Spain	24	7	50
United States	26	8	24
Singapore	28	9	31
Mauritius	31	10	46
Malaysia	43	11	3
United Arab Emirates	47	12	9
Qatar	51	13	13
Kazakhstan	59	14	17
Indonesia	62	15	1
Oman	63	16	14
Ghana	64	17	45
Kuwait	65	18	10
South Africa	66	19	28
Thailand	72	20	36
Sri Lanka	73	21	26
Bahrain	75	22	12
China	81	23	47
Philippines	82	24	44
Jordan	84	25	15
Tunisia	85	26	22

India	87	27	38
Azerbaijan	89	28	33
Senegal	91	29	27
Saudi Arabia	93	30	2
Kyrgyzstan	94	31	35
Kenya	95	32	25
Morocco	96	33	21
Turkey	100	34	11
Russia	102	35	41
Lebanon	114	36	23
Tajikistan	117	37	40
Bangladesh	120	38	8
Algeria	121	39	32
Egypt	128	40	16
Iran	132	41	4
Pakistan	134	42	5
Nigeria	135	43	19
Sudan	149	44	6
Afghanistan	150	45	20
Syria	151	46	42

Figure 2.3
Islamicity Index Versus IFCI



However, looking at Figure 2.4 reveals another potentially interesting story. The sample includes only the Muslim-majority countries. The correlation coefficient, albeit mildly significant, stands at 0.2880, showing a positive correlation between the Islamicity Index and IFCI. As the lower values on the Islamicity Index imply lower Islamicity and the lower values on IFCI indicate higher incidence of IsBF in these countries, a positive correlation between the two indices implies negative relationship between religiosity (Islamicity) and the incidence of Islamic banking and finance. This is a rather curious result, which must be carefully interpreted.

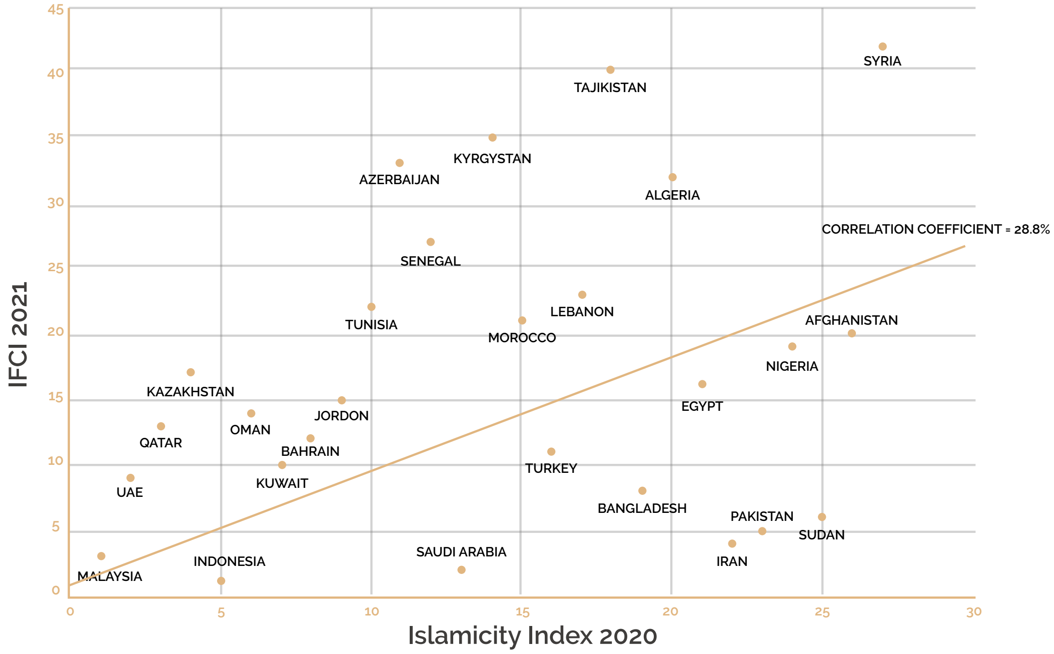
Islamic banking and finance, being explicitly identified as an Islamic phenomenon, may provide a basis for refuting many of the commonly drawn conclusions from the Islamicity Index, which should at best be considered as a measure of practicing of universally acceptable secular moral values than of the religiosity of the nations, as has so far been wrongly portrayed

Since the inception of the Islamicity Index, it has been taken as an indicator of Islamicity, i.e., upholding of Islamic moral values, in the countries, both Islamic and others, included in the sample. As the first 40+ countries on the index are predominantly non-Muslim countries, many observers have been implying that Islamic values are being practiced more in such countries than in the predominantly Muslim countries.

The index has been widely quoted to suggest superiority of non-Muslim countries over the Muslim ones. However, it is at best a secular index based on some universal moral values (which are admittedly acceptable in an Islamic tradition as well).

Given the negative correlation, albeit weak, between the Islamicity and incidence of Islamic banking and finance in the Muslim countries, one may question the validity of implications of the Islamicity Index.

Figure 2.4
Islamicity Index Versus IFCI: Muslim-majority Countries



As the observed correlation is interesting for many reasons, it will be on our future research agenda to further probe into the matter. However, it is sufficient to conclude at this point that the phenomenon of Islamic banking and finance does not validate of the conclusions normally drawn from the Islamicity Index. Islamic banking and finance, being explicitly identified as an Islamic phenomenon, may provide a basis for refuting many of the commonly drawn conclusions from the Islamicity Index, which should at best be considered as a measure of practicing of universally acceptable secular moral values than of the religiosity of the nations, as has so far been wrongly portrayed.

Box 1

A NOTE ON DATA AND METHODOLOGY

IFCI is based on a multivariate analysis. For construction of the index, original dataset included information on several variables, including macroeconomic indicators of the countries included, for the year 2010. The data was tested to see if it contained any meaningful information to draw conclusions from. After consideration of different multivariate methods, it was decided to use factor analysis to identify the factors that may influence IsBF in the countries included in the sample.

For factor analysis to be applicable, it is important that the data fits a specification test for such an analysis. The Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy was used to compare the magnitudes of the observed correlation coefficients in relation to the magnitudes and partial correlation coefficients. Large values (between 0.5 and 1) indicate that factor analysis is an appropriate technique for the data at hand. If the value is less than that, then the results of the factor analysis may not be very useful. For the data we used, we found the measure to be 0.85, which made it reasonable for us to use factor analysis.

Batlett's test of sphericity is another specification test that tests the hypothesis that the correlation matrix is an identity matrix indicating that the given variables are unrelated and therefore unsuitable for structure design. Smaller values (less than 0.05) of the significance level indicate that factor analysis may be useful with the data. For the present purposes, this value was found to be significant (0.00 level), which means that data was fit for factor analysis.

Factor analysis was therefore run to compute initial communalities to measure the proportion of variance accounted for in each variable by the rest of the variables. In this manner, we were able to assign weights to all eight factors in an objective manner.

By following the above method, we were able to remove the subjectivity in the index. The weights along with the identified factors make up the IFCI. The weights point to the relative importance of each constituent factor of the index in determining the rank of an individual country.

There are over 70 countries involved in IsBF in some way or another. However, due to limitations imposed by authenticity, availability, and heterogeneity of the data, IFCI was launched in 2011 with only 36 countries. Over the next three years, the availability of data allowed us to include another six countries to make the sample size of 42. The current sample stands at 50, and we believe that this is a robust enough number to analyse the state of affairs of the global Islamic financial services industry. Information contents of the data for other countries is not instructive at all.

The data used comes from different primary and secondary sources, but in its collective final form becomes the proprietary data set of Edbiz Consulting, which collects, collates and maintains it.

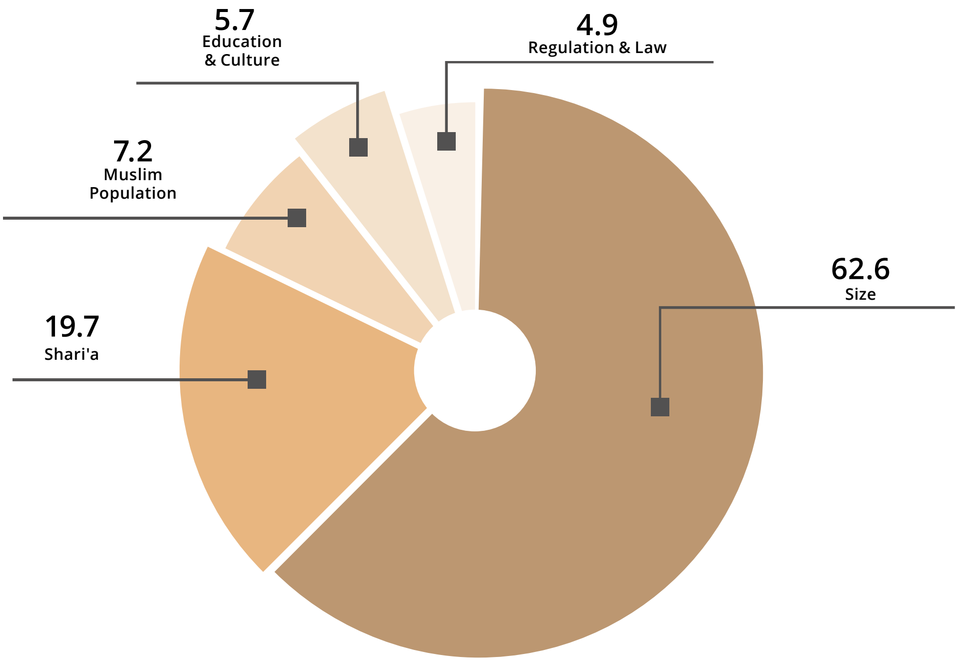
We collect annual data on eight factors/variables for the countries included in IFCI. The variable and their respective weights are described in the following table.

CONSTITUENT VARIABLES/FACTORS OF IFCI AND THEIR DESCRIPTION AND WEIGHTS

	Variables/Factors	Description	Weights
1	Number of Islamic Banks	Full-fledged Islamic banks both of local and foreign origin	21.8%
2	Number of IBFIs	All banking and non-banking institutions involved in IBF, including Islamic windows of conventional banks	20.3%
3	Shari'a Supervisory Regime	Presence of a state (or non-state) representative central body to look after the Shari'a compliancy process across the IBFIs in a country	19.7%
4	Islamic Financial Assets	Islamic financial assets under management of Islamic and conventional institutions	13.9%
5	Muslim Population	Absolute number of Muslims	7.2%
6	Sukuk	Total sukuk outstanding in the country	6.6%
7	Education & Culture	Presence of an educational and cultural environment conducive to operations of IBFIs, including formal Islamic finance professional qualifications, degree courses, diplomas and other dedicated training programmes	5.7%

8	Islamic Regulation & Law	Presence of regulatory and legal environment enabling IBFIs to operate in the country on a level-playing field (e.g., and Islamic banking act, Islamic capital markets act, takaful act etc.)	4.9%

RELATIVE IMPORTANCE OF THE CONSTITUENT FACTORS OF IFCI



The general model used for the construction of IFCI is as follows:

$$\text{IFCI}(C_j) = \sum_{i=1}^{i=8} W_i.X_i = W_1.X_1+W_2.X_2+W_3.X_3+W_4.X_4+W_5.X_5+W_6.X_6+W_7.X_7+W_8.X_8$$

where
C_j = Country j including in the index
W_i = Weight attached to a given variable/factor i
X_i = A given variable/factor I included in the index

The countries are ranked according to the above formula every year, using the updated annual data.

In 2016, a major adjustment exercise was undertaken to take into account some of the time-series characteristics of the data. The primary objective of this exercise was to normalise the data over the time. We adopted a methodology based on a weightage system that we adopted to construct a normalising factor.

The normalising factor used in the adjusted IFCI was calculated by the following formula:

$$Normalising\ Factor = \frac{Average\ (IFCI_{t-1}) \times IFCI_{it}}{100}$$

where

Average(IFCIt-1)= Average of IFCI scores for all the countries included in the sample of the previous year (t-1); and

IFCIit = IFCI score for an individual country i in the current year (t).

This normalising factor allows us to neutralise the purely statistical effect of data movements on IFCI score in such a way that the overall ranking each year remains unaffected.

As the above table and figure suggest, size of Islamic financial services industry as captured by four factors (namely, number of Islamic banks, number of IBFIs, volume of Islamic financial assets, and the sukuk outstanding) is the most important factor in the index, explaining 62.6% variation. Therefore, it is superior to the univariate analyses that focus on just size of the industry in each country. Furthermore, size on its own is not enough to capture the relative importance of IBF in a country. It is equally important to consider depth and breadth of the industry. Hence, both the size of Islamic financial assets and the number of IBFIs are included. Furthermore, the inclusion of sukuk, which accounts for 15% of the global Islamic financial services industry, as a separate factor is also useful.

Although the other factors collectively explain 37.4% variation in the index, their inclusion is important as they give a comprehensive view about IBF in a country.

It must be clarified that IFCI is a positive measure of the situation of IBF and its potential in a country, without taking a normative view on what should be the important factors determining size and growth of the industry, and their relative importance (i.e., weights).

PART 02

Role of Islamic Finance in a Post-COVID World

CHAPTER 03

Gold-Based Productive Waqf

The Case of Ubaid Waqf Economy Model

It is an ardent desire of many Muslims to witness the realization of a true Islamic economy that is benevolent to the community. The growth and advancement of IsBF, within the present riba-based monetary system, is a step towards that vision. However, the success of the industry has not necessarily translated into uplifting society's socio-economic standards. In addition, the current financial systems have rendered economies and the environment unsustainable. Therefore, the need arises to look beyond traditional financial institutions and economic models to seek a sustainable and equitable system that will benefit all community sections. Towards this end, this chapter proposes an innovative waqf economy model that is being practiced in South East Asia, which in our reasoning is capable of rendering that pristine Islamic economics and social system that is aspired.

Introduction

It is an aspiration for Muslims worldwide to realize a true Islamic economics and finance system in effect, at least in their respective countries. There have been several attempts at Islamic economic revivalism, a prominent example being the IsBF industry and Islamic insurance[1] (Takaful). Though these industries have witnessed phenomenal growth globally, a true Islamic economy is yet to be actualized anywhere that can be emulated. Muslim countries are still tagged as developing nations and third world nations with their economies based on riba[2], face a myriad of problems from rising inflation, the rising cost of living, high levels of illiteracy, unemployment, poverty, and widening gap in wealth distribution[3]. Moreover, their involvement in research and development in science, or any other field, is relatively minimal.

As a result, creativity and innovation are not fostered within their economies, leading to few products conceived and manufactured in Muslim countries worthy of emulation. In addition, there is also little evidence that the IsBF industry has made any significant contribution to the development of Muslim nations and improved the lives of Muslims[4].

Scholars have pointed out that a root cause for the aforementioned socioeconomic problems are the current monetary and financial system[5]. Political subversion by stronger Western nations are also a contributing factor, with many Muslim nations being remnants of former Western colonization. It may be argued that the developed Western countries also have the same riba-based financial system in place, however their superiority stems from the wealth derived from their former colonies, allowing them a head-start in economic development and scientific research, couple with the fact that the current riba-based fiat monetary system is designed towards an unjust transfer of wealth[6].

Per contra, Muslims are proud to conceive a relatively stable banking and finance system compared to the conventional ones, the capitalistic mindset prevails in all, resulting in the observances of similar problems across all countries such as rising inflation, the rising cost of living, growing disparity in wealth and income distribution, persistent poverty, unaffordable housing and destruction to the environment.

Today, the world faces a gargantuan crisis caused by the COVID19 pandemic that has affected every stratum of society globally. The remedial lockdowns and restricted cross-border travel have caused many economies to shrink, dealing a big blow to many livelihoods and disrupting all spheres of public and private lives[7].

The recessionary effects of the COVID19 are yet to be ascertained, though inevitable. As such, solutions must be sought beyond the realms of traditional financial institutions. With the growing prominence of social finance, this chapter will shed some light on how a traditional Islamic finance concept can be a sustainable, ethical alternative and multiplier effect on a community's socio-economic condition.

1. Farooq, 2013; Warde, 2000.
2. Riba – Arabic word which roughly translates as "interest" or "usury". In this context, we describe the fiat interest-based monetary system as a riba-based system
3. Abdelrahman, 2015; Iqbal, 1995.
4. Ahmed et al., 2015; Ahmad & Radzi, 2011; Aksak & Asutay, 2011; Akhtar, 2008.
5. Meera, 2018; Meera, 2016; Meera & Larbani, 2006.
6. Meera, 2004.
7. Bonaccorsi et al., 2020.

Problem statement

Despite the abundance of waqf properties lying idle without any productive revenue generation, there continue to be more waqf assets being endowed, contributing to the existing underutilized stock[8]. These issues occur when there are many different bodies, both private and public, that manage waqf and when beneficiaries are too varied. In addition, waqf is primarily perceived as a primitive practice with purely religious connotations and not as a tool for socio-economic development[9].

It is essential that a proper economic solution that integrates both is designed for the optimal allocation and utilization of waqf assets to contribute to the overall sustainable human and economic development.

Research Objective

The main objective of this chapter is to explore the case of The Ubaid Waqf Economy Model as an initiative that contributes to sustainable human and socio-economic development. The waqf[10] model currently being implemented in South East Asia can potentially assist Muslims in materializing that long dream of realizing a true Islamic economic and financial system. This model is the brainchild of Dato' Abu Ubaidah Kemin, a businessman who conceptualized this model and now aspires to expand it globally. In the following sections, the overall structure of the model, hereafter referred to as Ubaid Waqf Economy Model (UWEM), will be described and discussed, with particular emphasis on how waqf can potentially lead to a true Islamic economic system.

Literature Review

The term waqf refers to the "allotment and preservation of a property for a specified benefit and the prohibition of using it for anything outside its stipulated objective"[11]. In Arabic, its root word means "to prevent or restrain, confinement and detention" and entails permanent endowment for a specific purpose that is usually religious or charitable[12]. It is also defined as the "investment of funds and other assets in creative properties that provide either usufruct or revenues for future consumption by individuals or groups of individuals"[13]. The proceeds and use of waqf assets must be employed and invested in a permissible manner in Islam and should not go against the religious teachings[14]. Though waqf may come in many different forms and categories, it is imperative that the beneficiaries be specified with criteria and conditions.

Currently, there is renewed interest in waqf and its role in Islamic social finance for functions beyond the realms of traditional financial institutions. A plethora of studies exist that both have hailed its concept[15], yet rued its inefficient utilization[16]. As an example, it is reported that Indonesia alone has about 1,400 square kilometres of waqf land with an estimated value of US$60 billion. If these lands were put to productive use efficiently and earned a conservative return of 5% per annum, the potential returns would be about US$3 billion, which can be used to finance many socio-economic endeavours and initiatives[17].

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8 . Khan, 2007.
9 . Puad et al., 2014.
10. Waqf – a form of permanent endowment in Islamic Finance.
11. Kahf, 2003.
12. Khairi et al., 2014.
13. Pirasteh and Abdolmaleki, 2007.
14. Cizakca, 1998.
15. Suleiman, 2016; Zuki, 2012; Kahf, 2003; Sadeq, 2002.
16. Abas & Raji, 2018; Hasan & Siraj, 2016; Ismail et al., 2015; Puad et al., 2014.
17. Nafar, 2019.

Indonesia alone has about 1,400 square kilometres of waqf land with an estimated value of US$60 billion

In addition, waqf transcends the traditional immovable asset forms such as lands, mosques, and schools, and modern applications include providing health services, drinking water and construction of wells, education programs, and poverty alleviation and social entrepreneurship initiatives[18].

On a fiscal level, it has been found that the higher average per capita income in Muslim countries does not lead to higher socio-economic well-being within respective economies, hence the need for a more effective social, financial intermediation[19]. Most of the waqf administration is handled by the state or state bodies (Ab Hasan et al., 2015). For example, in Malaysia, waqf is managed by the State Islamic Religious Council of each state, and in Brunei by the Majlis Ugama Islam Brunei administers all waqf property. The incumbent issues of waqf administration of existing bodies have been highly researched[20], and there is a strong call for better governance and management of waqf assets, for both publicly and privately managed[21]. There is also a call for "third sector economy," or the voluntary sector, to be involved within the waqf sector, citing the possible unsustainability of public and private models[22].

Towards this end, several initiatives innovatively employ waqf as a means for socio-economic development, each with its scale, unique traits, and challenges. A famous example is cash waqf, which can be broadly defined as "a benevolent endowment fund formed with cash corpus, which is permanently dedicated to charitable activities and privately owned by a Muslim, or a group of Muslims, or a corporate body governed according to Shari'a with perpetual dedication of its usufruct to be spent on any purpose recognized by Shari'a"[23]. Cash waqf has become a popular alternative due to its ease of liquidity, management, distribution, and subscription compared to other waqf assets[24]. Bakar et al. (2019) provide a model of a corporate waqf university with insights on its management. Raheem (2021) posits a national waqf model that can be used to fund universal basic income. Khan et al. (2019) propose a waqf cooperative housing model as a solution towards the provision of affordable housing, financed by cash waqf, waqf sukuk and revenue generation from common waqf areas.

Other initiatives include waqf forests, development using blockchain technology, sukuk waqf, and Islamic waqf bank[25]. As there are many innovative proposals, one such initiative was launched and implemented in Malaysia, the Ubaid Waqf Economic Model (UWEM). This modus operandi of the UWEM will be the crux of this chapter.

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18. Salarzehi, Armesh & Nikbin, 2010.
19. Shaikh, Ismail & Shafiai, 2017.
20. Harun, Isa & Ali, 2012; Chowdhury et al., 2012; Ismail, Salim & Hanafiah, 2015; Hasan & Siraj, 2016; Abas & Raji, 2018.
21. Masruki & Shafi, 2013; Yaacob & Nahar, 2017; Ihsan & Septriani, 2016.
22. Arshad & Haneef, 2017.
23. Hassan, Karim & Karim, 2019.
24. Rahman & Sohel, 2019.
25. Ali & Kassim, 2020; Raghibi & Oubdi, 2018; Rashid, 2018; Mohammad, 2011.

Methodology

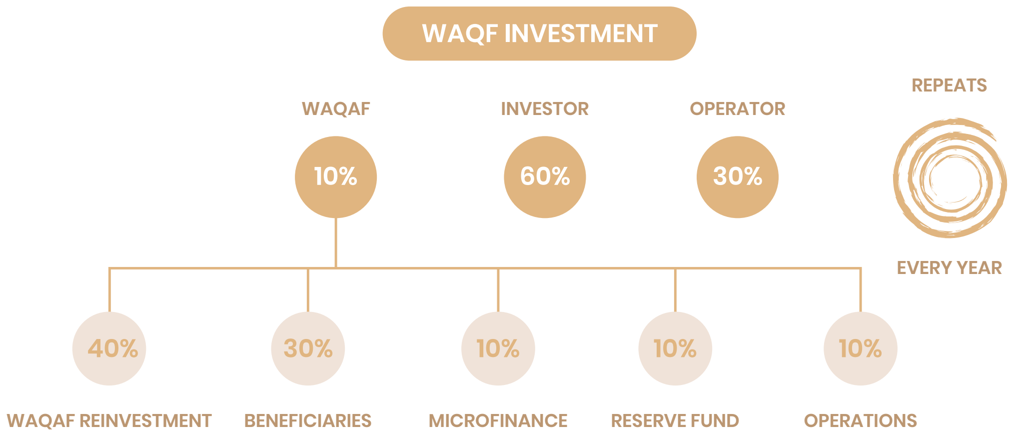
In this chapter, the Ubaid Waqf Economy Model (UWEM) and its implementation is described and evaluated as a case study. The case of UWEM is unique as it stems from an individuals' desire to employ waqf for a common socioeconomic benefit. The objectives of its conception are identified, and the modus operandi are examined and evaluated accordingly for effectiveness and sustainability.

The Ubaid Waqf Economy Model (UWEM)

The Ubaid Waqf Economy Model (UWEM), a brainchild of businessman Dato Abu Ubaidah Kemin, was first launched in Johor, Malaysia, in 2015. In the early days, he would allocate 10% of net profits from his business ventures for the sake of waqf. Once an asset is bequeathed as waqf, then it cannot be sold or inherited. Instead, it becomes umma's property for the benefit of umma[26].

As his businesses grew, funds were invested in businesses operated by other trusted parties, on mudaraba or musharaka[27] basis, who are willing to allocate 10% of net profits for waqf. Under this arrangement, the operator takes 30% of profits while Dato' as investor is entitled to 60% of profits, with the remaining 10% of profits being channelled for waqf. This is illustrated in Figure 3.1 below.

Figure 3.1
Division of Profit for Waqf Investment

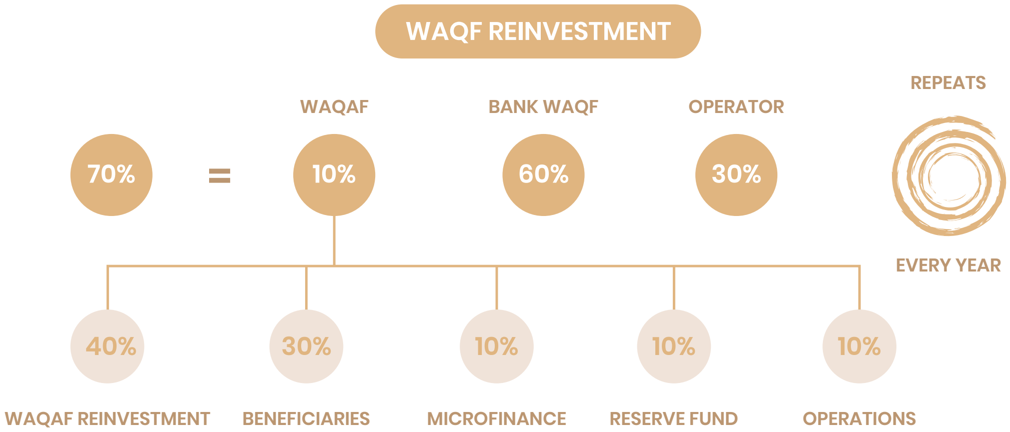


Under this model as illustrated in Figure 3.1, waqf funds are apportioned from the net profits earned by business activities. From the waqf portions, 40% of the proceeds are reinvested into businesses, 30% are channelled to beneficiaries such as tahfeez[28] schools and orphanages, 10% are utilised to provide qard hasan[29] Microfinancing to small traders and individuals in need of short-term liquidity, 10% kept as Reserve Fund for contingencies, while the remaining 10% goes for the management and operations of the waqf.

26. Umma – refers to the collective community of Muslims.
27. Mudaraba / Musharaka – forms of profit-sharing equity-based partnerships in Islamic finance
28. Tahfeez schools are Islamic religious schools that emphasize the science of recitation and memorization of the Holy Quran
29. Qardh Hassan – a form of benevolent or "interest-free" loan in Islamic finance

When the waqf funds are reinvested into business activities, the model stipulates 70% of the arising net profits to go back to the fund, whereas the operator is entitled to the remaining 30%. Out of the 70%, 60% will be apportioned to BankWaqf, an entity whose function will be described in the subsequent paragraphs, and 10% will be set aside as waqf. The waqf reinvestment and profit disbursement as described in Figure 3.2.

Figure 3.2
Division of Profit for Waqf Reinvestment



The reserve fund, which avails 10% of the waqf distribution, is created for contingency purposes during unexpected events. This reserve fund is an integral part of the UWEM and provides stability to the whole structure, and minimizes the need to borrow funds for liquidity purposes. However, cash is not kept idle in the reserve fund; rather, strategic asset allocation practices entail that 40% is invested in land and properties that bring about rental income, 20% is invested in gold which is a high quality liquid asset with a potential for price appreciation and a hedge against inflation, and the remaining 40% is maintained as cash and shares. This strategy enables optimization of the reserve fund, with the ability to liquidate whenever there is a need for funds.

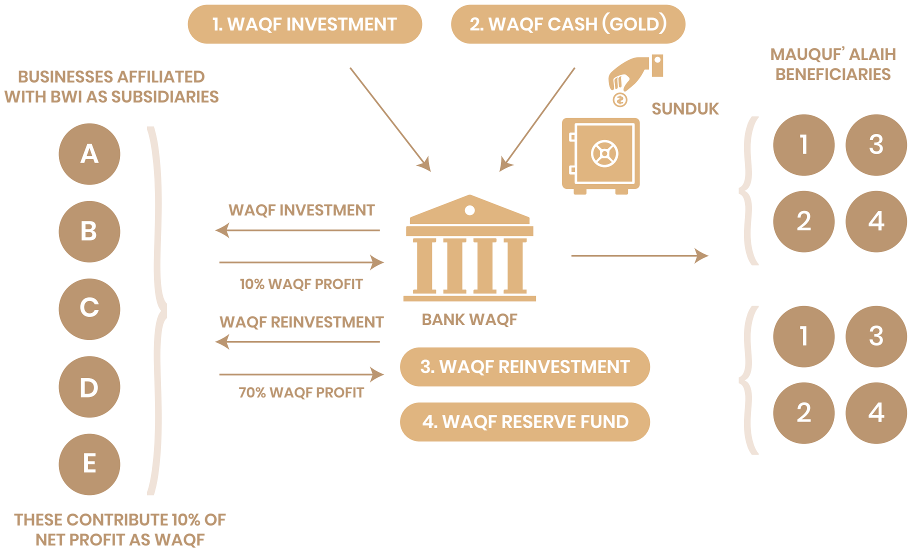
The repeated reinvestment of waqf funds with a 70% stake in the profits gave rise to a compounding effect that resulted in both the waqf funds and the ventures invested in growing exponentially, inspiring many to follow the UWEM business model. However, as the fund grew, it became difficult for a single person to manage. Thus the founder Dato' Abu Ubaidah Kemin decided to merge this fund with the waqf funds of those who followed his UWEM model, hence enabling a much larger pooled Waqf Fund that can be used for empowering Muslim businesses and waqf beneficiaries in a much stronger way that can take advantage of economy of scale with greater bargaining power. With the ambition of taking this venture internationally, Dato' Abu Ubaidah Kemin established the BankWaqf International in Indonesia and became its founding President.

The Bank Waqf International (BWI)

The Bank Waqf International (BWI) was established with the primary objective of aggregating all waqf contributions of businesses under one body. The businesses mentioned above themselves become the affiliated subsidiaries of the BWI. The BWI pools and manages four types of funds, namely Waqf Investment, Sunduq Waqf, i.e., cash waqf[30] contributions by the public, corporations, organizations, government agencies, Waqf Reinvestment, and Waqf Reserve Fund. These funds are illustrated in Figure 3.3.

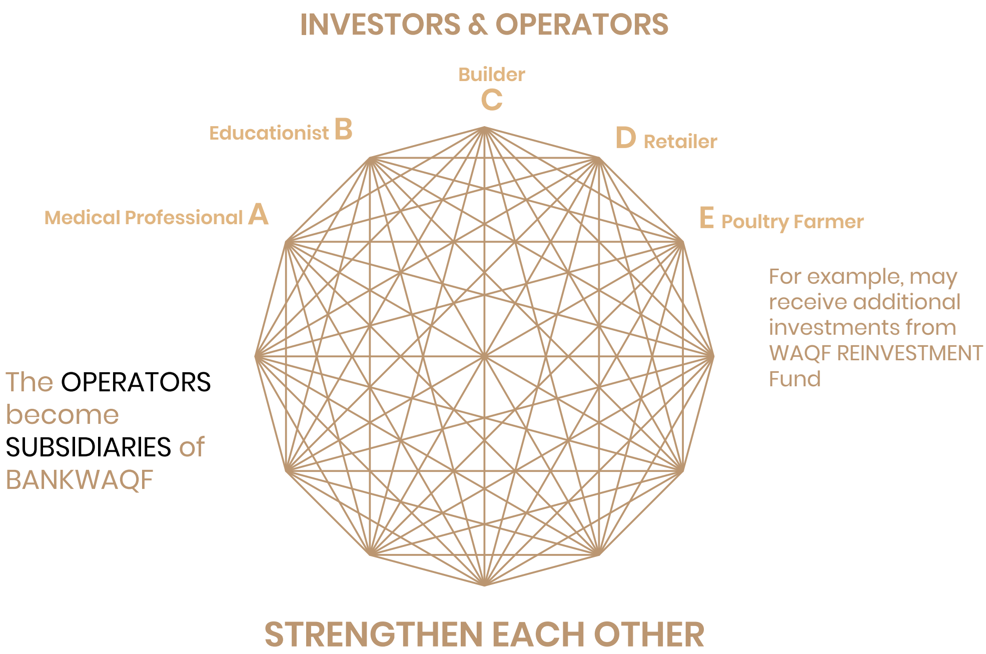
30. Cash Waqf – the permanent endowment of an amount of money and its usufruct for a specific purpose

Figure 3.3
Funds Managed by the Bank Waqf International



All the funds within are waqf in nature, making BWI acting like "trust fund" established to provide financial services to the people in the name of Allah SWT. Waqf is contributed to BWI in the form of cash or gold with the intention that these are invested in productive projects, and that the returns from these investments be then utilised for the benefit of the mauquf 'alaih[31], i.e. the beneficiaries. The BWI therefore gathers and creates a network of business operators under its ambit of waqf and strengthens them into a "force to be reckoned with". This is depicted in Figure 3.4 below.

Figure 3.4
BWI Links the Investors and Operators Within a Network of Subsidiaries



31. Mauquf 'alaih – beneficiaries of waqf

In order to illustrate the system, let us assume that five business operators come under the BWI as affiliated subsidiaries; a medical professional, an educationist, a builder, a retailer, and a poultry farmer, as shown in Figure 3.4. All five business operators would contribute 10% of their net profits for the Waqf Fund. In addition, waqf investments received from the public could also be invested in these businesses if a business fulfills the criteria for investment. These businesses may also be eligible for waqf reinvestment funds. The BWI can also extend financing from the waqf reinvestment funds for business expansion of their operators or for new start-up entrepreneurs whose businesses are Shari'a-compliant.[32]

Being in line with the Islamic laws and teachings and not involving anything prohibited in Islam, the BWI serves to be a global trust fund that belongs to the umma and is funded by the umma for the benefit and empowerment of the umma. One salient feature of BWI operations is that it backs its operations with gold. Currently, the operations of UWEM are both cash and gold-based, with the latter being an innovative solution. However, as mentioned earlier, BWI is fundamentally structured as a "trust" bank. The closest equivalent to waqf in conventional finance is the English trust. However, a trust can be set up for any objective, whereas waqf is charitable. That receives waqf in the form of cash which is then invested in productive businesses, and the returns are then distributed to the beneficiaries in the most beneficial ways. However, BWI also backs its operations with gold. The main reasons why a gold-based system is employed are described as follows.

Gold has shown to preserve value for thousands of years, and evidence has shown that the price of commodities relative to gold is practically a constant, a feat that fiat money cannot claim[33]. One significant characteristic of a fiat money system is inflation, through which businesses lose significant wealth. In the current global recessionary economic situation, where nations are printing money in trillions of dollars in the name of quantitative easing to mitigate the economic effects of the COVID-19 pandemic, economies are vulnerable. Markets, primarily financial and real estate markets, can potentially collapse, and geopolitical tensions rise. In such scenarios, the value of gold would rise while the value of fiat currencies would fall.

As such, BWI backs its operations with gold to preserve its value of money holdings and investment. Moreover, the gold price in US dollars or national currencies is expected to rise in current times for the unforeseeable future due to the global geopolitical situation. Hence it is financially prudent to hold liquid assets in the form of gold over cash. Therefore a small portion of the waqf fund is kept liquid in a gold form, while the rest is invested in productive businesses, the returns of which are available for the beneficiaries. In the Malaysian case of Waqf Investment, the cash invested by the investors would be immediately turned into gold. This gold would then be placed as collateral with a partner bank, using the rahn concept, and receive 80% of the money for investment purposes. This way, 20% of the funds are held in gold, while 100% belong to BWI. As the value of gold rises as expected, the value of the gold holdings will also rise[34].

This way, people can also give gold as waqf (permanent or temporary) as Waqf Investment or Waqf Gold (like cash waqf). Together with the gold custodian banks and BWI, the state's religious authority would act as the trustees of the gold, which belongs to the umma. In order to provide integrity and confidence of the public in the whole waqf in the economic system, BWI manages the funds using trustees who adhere to transparency and good governance and adhere to AAOIFI's waqf guidelines.[35]

32. Being in line with the Islamic laws and teachings, and not involving anything that is prohibited in Islam.

33. Meera, 2018.

34. There is always a possibility gold price can also drop, but with any business decisions this is a calculated risk that BWI takes.

35. Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) is the main standard-setting organisation within Islamic finance.

Adoption of Good Governance and Practices

The UWEM adopts and maintains good management practices, as it is a "trustee" for wealth given in the name of Allah SWT. Therefore, the following measures are adopted for purposes of governance and management:

1. Business Advisory Unit – this unit is set up within BWI to provide continuous advisory for any problems the member subsidiary companies might face.
2. Digitalization of business - Members are trained in business administration and digitalization to keep their business modern, up-to-date, and with applications of IT for management, accounting, finance, marketing, human resource management, and inventory management. This also facilitates transparency and governance.
3. The waqf employs investment appraisal officers to evaluate investment applications relatively in a just and professional manner. In addition, relationships officers are also placed as part of the management team of the micro-enterprises, particularly to monitor their running of the business and to be co-signatories for payments issued from the provided fund.

The Socio-Economic Benefits of Ubaid Waqf Economy Model

Any system designed and focused on sustainable growth must consider the "non-financial aspects" of the economy, such as social well-being, human capital, and the environment[36]. If established on a large scale, the UWEM aims to reverse persistent inflation, widening wealth distribution and income disparity, poverty, illiteracy, and high levels of corruption that may occur within the current capitalistic system. The following passages will further elaborate on the projected socio-economic benefits of UWEM.

The UWEM is an exemplary model of how the community can uplift each other. As the waqf fund grows exponentially and funds are invested and reinvested in businesses, it helps create jobs and provide employment, empowering people. History has shown how the waqf sector has catered for education and health[37], and hence the UWEM can impact human development directly and indirectly through education, training, and skill-building. The UWEM enables and facilitates economic networks such as food, shelter, health, education, utilities, transportation, communication with greater ease, enhancing living standards across the community.

For example, the UWEM provides a means to finance education and scientific research and development generously. This can significantly enhance the human capital in the economy and reward teachers and trainers their deserved wages.

From a monetary point of view, the UWEM finances business activities without creating new money, contrary to the present conventional and Islamic banking systems, and hence will not contribute to (the monetary cause of) inflation, the rising cost of living, unaffordable homes, and environmental destruction. Studies have suggested that money is the missing link for sustainability[38]. To uphold this, the UWEM backs its investments and economic activities with gold.

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36. Raheem, 2019.
37. Kahf, 2003; Islahi, 1992.
38. Lietaer et al., 2012.

From an economic standpoint, the UWEM provides riba-free (or interest-free) financing for new and existing essential businesses to grow and household consumption. It therefore promotes and enables the whole system to be free from riba. Moreover, through its redistribution channels, the UWEM can also contribute to social justice and reversing income and wealth inequalities in the economy. The socio-economic benefits of an improved standard of living are manifold. On the individual level, jobs and employment provide a strong sense of self-worth, reduce stress, and improve mental and physical health. On a macro level, this can reduce public expenditure for healthcare in the long run. With access to economic networks guaranteed for everyone, waqf can indeed provide social security for all.

The "by Umma for Umma" approach makes people become an asset to each other. This creates social wealth, i.e., peace, harmony, compassion, love, and tolerance to prevail in the economy. Accordingly, it gives birth to a compassionate gift economy rather than a mere competitive profit-motivated economy as in today's economic systems. In other words, the UWEM helps transform the umma into an "upper-hand" society rather than an always aid-requesting "lower-hand" people[39]. As such, it alters the criteria of social success and hierarchy from wealth accumulation to wealth gives. Ultimately, it provides a path for the attainment of United Nations Sustainable Development Goals (SDGs).

Unique Features of Waqf as an Institutional Tool in Islamic Economics

Waqf Versus Tax

Waqf is often compared with tax. Tax indeed is a burden to people as it takes away more from their disposable income, which is why many try to evade its payment. Certain countries have exorbitantly high tax rates, and taxes can also contribute towards inflation and rising cost of living[40]. Waqf on the other hand is voluntary and doesn’t burden the giver as it is bequeathed for the sake of Allah’s pleasure. Therefore, waqf is a superior way to finance public projects compared to financing using tax, as waqf encourages financing of public utilities, amenities and infrastructure. Also, just like tax, waqf can be contributed by non-Muslims and they can also enjoy its benefits.

Waqf and Zakat can Keeps the System Debt-Free

Zakat takes care of the eight asnaf, i.e., eligible recipients of zakat, among whom are the miskeen (poor), faqeer (the hard-core poor), and those in debt and unable to settle it[41]. While zakat takes care of these people in destitute, waqf, on the other hand, can further empower them with education, skill-building, and financing. Therefore together, both zakat and waqf keep the system debt-free, with a safety net that prevents bankruptcy for anyone – household or business –when the system works at its total efficiency.

Provision of a Supplementary Income for Everyone

The UWEM aspires to provide a second income for everyone, particularly for the lower-income group like farmers and fishers, using funds from the Sunduq Waqf, zakat (in this case meant only for the ansaf), sadaqa . Alternatively, even government subsidies, the system aspires to provide mainly the poor, like the B40 group, shares in the downstream businesses where these people work and contribute. Thus, for example, farmworkers could be given shares in food processing plants, and fishers could be given shares in businesses that process fish products. In this way, the poor

39. It is reported that The Prophet Muhammad, peace be upon him, said, “The upper hand is better than the lower hand. The upper hand is one that gives and the lower hand is one that takes.” (Ṣaḥīḥ al-Bukhārī 1362; Ṣaḥīḥ Muslim 1033).

40. Schneider et al, 2010.

41. Shirazi, 2014.

can avail themselves of a secondary income similar to the Universal Basic Income (UBI) concept gaining traction in many countries. Thus, the structure of the BWI provides second income for all, including investors.

Waqf Assists in the Attainment of Maqasid al-Shari'a

Waqf protects life by providing social security for all; protects faith, intellect, and progeny by providing education, health, financing, and overall security; and protects wealth by countering riba; providing everyone with a second income and makes it easy for everyone to access the economic networks.

Conclusion

The UWEM is an innovative, viable, and sustainable step towards a gold-backed waqf economy, presenting an opportunity to realize the pristine Islamic economics, finance, and social system visualized and desired at the onset of Islamic revivalism in the early 1970s. Despite the advancement of the Islamic banking industry and halal industry globally, the impact of their growths has been minimal on the overall well-being of Muslims throughout the world. The gold-backed Ubaid Waqf Economy Model (UWEM) aspires to provide a unique path for Muslims to achieve that long-desired goal of realizing true Islamic economics, finance, and social order. It is an ardent desire of the founder that the UWEM gain a wider exposure amongst governments, policymakers and academics to inspire and revive the institution of waqf towards sustainably rejuvenating the economy.

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CHAPTER 04

Potential Applications of Digital Technology in Islamic Social Finance

With the need to manage efficiency, liquidity and financial risks, treasurers are always on the lookout for new solutions to meet such objectives. Banks now understand the power of automation and digitisation to help treasurers attain these objectives; possessing a clear idea as to how it can help with their needs for control, visibility and centralisation. Most Islamic banks, previously not known for their technological agility, are successfully adopting transformational programmes to become industry leaders in the digital era. Pioneering technology has allowed them to develop new propositions in the areas of payments, collection, liquidity management, FX, trade finance and other areas of the working capital cycle to name a few. The landscape has become extraordinarily demanding and competitive for banks with the digital revolution that is taking place. This has resulted in an increased number of solutions and unprecedented innovation, with FinTechs and companies seeking to benefit from new technologies such as blockchain, Big Data, application programming interfaces and process automation.[1]

Use of digital services has become inevitable for the financial sector to enhance its coverage, especially when governments are promoting financial inclusion. Islamic social finance has the potential to serve the financial inclusion agenda in a complementing and effective manner. It is, therefore, important that potential applications of digital technology in Islamic social finance are considered and discussed with care – this chapter does the needful by focusing on potential applications of digital technology on zakat and awqaf, in particular.

Digital Technology for Zakat and Awqaf

One of the things that technology may address and resolve relates to the identity of the donors (muzakki/waqif) and beneficiaries. Zakat may be paid out by an individual muzakki (zakat payer) directly to an individual mustahiq (zakat beneficiary). This is the practice in countries where there is no organized or institutional mobilization and disbursement of zakat. Arguably, organized zakat management has many positives. Available evidence suggests that organized zakat management may be more efficient in identifying and distributing zakat among eligible beneficiaries. At the same time, institutional zakat management does leave room for some individual discretion and direct distribution. Moving from individual to institutional management of zakat brings in the first level of efficiency. Indeed, most Muslim societies either already have or seek a zakat infrastructure to ensure institutional zakat management. Moving from physical distribution of goods to cash may take us to the second and higher efficiency level.

1. Rationale for Digital Distribution

Paying in hard cash is simple. It appears familiar. However, dealing with hard cash has its downsides. For instance, it requires a system to handle it because of its size and volume. It is also unsafe. There is always a risk of robbery and internal leakages. It is also hard to account for since immoral insiders can be hard to monitor.

It is not hard to see that paying through digital format has decisive advantages over hard cash distribution. Digital payments involve user authentication. This makes it possible to ensure that cash reaches the intended beneficiary. A digital environment also ensures the integrity of data relating to the beneficiaries. Thus, there are built-in mechanisms that protects against theft and leakages. Every single payment can be accounted for or tracked, minimizing the possibility of corruption. Furthermore, every single payment can be properly authorized.

What are the operational requirements for a successful digital zakat payment program? Essentially, the program has to use infrastructure that already exists on the ground. For example, the required infrastructure would consist of bank servers for accounting, mobile phones for notifications, ATMs, or banking agents for cash withdrawal, so on and so forth. Assuming that such an infrastructure exists, a digital zakat payment program will have distinct benefits over a physical cash disbursement program.

However, there is another factor other than infrastructure that needs to be part of the equation. It is about mustahiqoon or beneficiaries themselves. Are beneficiaries familiar with and ready to take up digital cash? The bank needs to ensure that the beneficiaries, who are mostly illiterate and poor, are taken care of with the fulfillment of the following conditions:

- Do the mustahiqoon or beneficiaries understand the process?
- Is there a cost/fee for withdrawing their funds?
- Is the merchant charging a fair price when good are bought with the card?

1. Argument built in 2018 by Haytham El Maayergi of ADIB (https://www.treasurers.org/hub/treasurer-magazine/how-digital-boost-transforming-islamic-finance)

- Do they have problems using the hardware?
- Can a beneficiary use the card/PIN by her/himself? Are there helpers around to explain the process to them?
- Are certain groups (e.g., disabled, or the elderly) particularly disadvantaged allowed to use the technology?
- Is there some help out there whom they can turn to if they have a problem and are they treated fairly?
- Is there an increase or decrease of security threats to participants, staff, and partners with the introduction of digital zakat transfers?
- Has control and access of zakat transfers improved or made worse by the introduction of new technologies?
- If the beneficiaries are not familiar with and ready to take up digital cash, the zakat body needs to factor in significant awareness and customer support efforts and related costs.

What if there is no appropriate digital infrastructure in the area such as financial service providers, ATM or agent in the ground, mobile phone coverage, and ownership. In that case, a digital zakat distribution program would factor in high setup costs.

The ultimate objective of the zakat distribution program is to enable the people in distress to buy goods and services they need. It makes little difference if liquidity takes the form of hard cash or digital cash. Notwithstanding the hype around digitization, the required infrastructure and the beneficiaries' readiness determine the program's success. Once technology requirements, beneficiary readiness, and operational implications are fulfilled digitization will undoubtedly enhance efficiency and make sense.

Another dimension of digital zakat distribution that needs to be underlined is human dignity. Where the traditional distribution methods require queuing up by participants, physical appearance and waiting at the place of distribution, and similar conditions, receipt of zakat may involve compromising one's self-respect and dignity. For a self-respecting poor, a digital receipt or online credit will be a far welcome proposition. Indeed, this intends to protect the dignity of the individual (nafs), one of the five objectives (Maqasid) of the Shari'a.

2. Rationale for Digital Identity

In principle, before the distribution of zakat, an inquiry should be launched to ascertain whether the beneficiaries belong to one of the eight asnaf or categories (e.g., poor, needy, indebted, in-bondage) Shari'a had outlined for eligibility to claim zakat. Additionally, if the purpose of the zakat program is poverty alleviation or economic transformation of the recipient of zakat from mustahiq to muzakki (zakat recipient to zakat payer), they need to be monitored. With the digital payment of zakat, such monitoring of individual beneficiaries can be performed efficiently and effectively. However, this procedure of zakat disbursement may not be relevant in the context of humanitarian crises when zakat is distributed to meet an emergency.

The beneficiaries in this context should only qualify as eligible from Shari'a point of view. It is essential for the beneficiary to have a distinct identity for the digital payment of zakat. This identity shall be provided to the digital payment provider in order to claim digital zakat. Digital zakat payment then essentially is about assigning a monetary value to a digital identity. While digitizing the notion of a hundred dollars into zeros and ones is easy; giving zakat beneficiaries the means to unfailingly prove their ownership over that money (i.e., their digital identity) can be far more challenging with diverse mechanisms in place. It may be as simple as a random number/ token assigned to an individual where the identity need not be linked to anything intrinsic about the individual. It is not a tokenized form of his/her "real" identity.

A different form of identity linked to "real" identity is the Know Your Customer (KYC) requirements imposed by regulators on the various service providers. The KYC requirements comprise a set of verified personal information that service providers must ask for and hold about their clients. The information may vary widely and include combinations of name, address, date of birth, profession, education level, marital status, so on, and so forth. Since zakat payments involve financial flows, the authorities insist on such information to control money laundering, engaging in illicit transactions, and tax evasion. At a higher level, digital identity may require the addition of biometric information relating to an individual.

a) Identity and the SDGs

It is interesting to note here that legal identity and identification are also parts of the Sustainable Development Goals (SDG) agenda. As one of the proposed SDG targets (#16), it is also seen as a critical enabler of the efficacy of many other SDG targets. The SDGs underline the need to ensure that all individuals have free or low-cost access to widely accepted, robust identity credentials. While legal identity is frequently associated with a specific national credential, such as a National Identity Card, the appropriate concept in the context of the SDGs is broader than this. Not all countries issue National Identity Cards, and national status is not an essential component of identity as relevant for all SDGs. Indeed, there is a view that such legal identity can be provided far more quickly and widely by not requiring a prior determination of nationality, which can at times be a complex process.

It may be noted that robust identification is instrumental to achieving many of the SDGs. It directly relates to at least ten clusters: social protection floors, including for the most vulnerable; assistance in dealing with shocks and disasters; equal rights to economic resources including property and finance; the specific empowerment of women in this area; improvements in maternal and child health; coverage by vaccines and similar treatments; improving energy efficiency and eliminating harmful energy subsidies; child protection including the ending of harmful child labour; reducing the costs of making remittances; reducing corruption, fighting crime and terrorism and strengthening and improving the equity of fiscal policy. Most of these goals and targets may be directly mapped to the goals (Maqasid) of the Shari'a for which zakat funds may be utilized.

Robust identification is instrumental to achieving many of the SDGs

While identity may not be the most important requirement for pushing forward a zakat- funded development agenda, the SDG-related targets are made far more difficult if there are no robust identification means. At the same time, sound zakat management requires a delicate balance between requiring identity credentials as a condition to receive zakat versus creating an additional exclusionary barrier. Overzealous or inflexible ID requirements may sometimes block individuals from accessing the benefits.

b) Digital Identity for IDPs

Legal identity as a precondition for receiving zakat assistance can be difficult for the poorest of the poor and elderly, and for those affected by natural calamities (e.g., flood inundation) and the internally displaced due to conflicts and war situations. Moreover, most of the target beneficiaries may not even have legal documents to establish their identities. It is therefore, important that digital identities in such cases are assigned without linking the same to anything intrinsic about them. There have been some recent experiments in this regard using blockchain technology.

In a pilot program implemented with a blockchain application, developed by AidTech along with the global innovation team of the International Federation of Red Cross and Red Crescent Societies, provided digital identity to Syrian refugees in the form of smart cards with unique QR codes. Each card entitled an individual to buy goods from partner merchant/vendors worth a certain value. It was also possible to replace smart cards with mobile devices. The technology enabled monitoring in real time and with complete transparency about all the transactions online. In short, it ensured the delivery of digital entitlements via digital identity with complete transparency and accountability of the distribution of resources. This experiment and pilot study can be replicated by other zakat organizations in similar complex humanitarian settings. The use of unique digital identity may allow the zakat organizations to document information such as eligibility, entitlement packages, and automated periodic payments. It may enable them to transparently track resources distributed throughout the process with a high degree of accountability.

c) Ethical Concerns with Digital Identity

Identity brings many benefits to the process of zakat distribution. Lack of identity or anonymity on the part of the beneficiaries is certainly not desirable. It should be evident that a digital environment makes it possible for the zakat organization to collect many types of personal data. Zakat organizations may collect a range of data like personally identifiable information, e.g., names, phone numbers, and bank record details. Such data should be the bare minimum for the organization to target assistance and ensure that the correct participant receives such assistance.

Usually, the scope of such beneficiary data is enormous with digital zakat, where such data needs to be shared with third-party service providers, such as mobile phone companies and financial service providers, to execute the transfer of cash. This raises some concerns about the privacy of data. Furthermore, it is essential to realize that other actors may be interested in such data, e.g., persons/ groups. Some of these may indeed be hostile to the intended beneficiaries and target them for extortion and violence. Therefore, adequate care needs to be exercised about possible data breaches. In addition, the personally identifiable information (PII) itself should be minimized.

Zakat organizations cannot close their eyes to privacy issues of personally identifiable information relating to beneficiaries. Therefore, they should have some mechanism in place to determine which information could be shared with whom. They should also define regulations applied to the data and its compliance with the legally established privacy principles of the relevant jurisdictions (in addition to national regulations like KYC, regional or international agreements may also apply). In addition, the zakat organization may develop its privacy principles and ethical guidelines.

3. Sanctity of Waqf Records

The institution of waqf or awqaf, as discussed before, implies holding or setting aside certain assets by the donor (waqif) and preserving it so that benefits continuously flow to a specified group of beneficiaries or community. The nature and purpose of the waqf should be clearly stated in the waqf deed or document by the donor (waqif). The donor also specifies the trustee-manager(s) to ensure that the intended benefits materialize and flow to the community. The trustee-manager is variously described as mutawalli or nazir. The waqf deed provides the method of compensation of the trustee-manager, usually a part of the earnings or benefits from the assets under waqf. Thus, the building block of waqf is the deed that is a written record of the transactional process and the relationships. Since the stated intentions of the endower (waqif) are immutable and binding on all stakeholders, therefore, the sanctity of the waqf deed assumes great significance.

In recent times, with a growing concern regarding recovery of lost awqaf properties across the globe due to encroachment, often by the state or its agencies, powerful corporates, and individuals, there have been ambitious initiatives to create computerized central databases on waqf deeds/ assets. However, blockchain technology has immense potential for the awqaf sector as a new technology that can ensure far superior outcomes compared to centralized databases. While blockchain employs various modern technology and security steps absent in a written text, it is essentially a ledger or a record. Like a written record, it has chapters – or blocks – of information, each added sequentially over time. Experts note that the blockchain fundamentally differs from the traditional databases or computerized/ manual records. It differs in two distinct ways.

First, the blockchain is a shared record. We are no longer talking about centrally controlled and updated records, whether written documents by individuals or digital files owned by database administrators. In these cases, a centralized authority would govern the records. By contrast, the blockchain is a distributed record. No single participant owns the blockchain or dictates additions to it. Instead, updates are a function of consensus amongst participants. In the context of awqaf, it is perhaps an extremely ideal scenario that the society as a whole or the waqifs (and designated individuals/ bodies, e.g., Islamic scholars/ jurists/ waqf-entities) collectively own the blockchain.

In some cases, the blockchain may be "public" with complete access to waqf records given to every member of the society. On the other hand, the blockchain may also be "private" with restricted access for specific parties with the ability to "modify" or "update" records by consensus. It would be a more desirable scenario where participants (society) by consensus decide to modify the intended use or develop the asset or replace the asset if considered desirable in societal interest, as compared to one where a waqf board/ waqf commissioner implements the changes.

Second, the blockchain is immutable. It stores a history of itself back to the first entry, known as the genesis block. The identity of each new entry is created, in part, from the identity of the previous entry. Changing its content or identity is essentially impossible because every individual block is inextricably linked to all that precedes it. It is this feature of the blockchain that makes it most suitable for awqaf. A waqf, by definition, is inalienable, irreversible (for most Islamic scholars with some recent exceptions), and perpetual dedication of a privately owned asset for a public purpose by the owner. Unfortunately, throughout the history of Islamic societies, there have been cases of abuse, misuse, and usurpation of waqf assets, tampering, and destruction of waqf deeds by bad actors (which unfortunately included public or state agencies as well as private entities). A search for solutions to this intractable problem has eluded societies. Given the immutability of the blockchain, which brings in its unprecedented security in the form of tamper-proof records, impermeable to incursions by bad actors, we may just have hit upon a solution.

As an append-only database, blocks cannot be changed once committed to the blockchain. Instead, the blockchain only changes by the addition of new blocks. Thus, it appears most suitable for creating waqf-mushtarak or the use of new waqf resources for the development of existing waqf assets. It must be noted that awqaf have a business face too. The waqf resources must be invested in the best possible way to maximize returns, which may then be directed at the intended beneficiaries. Thus, the blockchain database has enormous potential for corporate applications.

Experts note that the blockchain eliminates the need for an intermediary third party, such as a state agency (often lacking credibility). Both transacting parties can trust that the information added to the blockchain cannot and will not be changed. Large waqf-based organizations could directly interact with each other, writing their contracts with no need to involve third parties or any other intermediary to assert correctness. Blockchain also allows participants to reach a consensus or settle a transaction quickly. Multi-day processes channelled through intermediaries are reduced to minutes, thereby enhancing the efficiency of waqf-based organizations.

Experts note that for shared records such as waqf deeds or contracts, the blockchain fundamentally transforms ownership, transparency, security, and consequently, the value of the records and the process they govern. In the context of a shared record or contract, blockchain reframes the concept of trust. The blockchain lets people (or companies) who have no particular confidence in each other collaborate without going through a neutral central authority. As a machine for creating trust, the blockchain could solve the problem of the massive trust deficit in the waqf sector. Indeed, the importance of trust can hardly be overemphasized in the context of the development of waqf assets, especially where it involves infusion of private capital. Often the trust deficit is linked to society's concern for the preservation of waqf assets. For example, in the face of large-scale encroachment of waqf assets in India by state agencies, most proposals to develop a particular waqf property and transform the same into productive community assets have met with stiff resistance by community leaders. Often the contracts that go with waqf management evoke a trust deficit. For example, waqf assets are often leased (if not sold or offered as collateral) at grossly below-market rates or for a near-perpetual lease term to the lessee(s). While waqf laws seek to minimize such possibilities through provisions, e.g., the penalty for the mutawalli, these have generally been ineffective in most jurisdictions, aggravating the problem of trust deficit. The blockchain potentially offers a solution in the form of smart contracts.

A "smart ijara" or operating lease contract – that uses the blockchain and automates the periodic payment streams as well as reversion of leased assets to the waqf at the end of the lease period – could be a self-paying and self-executing instrument

A smart contract is a computerized transaction protocol that executes the terms of a contract. It purports to, among other things, satisfy common contractual conditions (such as payment terms, liens, confidentiality, enforcement), minimize exceptions both malicious and accidental, and minimize the need for trusted intermediaries. Related economic goals include lowering fraud loss, arbitrations and enforcement costs, and other transaction costs. For example, the Islamic lease contracts can now take the form of self-executing digital or smart contracts with "electronically coded" terms. The contractual terms will execute only if the conditions are met. This will automate the entire contractual process for Islamic institutions. In addition, the Islamic contracts will now be easy to verify, immutable, and secure, mitigating operational risks arising from settlement and counterparty risks as well as administrative and legal complexities and redundancies. Thus, a "smart ijara" or operating lease contract – that uses the blockchain and automates the periodic payment streams as well as reversion of leased assets to the waqf at the end of the lease period – will now be a self-paying and self-executing instrument. Indeed, the most effective application of blockchain is to ensure the sanctity of the waqf deed and ensure that the conditions stipulated by the waqif are met most transparently. Thus, as rightly called a "trust-machine," it can effectively address the "trust-deficit" constraint that faces the global awqaf sector.

AI Applications in Zakat and Awqaf

A digital and technology-enabled environment for zakat and waqf opens abundant new opportunities and possibilities for applying artificial intelligence (AI). As is explained below, AI can enhance the efficiency of the processes along the value chain in the IsSF sector.

Artificial Intelligence is the use of computers to mimic the cognitive functions of humans. Humans can see, listen, relate, analyse, compute, and make decisions. A computer system that does these things is called artificially intelligent. So, AI is about machines that can perform tasks typical of human intelligence. Computers need data that could be anything ranging from words, texts, images, and gestures – anything that conveys information. When one seeks to relate data, analyse data, compute, and make decisions, one uses algorithms.

1. Machine Learning (ML) Algorithms

A fundamental building block in AI is the algorithm, which means a set/list of rules to solve a problem. One needs a code to tell a computer what to do. However, before one writes a code, one needs an algorithm. An algorithm for a simple zakat liability estimation of an individual may appear like this:

- Get the values for Zakatable Assets (ZA) – Gold (G), Silver (S), Cash (C), Receivables (R), Investments in Zakatable Assets (I), Business Stock (B) – and Deductible Liabilities (DL)
- Get the current market price (P) of gold (say per 1kg)
- Calculate Nisab (NB) = P*0.085
- Find Sum of all Zakatable Assets [ZA= G+S+C+R+I+B]
- Find Net Zakatable Assets (NZA) = ZA-DL
- Compare NZA with NB;
- If NZA < NB, Zakat Payable = 0;
- If NZA >= NB, Zakat Payable = NZA X 0.025

There is little for the algorithm to do when all data are given other than to compute the result. However, there is no single answer once one seeks to predict the zakat liability of the individual into the future. Now all the inputs will be the predicted values of zakatable assets and liabilities.

The benchmark Nisab will also depend on the future value of gold. There is now the need for another algorithm to predict the future value of gold (e.g., exploring a pattern in the historical values of gold and extrapolating the same into the future). Alternatively, when some dynamic decision criteria are introduced (e.g., an individual's intention to liquidate his/her investment or hold long-term), the zakatable investments will take different values. One would then be stepping into the domain of machine learning (ML).

Machine learning is a way of achieving AI without being explicitly programmed. Without machine learning, AI would require building millions of lines of codes with complex rules and decision trees. So instead of hard-coding, machine learning is a way of "training" an algorithm to understand the logic and produce the results. Training involves feeding vast amounts of data to the algorithm and allowing it to adjust itself and improve. So these are self-reliant algorithms.

Machine learning outcomes can be of two kinds. First, it can be predictions about things that are not yet known but can shed some light on existing data. For example, what will be the price of gold next month? There is no single answer. Machine learning outcomes can also be about finding patterns in the data that are not entirely obvious because they are implicit or probabilistic. For instance, Twitter responses of visitors to the popular zakat crowd fund portal in Indonesia, which are just a bunch of texts can be analysed to see a pattern hidden in such responses? Is the crowd fund providing for what it takes a visitor to turn into a donor? What are the chances that a visitor will pay zakat online through the portal or turn away? Now the machine needs to infer the idea of a "satisfied" visitor from a bunch of textual data.

However, AI is not just about predicting or classifying. AI is a much broader concept than machine learning. First, there are those particular categories of machine learning algorithms that carry the tag of deep learning. In addition to deep learning, other approaches to machine learning include decision tree learning, inductive logic programming, clustering, reinforcement learning, and Bayesian networks, among others.

Deep learning was inspired by the structure and function of the brain, namely the interconnecting of many neurons. Artificial Neural Networks (ANNs) are algorithms that mimic the biological structure of the brain. Deep learning models try to simulate more closely how our human brain works.

a) Prediction and Classification with AI/ML

In AI, the machines are expected to interact the way humans do. For example, when confronted with an individual, seeking a small sadaqa donation or a qard (loan), a potential donor or lender usually would like to ask a few questions about his/her financial conditions, make him speak, seek clues in his dress, countenance, and facial expression. Same data – pixels in an image, text in speech, numbers can all be used by a machine/computer. However, compared to humans - the ordinary individuals – a manager with a Qard Fund will perhaps seek more systematic data. Microfinance institutions (MFIs) insist that the client must perform salat (mandatory prayer) at the local mosque. With computer vision now fast becoming a part of good mosque management, data on mosque attendance should be available for the MFI and the machine. Additional data can be made available in utility bills, grocery purchases, type of mobile users so on and so forth. Indeed, there is data everywhere.

> AI can tell us whether or not the individual belongs to one of the eight categories of mustahiq or person eligible to receive zakat in the eyes of Shari'a

The AI-driven machine can then be trained on such data to enhance its intelligence and go on to classify the individual as conforming to the criteria of an individual in genuine need or not. For instance, AI can tell us whether or not the individual belongs to one of the eight categories of mustahiq or person eligible to receive zakat in the eyes of Shari'a. Moreover, AI can predict, should it be a case of qard, the probability that the borrower may default or delay repayment. AI can classify the default as a genuine or a wilful one. In the former case, the defaulter perhaps needs additional help. The latter case would call for a penalty.

There are innumerable ways in which AI can help humans analyse better, predict better and classify better. However, what needs to be underlined is that there is no known single correct answer in AI. One must accept the possibility of error. There are four possible outcomes. For instance, in the case of the above classification problem relating to mustahiq (zakat beneficiaries eligible according to Shari'a), the machine may end up classifying (i) a poor as a poor, (ii) a non-poor as a non-poor, (iii) a poor as non-poor and (iv) a non-poor as poor. In the first two cases, it would have done its job correctly. In the third case, it would deprive a genuine mustahiq of receiving zakat. In the fourth case, it would ensure a non-mustahiq to receive zakat. The error in the third case is perhaps more severe. Imagine a similar classification error in treating a Covid-19 patient – an infected patient who is not diagnosed as one and is not receiving the treatment! Fortunately, misclassification risks are far less harmful and fatal in the domain of Islamic finance than in healthcare. The computer is given a clear objective expressed as an optimization problem, such as minimizing the probability of error. Then data is provided to the computer, and it is required to optimize based on this data, which contain clues to solving the prediction/ classification problem.

b) Types of ML

There are three broad types of ML - supervised, unsupervised, and reinforcement.

First, there is supervised learning, which is fast, accurate, and most commonly used ML. Machine learning takes data as input that is called "training data." The training data includes both inputs and labels (targets). The data scientist trains the model with lots of training data (inputs & targets). Then with new data and the logic it gets, the output is predicted. Two types of problems are addressed through supervised learning – regression and classification. Classification separates the data. Regression fits the data.

Regression: This is a problem where one needs to predict the continuous-response value (a number that can vary from -infinity to +infinity). In the earlier zakat estimation example above, one needs to predict the prices of gold, silver, shares, value of inventories, agricultural produce, lease rental rates/ prices of houses and other assets, etc.

1. Available at http://afpfep.org/wp-content/uploads/2018/04/2018-Fundraising-Effectiveness-Survey-Report.pdf

Classification: This problem predicts the absolute response value where the data can be separated into specific "classes" (one predicts one of the values in a set of values). Adding a few more to the earlier examples, one may note that the initial six classifications are binary (yes or no), while the last three are examples of multi-class classification.

Yes/No

- Is individual A in the poor (faqir) category of mustahiq or not?
- Is individual B in the traveler (ibn Sabeel) category of mustahiq or not?
- Are donors to Global Sadaqah (a crowdfunding platform) a satisfied lot or not?
- Will donors to Global Sadaqah (a crowdfunding platform) revert as repeat-donors or not?
- Is individual C going to default on his repayment of qard or not?
- Is this picture of Brother X or not?

Very high/ high/ moderate/ low/ very low

- What are the chances that a transaction by individual E will prove to be a fraudulent one?
- What are the chances that zakat beneficiary F receiving specific skills will be able to transform himself/ herself into a muzakki-entrepreneur?
- What are the chances that project D will utilize zakat funds in the Shari'a-stipulated way?

In unsupervised learning, the training data does not include targets. So, one does not tell the system where to go. The system has to understand itself from the data given. It has to understand patterns in the data itself. Here training data is not structured.

There are also different types for unsupervised learning, like clustering and anomaly detection. Clustering is a type of problem where one puts similar things together. It is similar to multi-class classification, but the system understands and clusters the data without providing the labels.

Some examples are:

- given questions or comments on a zakat portal, cluster them into payer-types
- given set of tweets on volunteering portal, cluster-based on the content of tweets
- given WhatsApp forwards in Islamic women groups, cluster senders into different types

Unsupervised learning is relatively more challenging to implement and not used as widely as supervised.

c) Model Evaluation

A business user of machine learning algorithms can, of course, leave the technical details out. One does not have to build one's own machine learning model. Instead, one can seek the services of dedicated data scientists. As Islamic finance or social finance professionals, one may encounter machine learning models that do one or more of the above tasks. Once one is done asking what it does and why one should need it, the next set of questions ought to be: how good is it, should one trust it? The process of model evaluation is about finding how good the model's predictions are.

2. Matthew Biggins, AI and the Future of Ethics, available at https://medium.com/s/ai-dirty-little-secret/ai-and-the-future-ofethics-e4286567e742

Interestingly, one can find this by comparing what the model predicted with what one already knows but has not shared with the machine. For example, a manager from Akhuwat (qard fund) is interested in a model that can correctly classify its new beneficiaries into good and bad borrowers (from a default point of view). It has data for the past two decades on its beneficiaries that includes the minuscule population of defaulters. It knows who defaulted and who did not. Assuming that it shares data for the first twelve years (60 percent) of the machine to train the prediction model, this set is called the "training dataset." Then the machine uses the next four years of data to choose between alternative models. This data set is called a "validation dataset." Finally, it uses the last four years of data (20 percent) to find the optimal parameters of the model that minimize errors.

Now, one may argue that there is no business case for Akhuwat type organizations to use such prediction models. An organization that enjoys minimal defaults (around one percent) may not find the idea of employing complex prediction algorithms a good business proposition. However, the issue of cost versus benefits of such an exercise is undoubtedly relevant. It perhaps serves well those entities experiencing high credit default risk and do not know how to tackle it. At the same time, such models may offer alternative value propositions to Islamic microfinance institutions that may like to predict the outcomes of their skill-enhancement initiatives – predict potential winners among micro-entrepreneurs based on data that go beyond their education and apparent competencies.

There is merit in the idea that machine learning models make predictions based on data beyond what is traditionally used to assess creditworthiness (such as proof of income or employment) or entrepreneurial traits in individuals. Poor people are financially excluded because they are data excluded. ML models use "alternative data" that has no apparent relationship with the financial and business capabilities of the client, such as the number of contacts on one's phone, the make of the phone, one's average mobile top-up value, one's online access patterns, indeed, anything relating to their digital footprint.

Apparently of low value, there are hundreds of such data types available to our machine to explore and find relationships with loan repayment or entrepreneurial success. At the same time, the use of "alternative data" raises serious ethical issues, especially from an Islamic point of view. Islamic societies place massive value on "privacy," and for good reasons. Can the machines come up as winners in the face of this ethical constraint?

2. Natural Language Processing (NLP)

One can break up natural language processing into several activities. First, the machine needs to be able to recognize speech when it is spoken to. That is converting language from its speech form to its textual form. Then the machine needs to extract meaning from that text to understand. Second, the machine needs to be able to articulate response as a string word put together. Third, the machine may need to turn that into spoken words to synthesize speech. AI applications may include one or more of the above processes.

AI applications take care of the first step, extracting the text out of audio or video recordings. Some applications go further and analyse text contained in tweets or messages or emails or responses on a portal. Such an exercise may be helpful, for instance, for a waqf organization to know what the neighbourhood feels about the public goods (education, healthcare, orphan care, etc.) it provides. An association of zakat organizations in a country concerned about a high rate of "donor attrition" may feel the need for a "feel-good analysis" of donors. A microfinance institution serving micro and small businesses may be interested in its clients' "business sentiment analysis". All these would require analysis of texts in the form of stakeholders' responses in various channels, e.g., tweets, emails, comments, and queries at the portal.

Web-based chatbots go one step further. They can formulate a response to individual customer messages and post that back as an instant message. Automatic response systems of the type one find with a few Islamic banks are similar, except that they need to understand spoken requests in the first place. So, they need to incorporate a speech recognition element. There are, of course, some basic ones that will not talk back beyond playing some standard pre-recorded messages. Instead, they note what the customer issue is. There are, however, the Kikus, the Siris, and the Alexas that are fully interactive voice assistance systems that cover the full range of activities.

There is no doubt that the chat-bots of tomorrow will be much smarter than what we have today. A distinct possibility is a robot-scholar or a robot-Shari'a-auditor or a robot-regulator, well-versed in Islamic law & economics and national laws and regulations. However, one has to be content with robo-advisors in place for Shari'a-compliant investments and wealth management. Since investments are an integral component of awqaf, the mutawallis and nazirs should find value in the recommendations of robo-advisors.

3. NLP with Computer Vision

NLP with computer vision may help address "donor attrition" risk. This is a risk that all charity and non-profit organizations face. It is a significant risk. It can significantly affect their ability to keep their programs funded. A global report on Fund-Raising Effectiveness6 underscored this risk in simple words: for every 100 new donors in a year, the non-profits lost 99 existing donors! One may add to this the estimate that it costs non-profits about ten times more to bring in a new donor than to keep an existing donor. Addressing this major problem may require a multi-pronged action plan – develop and use donor analytics, get feedback, and reach out to the lapsed donors.

Now, imagine an existing donor walking into the premises of an Islamic non-profit organization. A computer placed at the reception can instantaneously recognize him, cross-checks its database of his past contributions, and identifies him as an individual with a high propensity to donate. The next instant, the computer warmly welcomes him, offering to serve him with info on the latest campaigns matching his interest or providing impact feedback on past campaigns he contributed to. Won't this gesture influence his decision to donate again to the same organization? If he is a zakat payer, the machine can even help him counsel and estimate his zakat liability. A machine that sees listens, and talks can undoubtedly help the non-profit retain him as a donor and a continuous supporter of its programs.

Here is another scenario. A poor micro-entrepreneur is seeking a qard loan or a micro-Murabaha financing from an Islamic MFI. Usually, she should be ready to visit the nearest branch of the organization with a plethora of documents for KYC compliance opening an account. However, when she connects to the branch seeking an appointment, she is told not to put herself into the inconvenience of a personal visit. The process of visual authentication and KYC is now possible remotely with computer vision. What is now required is this. First, she needs to send a photo of her ID card. The computer will pick out her facial image, name, and other written text on the card. Next, she takes a selfie with her mobile phone against the photo on the ID card. The computer will compare the facial features on her selfie photo with the photo on the card. Her authentication is complete.

In the above two examples, enhanced customer satisfaction is made possible, most certainly, because of hearing, talking, and seeing machines.

Ethical Issues in AI[2]

As discussed above, a machine can hear humans talk, talk back to them, see and recognize them. Once one adds the internet-of-things, it can do things as well. A natural question that arises now is: Can such an "intelligent" machine enter a contract in a legal sense? Can an "intelligent" machine be held "accountable" for its actions? For example, a nadhir of cash or corporate waqf liquidates 20 percent of its equity portfolio on a signal from the Robo- investment advisor, only to see the markets bouncing back and experiencing a significant climb upward. Before one seeks an answer to such questions, it is perhaps helpful to differentiate between three different levels of AI. First, there is narrow artificial intelligence (ANI), which does one thing at a time. For instance, the AI algorithm enables one to convert speech to text. Second, artificial general intelligence (AGI) can do everything humans can at the same level of mental abilities.

Moreover, finally, the dreaded zone of artificial superintelligence (ASI) dominates and is far superior to human intellect. Humans would have no clue as to what the machine is thinking. Humans are currently at ANI, while experts disagree on whether AI will soon reach higher levels. One can comfort the forecast that AI will firmly stay within human control and conveniently trash the forecast of some that machines will become incomprehensibly smarter than humans with ASI. However, in the event ASI materializes, it will be beyond human control. One can only hope that, before the inevitable happens, humans would have inculcated in the machines Islamic ethical and moral norms and values.

1. System Accountability

Experts in the ethics of AI consider three levels of ethical behaviour by the machine. First, AI has ethical constraints programmed into it. Second, AI weighs inputs in a given ethical framework to choose an action. At the highest level, AI makes ethical judgments and defends reasoning. It is relatively easy to see the first level in action. The Islamic investments robo- advisor will not touch a pork-producing company with a stick! It knows wine and pornography are harams and beyond its reach. This is because of Shari'a's constraints programmed into it. It will never permit investments into any projects that violate the conditions imposed by the nazir. If it is into zakat advisory, it will never "clear" a list of beneficiaries that include the non-poor (unless there are other defendable reasons to pay zakat to them). If it is to assess the performance of a nazir or mutawalli, it will raise a red flag over benefits flowing to projects that are not in conformity with intentions of the waqif.

While we are still within the domain of ANI, the task seems to be more accessible. However, machines cannot be penalized for the consequences of their actions. Even though this may encourage people to exercise enough caution while creating AI, system accountability is suggested[3]. However, system accountability may yield good results if ensured through government regulations and industry standards requiring developer companies to subject algorithms to rigorous scrutiny for ethical questions that may be lurking around the corner.

b) Big Data and Privacy Concerns

Any discussion about AI is incomplete without talking about big data. The narrative "data is new oil" is frequently used to underline that data has become the most critical resource of our times. As machines continue to gain intelligence by devouring more and more data – in the form

2. Available at http://afpfep.org/wp-content/uploads/2018/04/2018-Fundraising-Effectiveness-Survey-Report.pdf
3. Matthew Biggins, AI and the Future of Ethics, available at https://medium.com/s/ai-dirty-little-secret/ai-and-the-future-ofethics-e4286567e742

of numbers, text, sound, images, and what-have-you – raise serious ethical questions that should concern an Islamic economist. Big data is about the massive volume of data. As our society gets more and more digitalized, data grows bigger and bigger. However, big data is not just about volume. It is also about the velocity of data. Unlike old days, social media apps now throw up massive amounts of data in real-time.

Furthermore, our data-devouring machines (e.g., robot traders) require fast feedback loops in order for the system to work. They need to sense what is coming to make real-time decisions constantly. One more distinct feature of big data is that it is mainly unstructured – text, images, and sounds – and the machines look for hidden patterns and signals in them.

Now, the first ethical question: should big data be treated as a natural resource? Throughout human history, the privatization of natural resources – oil, coal, natural gas, forests and timber, minerals – have created large monopolies and contributed to massive wealth creation for a privileged few. A natural outcome of this is gross and ever-increasing economic inequalities. The idea of a monopoly is alien to Islamic economic ethics. However, a trend of cannibalizing small players and enhancing monopoly power should be discernible if we look around. A small number of tech giants have taken rapid strides in monopolizing this new resource. This demands legislative action. Further, unlike oil that gets depleted, the use of data creates new data. It is, therefore, never too late to curb the rise of tech- monopolies.

It is never too late to curb the rise of tech-monopolies

Second, the use of alternative data may raise serious privacy issues. In a fascinating 2019 publication, "On the Rise of FinTechs: Credit Scoring using Digital Footprints," the authors find that easily accessible variables from the digital footprint – the device type, the operating system, and the email provider – a proxy for income, character, and reputation and are highly valuable for default prediction. It may be highly desirable to scrutinize whether such alternative data proxies for variables (e.g., race, religion) may lead to discriminatory behaviour on the lender. Regulators must also watch closely whether such alternative data violate individuals' privacy rights. Both are of concern to an Islamic economist.

In conformity with the objective of Shari'a to protect the dignity of the individual (hifdh al-nafs), Islamic societies have always stood for the absolute privacy of an individual. The "purdah" system is a testimony to the same social and ethical norm that seeks to protect the dignity of women in Islam. On the possibility of sharing relevant information about the individual borrower (as in the credit-scoring model), one needs to be careful about a significant Islamic ethical norm – an individual's right to be protected against gheebah buhtan and nameema – that govern information-sharing.

Gheeba means information-sharing about a Muslim who is neither present nor approving, even when accurate. When data is inaccurate, sharing of information amounts to buhtan. Nameema refers to the disclosure of data that may hurt the interests of the concerned party or lead to conflicts with a third party. Scholars assert that extreme caution should be exercised given the above norms while sharing data and information about others in general. Information-sharing may be undertaken only under specific conditions, e.g., when this is certain to bring some benefit to a Muslim or

Ward off some harm. Shari'a, however, provides a window of permissibility for sharing personal data and information when it can potentially impact decisions relating to marriage, business, etc. At the same time, the data and information shared should be the minimum required to address the problem at hand.

Data privacy has been a subject of regulation that varies widely across countries. Perhaps instead of getting into the diverse range of regulations in practice, it will be helpful to underline some privacy-related guidelines and principles[4] that do not violate Islamic societies' fundamental beliefs and culture. They merit serious consideration by zakat and Islamic non-profit organizations, especially those that have gone digital, where the beneficiary is usually in a weak bargaining position.

- Organizations should respect the privacy of beneficiaries and recognize that obtaining and processing their data represents a potential threat to that privacy.
- Organizations should protect all personal data they obtain from beneficiaries either for their use or by third parties.
- Organizations should exercise extra care and sensitivity towards "purdah culture."
- Among women in obtaining and processing their data.
- Organizations should ensure the accuracy of personal data and keep such information up to date.
- Organizations should obtain consent or inform beneficiaries as to the use of their data.
- Organizations should not hold beneficiary data for longer than what is required.
- Organizations should be accountable for holding the data and address any query/ complaint by a beneficiary regarding his/her data.

Finally, there is an ethical concern regarding possible bias in the data used for AI. If one uses partial data to train the machine learning AI, then one would get biased AI. Often the bias is unconscious or is based on deeply-rooted societal norms. For instance, it is common to notice a gender bias when all machine-voices talking to humans in lifts, cars, or virtual assistants on a portal are female voices by default. It is not hard to see how such biases in either direction can creep into an AI-based algorithm. Those concerned with and seeking to fight against highly destructive and pervasive societal biases will find the going increasingly difficult.

4. These are very similar to the principles and Operational Standards that have been developed by the Cash Learning Partnership (CaLP) for organizations engaged in cash transfers.

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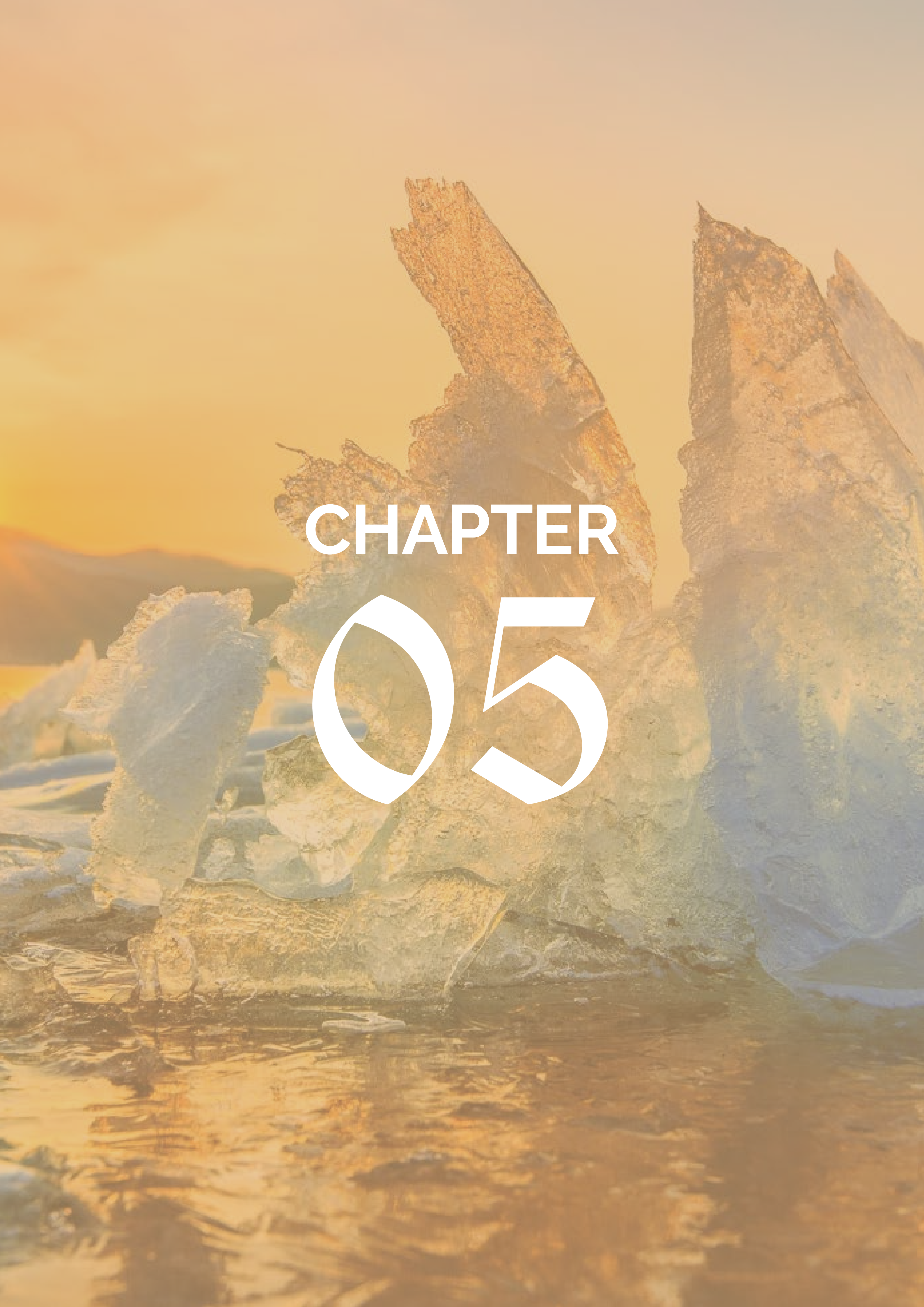


CHAPTER 05

Climate Remediation and Circular Economy

Reframing Islamic Finance Architecture and Infrastructures

This chapter shows how climate change is perceived as the top substantial risk to the world economy. As remediation, the chapter defines post-covid-19 green economic transformation (GET) as achieving high human development within the one earth ecological capacity and argues that this should be the pivot of the emerging climate policy landscape. The regenerative, reproductive, and redistributive circular economy business models provide the required new paradigm. The chapter shows the emerging race to responsibility and how the financial architecture and infrastructures are changing. Islamic finance though an inherently responsible entity has not been actively participating in the ongoing transformation of economies. Therefore, it poses to Islamic finance a reputational risk. The Islamic finance architecture and infrastructure must play a leading role in the movement of responsible and sustainable finance contribution from Shari'a governance and compliance. Through this chapter, GIFR 2021 provides a framework for the evolution of a coherent climate policy landscape in Islamic finance.

Introduction

It is widely recognized that the earth, human civilization, and other species are currently going through the epoch of Anthropocene, i.e., the biocapacity of the earth is adversely being impacted by human actions, far more in intensity than the natural factors (IPCC August 2021). CO_2 emissions and the resultant global warming primarily cause this catastrophe. It has been recognized for at least two decades now and has been the factor behind the United Nations Framework Convention on Climate Change known as the Kyoto Protocol 1992 and the Paris Agreement 2015 to remediate climate by reducing CO_2 emissions.

Islamic economics and finance principles are inspired by the teachings of Islam, which are also shared by all religions. The core principles include:

- Mankind being a trustee of Allah on earth must look after earth with great responsibility;
- As a trustee of Allah mankind shall establish al-Meezan (the universal balance);
- Israaf (waste) and Tabzeer (extravagances) are strictly discouraged;
- Balanced approach of lifestyle (wassatiya) is highly encouraged;
- Riba (commercialization and financialization of lending) is strictly prohibited;
- A multidimensional Maqasid framework for strategies and policy landscape is provided; and
- A moral (Shari'a) screening to be voluntarily adopted by financial institutions and other businesses as an integral part of the governance system.

These principles are indeed in coherence with the emerging transformative reforms towards greater responsibilities. However, in practice, Islamic finance must operate within the existing international financial, legal, regulatory, supervisory, and disclosure framework. The standards of Basel Committee for Banking Supervision (BCBS), adapted for Islamic finance by the Islamic Financial Services Board (IFSB), and the standards of International Accounting Standards Board (IASB) adapted for Islamic finance by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) are only two essential examples. The standards of IFSB and AAOIFI have been instrumental in establishing the international credibility of Islamic finance.

This important chapter aims to assess the emerging transformative international policy landscape for the remediation of global warming and the changing role of Islamic financial architecture and infrastructures. Without the policy guidance and support from standard setters, regulators, and supervisors, Islamic finance may lag in the race towards responsible and sustainable finance. Lagging in the competition for sustainability by itself poses the most important reputational risk to the dynamism, resilience, and sustainability of Islamic finance.

Without the policy guidance and support from standard setters, regulators, and supervisors, Islamic finance may lag in the race towards responsible and sustainable finance

In section one we have discussed the emergence of "climate policy failure" as the most critical risk to the global economy. We also describe the different climate policy scenarios.

In section two we have contextualized our discussion concerning SDGs and shows the divergence between human development and ecological footprint as policy targets. We show what it means to realign these two diverging policy targets and the unprecedented challenge of the targeted green economic transformation (GET) where high HDI is achieved within the capacity of one earth. We also outline the likely green economy circular business models that will eventually replace the existing linear business models. In section three we have summarized the transformations of the international financial architecture to achieve the targeted GET. In section four we have undertaken an initial gap analysis of the Islamic financial architecture and infrastructure to meet the challenges and opportunities of the green transformation. Finally, section give concludes and suggests policy implications of our analysis.

Top Risks Facing Global Economy and Climate Policy Scenarios

During the last two years, the overall perception of the global economy's overriding risks has drastically changed. The pandemic, climate change, and digital revolution have entirely transformed the world and our perceptions of the world economy's challenges.

Global Risk Report 2021 reports the results of a comprehensive global risk perceptions survey. The results of risks likely to happen and risks perceived to impact the global economy are summarized in Table 5.1. We can see that climate-related risks are perceived to be the most serious. We also notice the overwhelming perception regarding the pandemic and uncertainties related to technology and the digital divide.

Table 5.1
Global perceptions about risks facing the world economy

Top 10 risks by likelihood			Top 10 risks by impact		
2010	**2015**	**2020**	**2010**	**2015**	**2020**
Assets price collapse	Interstate relations fracture	Extreme weather	Assets price collapse	Water crises	Infectious diseases
China economic slowdown	Extreme weather	Climate action failure	Deglobalization	Infectious diseases	Climate action failure
Infectious diseases	National governance failures	Human environmental damage	Oil price spike	WMD	Weapons of mass destruction
Fiscal crises	State collapse	Infectious disease	Infectious disease	Interstate conflicts	Biodiversity loss
Global governance gaps	Unemployment	Biodiversity loss	Fiscal crises	Climate action failure	Natural resource crises
		Digital power concentration			Human environmental damage
		Digital inequality			Livelihood crises
		Interstate relations fracture			Extreme weather
		Cyber security failure			Debt crises
		Livelihood crises			IT Infrastructure breakdown

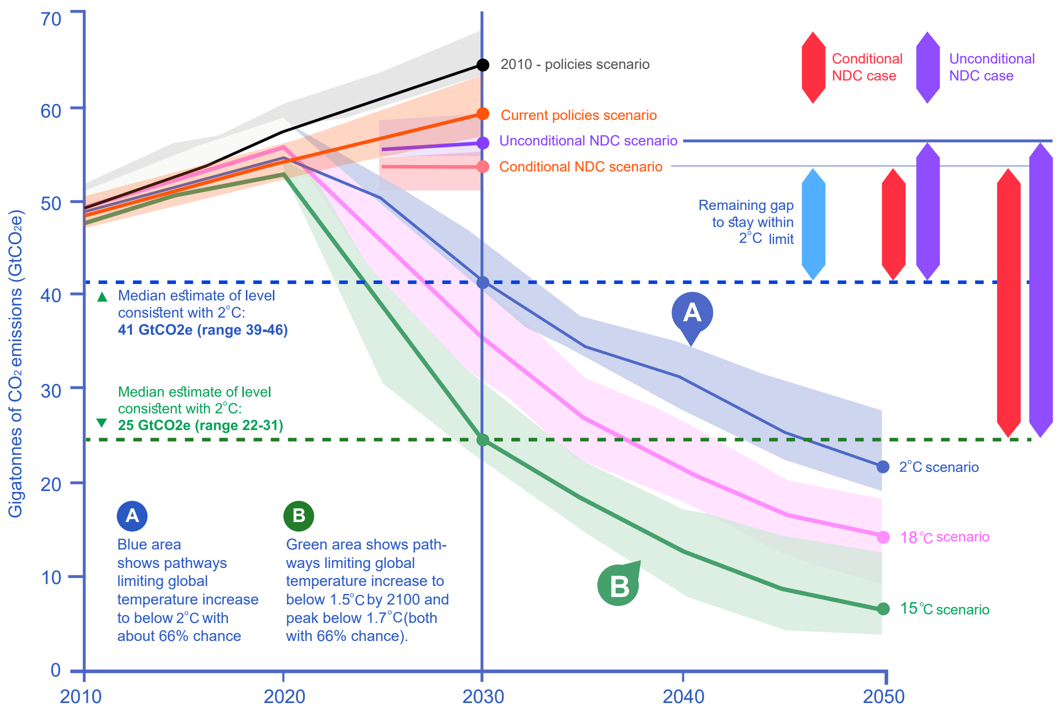
Source: Extracted from World Economic Forum (2021)

Table 5.1 also depicts the emergence of likely risks and their intensity over the last decade. It is pertinent to note that risks from economic origins (in blue color) were perceived to be dominant in the first half of the decade. However, in the second half of the decade, especially from 2018, risks from the environmental origins (in green color) are perceived to be dominant both in likelihood and intensity. We also see risks originating from digitization rising.

It is essential to note that risks originating from the economic origins have not been reduced; instead, COVID-19 has led to an increase in extreme poverty, inequalities, accumulation of debt conditions in the least developed countries, and vaccine inequities.

It is ironic indeed that livelihood and debt crises, which remain acute, have gone down to the bottom in intensity and impact. The world is now predominantly overwhelmed by the climate crisis. The rising socio-economic problems because of environmental crises can be an additional devastating risk.

Figure 5.1
Emissions gaps scenarios 2020 to 2050



Source: UNEP (2020)

The UN Intergovernmental Panel on Climate Change (IPCC August 2021) validates this rapidly emerging perception about climate catastrophe. As a result of this science-based reality concerning the anticipated climate disaster, the global policy landscapes about climate risk mitigation and adaptation and regulation of financial services are changing rapidly.

The IPCC reports confirm other scientific studies concerning natural capital risks - emissions, waste, and biodiversity loss. The findings of the 2020 Emissions Gaps Report by the UN Environmental Program are summarized in Figure 5.1. The black line shows the actual trend of global emissions, and the targeted Paris Agreement (scenario 1.5C global warming over the pre-industrial temperatures) emissions are shown by the green line.

The risks identified in Table 5.1 are related to the world remaining on the business-as-usual scenario of the policy landscape, which is perceived to be disastrous. The Paris Agreement Scenario of 1.5C by 2050 requires to reduce global annual emissions from 55 Gigatons in 2020 to less than 10 Gigatons in 2050. This requires a drastically different policy landscape, which is indeed fast emerging. Not achieving these targets (climate action failure) is perceived to be one of the top risks identified in Table 5.1.

SDGs and Climate Remediation

The UN Sustainable Development Goals (SDGs) have made climate crises part of the global development policy landscape. Suggesting climate crisis as a global risk has been an essential success of the SDGs. It is pertinent to note that the UN will celebrate the next ten years as the Ecosystems Restoration Decade. Ten years are left for the fulfillment of the goals delineated in SDGs. (2015-2030).

The SDG17 calls for coordinated efforts by the stakeholders to achieve the SDGs. The rest of the 16 SDGs concerns two overarching global policies that have historically been divergent due to wrong policy prescriptions. These are:

a) the UN Human Development Index (HDI), which provides a framework for multidimensional development: and

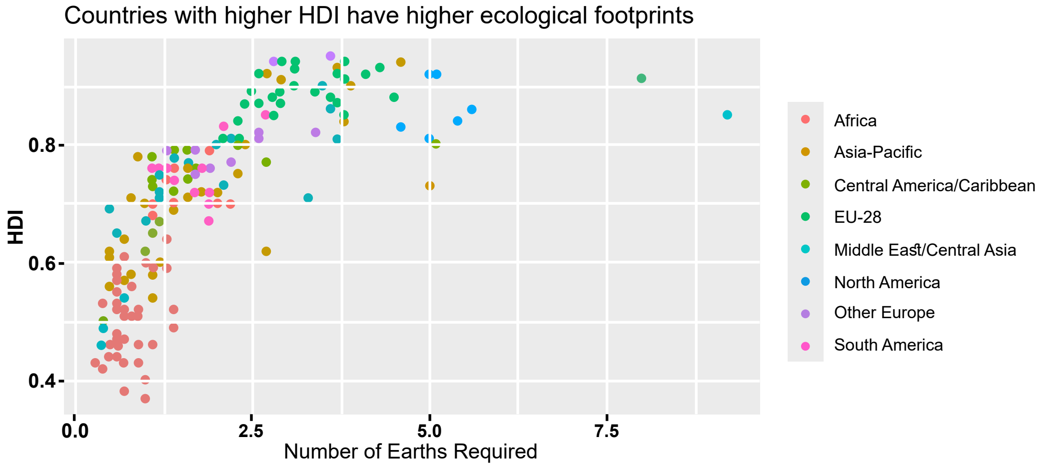
b) Ecological Footprint Indicators (EF)[1]. The HDI from 0.8 to 1.0 is considered the highest target for any country. All developed and some emerging countries like Malaysia and GCC region, for example, have achieved this high level of HDI. On the other hand, the least developed countries have HDI lesser than 0.5. Pakistan's HDI, for example, is slightly higher at 0.557.

The ecological footprint (EF) measures a country's environmental resilience within the ecological system. Unfortunately, the EF of all the developed and emerging countries is much more than what is safely allowed. On the other hand, the EF of the least developed and developing countries is generally low. Pakistan's EF, for example, is at 0.79, lower than its one earth capacity.

Figure 5.2 summarizes the HDI and EF data for different countries worldwide, signifying this divergence between HDI and EF. Developed and emerging countries have achieved their respective high HDI at the cost of depleting the global public asset - the earth's ecological capacity, because of waste-driven growth policies, the material footprint of resource extraction, CO_2 emissions, deforestation, and climate change.

1. See https://www.footprintnetwork.org/

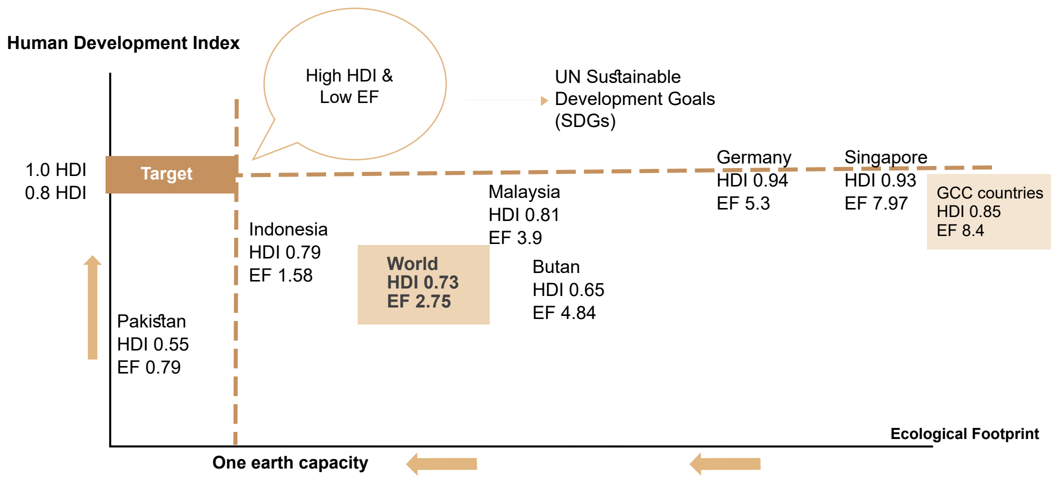
Figure 5.2
The HDI and Ecological Footprint Conflict



Source: York University Ecological Footprint Initiative & Global Footprint Network. 2021 Edition.

SDGs related to eliminating poverty, hunger, and disease could not be achieved if the quality of water and air is not safe. Similarly, even if poverty is eliminated, but waste is not managed, it would affect the quality and biodiversity of surface and seawater. Without a healthy planet, a healthy population is unattainable. Therefore, the new policy landscape should target the achievement of all SDGs – with the result to have high HDI within the capacity of one earth as pictured in Figure 5.3. We captioned the figure "green economic transformation" (GET), implying that developed countries must drastically reduce their ecological footprint while maintaining their high HDI level. Developing and least developed countries must enhance their HDIs but without worsening their ecological footprint.

Figure 5.3
Green economic transformation



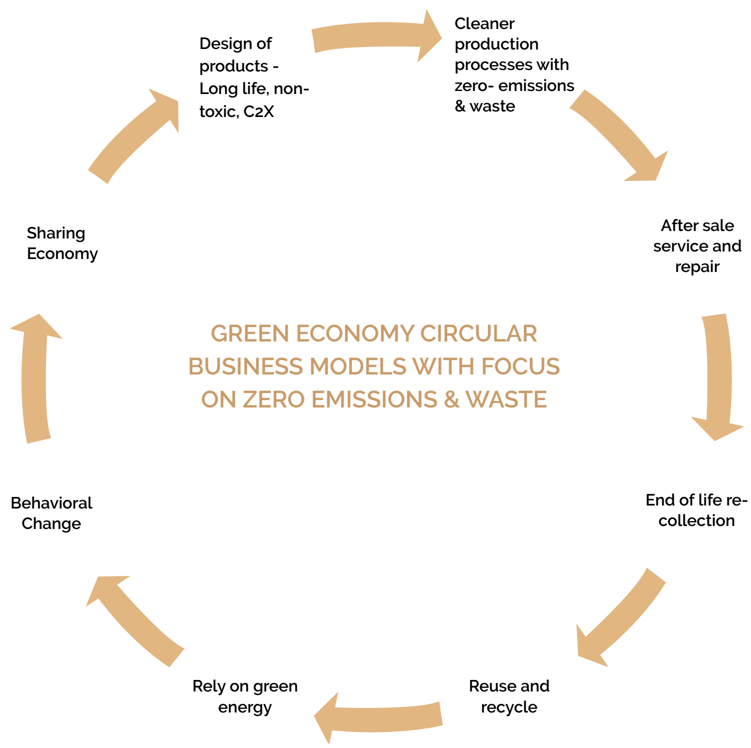
Source: Based on Figures 5.1 & 5.2

GET will require a new economic paradigm and drastic transformation of the economies to reduce emissions, eliminate waste, restore the ecosystems, and, for short, “heal ecology through economy” with restorative, regenerative, and redistributive systems as summarized in Figure 5.4. The essential elements of the new paradigm are to internalize negative externalities through an altruistic change at the individuals, households, firms, and public sector organizations level concerning:

1. Behavioural change in support of ecology and environment
2. Reliance on green energy and zero-emissions
3. Sharing economy solutions
4. Breakthrough technologies and design of products, long-life non-toxic and cradle-to-cradle
5. Green production processes with a focus on zero-waste and zero-emissions
6. After-sale service and repair
7. Product as a service and after use recollection
8. Reuse and recycle

Initiatives like the European Green Deal and similar national and municipal initiatives pursue the restorative and regenerative paradigm shift. It is also supported by restoring the ecosystems through reforestation, cleaning up rivers, seas, and oceans, and reducing emissions and waste. Thus, the green transformation is expected to reduce ecological footprints while enhancing the human development and wellbeing of future generations and other species.

Figure 5.4
Business models for GET



Source: GIFR[2]

2. It must be clarified that the data and the exhibitions are based on the research conducted by the author of this chapter, Dr Tariqullah Khan.

Islamic Finance in the Emerging Global Financial Architecture and Policy Landscape

The international financial infrastructure comprises five pillars:

1. Universal Moral, ethical, and legal norms and practices of conducting business;
2. Best practice standards (capital adequacy, financial reporting and transparency, governance, supervision, etc;
3. Objectives of financial infrastructure – Financial Development and Financial Stability;
4. International institutions and their functional coordination – Financial Stability Board (FSB), BCBS, International Monetary Fund (IMF) World Bank (WB), etc; and
5. Assessment of national financial infrastructures (financial sector assessment).

It is pertinent to note that all these pillars are undergoing profound and fast transformations. Table 5.2 summarizes these pillars and the transformation that is taking place.

Robust national support institutions are a prerequisite for the implementation of international best practices in local jurisdictions. The national financial infrastructures comprise several essential components:

a) Legal and regulatory infrastructure;
b) Financial reporting, transparency and governance infrastructure;
c) Systemic liquidity infrastructure;
d) Human resources, R&D financial innovation infrastructure (and for Islamic finance); and
e) Shari'a governance infrastructure.

Due to the transformation of the international architecture, these infrastructures are updated to provide the necessary support for the orderly transformation of economies and financial systems. Table 5.3 provides a summary of the national financial infrastructure to ensure the implementation of the international financial architecture.

Together, the architecture and the infrastructures provide the overall policy landscape and regulatory and supervisory support for the conduct of the financial services in an orderly, resilient, inclusive, and sustainable manner. The architecture and infrastructures of Islamic finance are a sub-set of the global system and cannot remain isolated. In Figure 5.6, we summarize this fact to highlight the interdependence and interlinkages of the Islamic finance architecture and infrastructure with the existing and emerging global systems.

1. Islamic finance in the transforming global financial architecture

The international financial architecture is transforming rapidly to meet the preconditions of GET explained in Figures 5.3 and 5.4. Table 5.2 and Figures 5.5 (a, b and c) explain this transformation and the influence of new institutions on reshaping the architecture. The transformation resonates with the ideals of Islamic finance driven by the Maqasid al-Shari'a. Figure 5.5(c) explains how the ideal objectives of Islamic finance development will also transform, provided Islamic finance architecture and infrastructure can align with the global transformative trends.

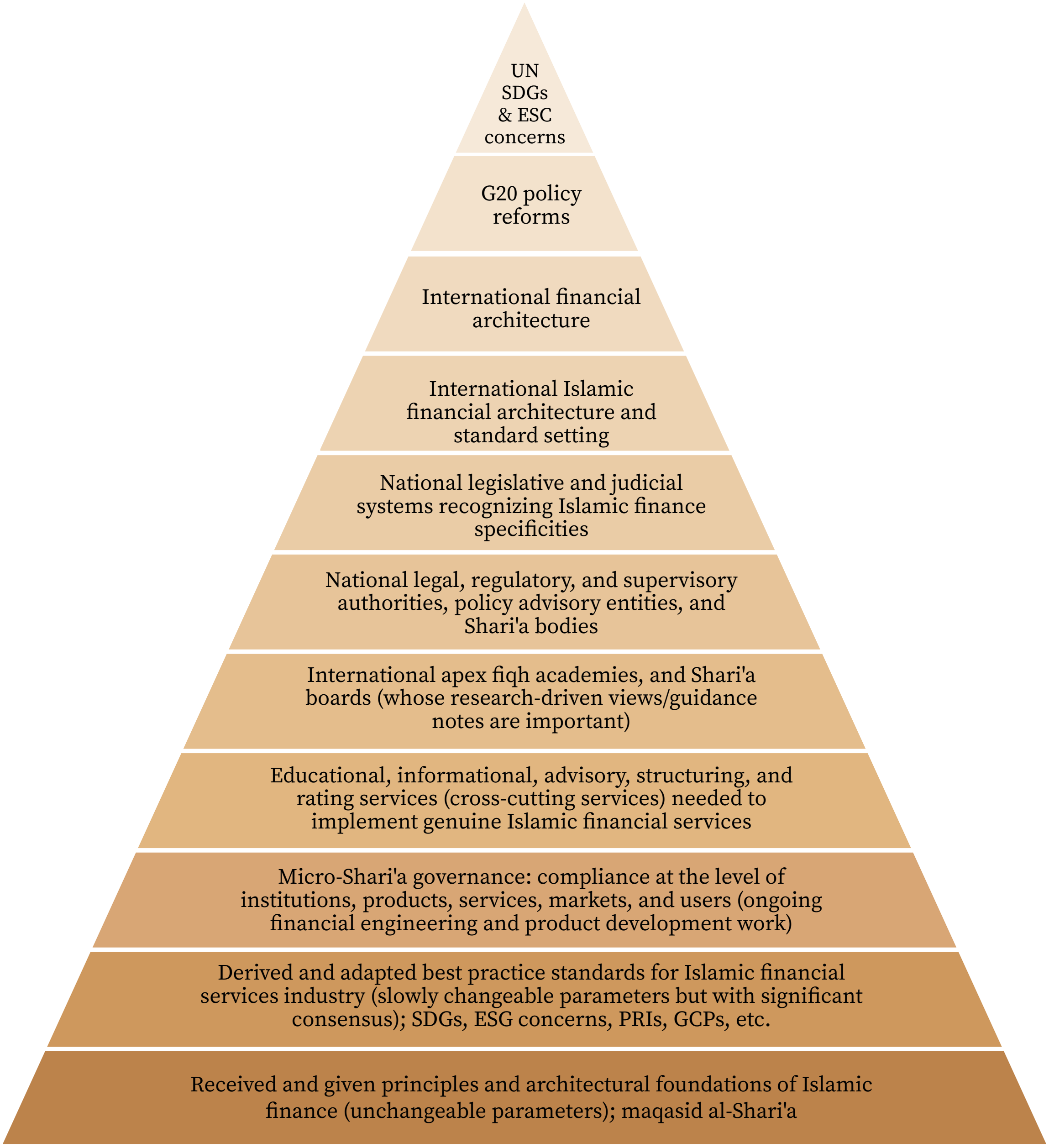
Table 5.2
Climate change - the transforming international financial architecture and Islamic finance

Traditional Pillars	Traditional plus Emerging Pillars	Robust Response of Conventional Finance	Lukewarm Response of Islamic Finance
Universal Moral, ethical, and legal norms, and practices of conducting business	Principles of Responsible Investments (PRIs). Global Compact Principles (GCPs). Principles of Responsible Banking (PRBs). Principles Sustainable Insurance (PSIs). Environmental, Social & Governance (ESG) concerns. SDGs impact.	4253 PRI signatories, including investment managers, service providers and fund owners. UN members as signatories of CGPs. PRBs adopted by 240 banks. The Net-Zero Banking Alliance brings together 53 banks from 27 countries with over US$37 trillion. 2020, over 145 insurance companies US dollars 43 trillion funds in ESG investments. 2021, Saudi Arabia announced ESG orientation in sovereign wealth fund management. 2020, 82 institutions reported on SDGs. Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).	Malaysia has introduced VBI initiative for Islamic banks and climate risk framework for all banks. The response of Islamic banks of other jurisdictions has been nil. There have been initial efforts to issue green sukuk.
Best practice standards (capital adequacy, transparency, governance, supervision etc.	Global Integrated Reporting (GIR). Sustainability Reporting. SDGs Reporting. Value-based intermediation (VBI)Reporting.	2020, 1,600 companies using GRI. 2020, over 70 countries require sustainability reporting. 2020, in Malaysia 14 community of practitioners' report on VBI practices. 2021, BCBS has already published two initial papers - Climate-related risk drivers and their transmission channels and Climate-related financial risks – measurement methodologies	OIC Fiqh Academy has issued special resolution on environment. IFSB, AAOIFI, IIFM, IILM and other infrastructure institutions have so far not initiated any response and learning efforts.
Objectives of financial architecture – a) Financial Development b) Financial Stability	Financial Inclusion. Environmental Sustainability. Broader ESG compliance. Achieving SDGs.	The above practices are changing business processes to become more inclusive, sustainable, and friendly of ecology with long-term considerations and achieving net-zero emissions within the 2050 timeline.	Shari'a compliance has been added as objective of Islamic financial services development. Academic studies emphasize Maqasid and financial inclusion.
International institutions (functions and coordination) – BIS, IMF, FSB, WB etc.	UN Institutions. Climate change and financial risk focus groups. Environmental Movements. Businesses voluntary practices.	BIS has initiated new programs under Green Swan theme to address climate related commercial risks. The IMF and WB have announced to including climate related disclosures in their FSAP. New institutions like Network for Greening the Financial System (NGFS) with membership of 83 central banks have been established.	The IsDB has initiated thematic sustainability sukuk program and climate finance strategic framework. However, as mentioned above other institutions like IFSB, AAOIFI are passive. IIFM is considering establishing an EGS WG.

Table 5.3
Climate change - the transforming national financial infrastructures and Islamic finance

<table>
<tr><th>Traditional Pillars</th><th>Extended elements of Pillars</th><th>Emerging responses to climate change</th><th>Status of Islamic Finance</th></tr>
<tr><td>Legal and regulatory infrastructure</td><td>Banking and company laws, contracts and property rights, insolvency and creditor rights regime, financial safety nets, regulatory and supervisory regimes</td><td rowspan="5">Major regulators and central banks like EU and ECB, regulators of UK, USA, Canada, and other countries have already introduced regulatory changes to incorporate the concerns of climate change. For example, the European Green Deal and EU Taxonomy requires financial institutions and businesses to follow strict sustainability guidelines. Similar guidelines are growingly being applied in other jurisdictions with respect to sustainability disclosures. BIS, NGFS and BCBS, etc., are addressing physical and transition risks posed by climate change. Rating agencies and increasingly recognizing climate risk exposure. The Integrated Reporting framework is increasingly being applied by financial institutions. About fiscal and monetary policies response a significant discussion and dialogue among regulators and policy makers is going on.</td><td rowspan="5">With respect to Islamic finance, Malaysia has introduced the pioneering initiative of value-based intermediation driven by the Maqasid al-Shari'a and 14 Islamic banks as member of community of practitioners are voluntarily adopting the framework and reposting according. Malaysia has also introduced climate risk framework as mandatory for all financial institutions. There is a small segment of green sukuk whereas the capital markets authorities are slowly discussing ESG concerns although existing Shari'a screening methodologies ignore such concerns.</td></tr>
<tr><td>Transparency and governance infrastructure</td><td>monetary and financial policy transparency and neutrality, corporate governance, accounting, and auditing framework, disclosure regime and market monitoring arrangements such as credit ratings, and credit reporting systems</td></tr>
<tr><td>Systemic liquidity infrastructure</td><td>monetary and exchange operations, payment and securities settlement systems, microstructure of the money, exchange, and securities markets</td></tr>
<tr><td>Human resources and R&D infrastructure</td><td>literacy, educational, training, certification programs, research, advisory services, and product development, Shari'a governance competencies, information services</td></tr>
<tr><td>Shari'a governance infrastructure</td><td>Legal protection for Shari'a supervision, arbitration and reconciliation framework, governance of Shari'a supervision, central Shari'a advisory board, licensing of Islamic financial services</td></tr>
</table>

Figure 5.5(a)
Islamic finance in the emerging global financial architecture



Source: Khan (2019a)

Figure 5.5(b)
The transforming international financial architecture

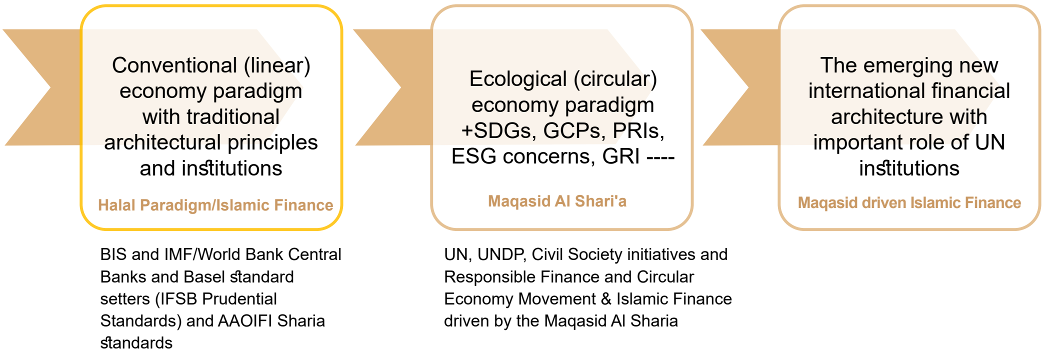
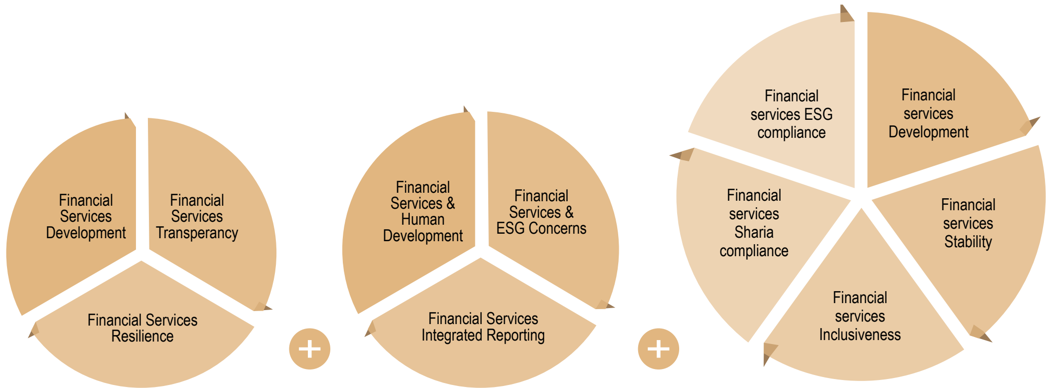


Figure 5.5(c)
Ideal objectives of Islamic financial services development



2. Islamic finance architecture and infrastructure institutions and global Apex Strategic Body

Table 5.4 lists the Islamic finance architecture and infrastructure institutions and offers a wish list about the new roles of these institutions to meet the challenges and opportunities of green economic transformation. In terms of thematic coverage, the institutional format is indeed comprehensive. However, we find two critical gaps in this current institutional framework. First, being a vital sector, the Awqaf-driven social finance has no representation. Ideally, the International Awqaf Board (IAB) should reinvigorate this sector and integrate it into the financial sector policies. Second, the existing institutions do not have a culture of dialogue and a framework to present a common global strategy. Functional coordination between relevant institutions is an essential pillar of financial architecture. Therefore, there are significant opportunities for coordination between the institutions under the umbrella of a new Apex Global Islamic Board, addressing the challenges and opportunities of the GET.

There are significant opportunities for coordination between the institutions under the umbrella of a new Apex Global Islamic Board, addressing the challenges and opportunities of the GET

Table 5.4
Islamic finance architecture and infrastructure institutions – A suggested new direction

Institutions	Mode of contribution to Islamic finance	New direction to address climate change
Islamic Development Bank	TA, equity stake, policy support, infrastructure, and architecture development.	Bellow, separately we have summarized the significant response of the IsDB to climate change.
The Islamic Development Bank Institute (IsDBI)	Research, training, advisory and Information services for application of Shari'a in economics and finance.	There's a lot of unexplored opportunity for IRTI to utilize its training, knowledge, and advisory initiatives to lead policy dialogue in transitioning to green economies.
Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC)	Facilitating trade and investment between member countries and the world through Shari'a compliant risk mitigation tools.	Significant opportunities exist for ICIEC to center its operations around the IsDB climate policy as its World Bank counterpart MIGA has centered its new initiatives on climate policy of the WB.
Islamic Corporation for the Development of the Private Sector (ICD)	ICD fosters sustainable economic growth in its 55 member countries by financing private sector investment, mobilizing capital in the international financial markets, and providing advisory services to business and governments.	Significant unexplored opportunities exist for ICD to center its operations around the IsDB climate policy as its World Bank counterpart IFC has centered its new initiatives on climate policy of the WB.
International Islamic Trade Finance Corporation (ITFC)	Advancing trade among OIC Member Countries, which would ultimately contribute to the overarching goal of improving socioeconomic conditions of the people across the world	The ITFC is the core revenue generating entity of the IsDB group and it faces a lot of exposure to risks arising from energy transition from fossil fuels to clean energy and the ITFC must evolve a strategy to overcome the challenges arising from transition to clean energy.
OIC Fiqh Academy (OIC-FA)	Shari'a guidance on contemporary issues including economics and finance	The Academy has already issued a resolution concerning caring of environment. Given that there is lack of interest among Shari'a advisors, the academy can utilize its convening powers to mobilize opinions of scholars for climate remediation.
Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC)	Information and statistics processing and data management for cooperation between OIC countries and training for manpower development	SESRIC has the great opportunity to integrate climate remediation in all its main activities, data services, research, training, and conferences, spatially helping member countries in transitioning to green economies.
Standing Committee for Economic and Commercial Cooperation of the Organization of the Islamic Cooperation (COMCEC)	Enhancing policy dialogue, coordination, and cooperation between OIC countries.	COMCEC being based in Turkey has the excellent opportunity to bring climate remediation to the center of policy dialogue and knowledge and experience sharing among member countries.
The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) (1991)	Standard setting, product development and training	The IASC and IFRS Foundation are working establishing Sustainability Standards Board (SSB). AAOIFI has an excellent opportunity to integrate Maqasid-based integrated standards in accounting, auditing and Shari'a standards.

International Islamic Financial Market (IIFM) (2001)	Financial markets product development and training	IIFM's mandate enables it to prepare standards for sustainable Sukuk and integrate ESG concerns in its different activities.
The General Council of Islamic Banks and Financial Institutions (CIBAFI) (2001)	Product development, training, advocacy, and research	CIBAFI is reported below is already engaged in climate remediation and looking ahead it has pipeline of futuristic initiatives. Awareness and training based on these initiatives can be greatly useful for the industry.
The International Islamic Rating Agency (IIRA) (2002)	Rating services	Rating agencies are already integrating sustainability concerns in rating methodologies. IIRA must also consider integrating sustainability in its rating methodology.
The Islamic Financial Services Board (IFSB) (2002)	Standard setting, policy convening and training	IFSB has made outstanding contribution to enhance global credibility of Islamic finance. Looking ahead the IFSB needs to extend its work to cover climate related concerns.
International Islamic Centre for Reconciliation and Commercial Arbitration, (IICRACA) (2005)	Dispute resolution	There are already environment related disputes arising involving financial institutions. More such disputes are expected in future due to scope of transition work.
International Islamic Liquidity Management Corporation (IILM) (2008)	Liquidity support	Sustainable Sukuk are coming to the forefront and the IILMC can play an important role in utilizing it in its own work and in enhancing popularity and credibility of such Sukuk.

Observations on Islamic Finance Awareness to Climate Remediation

Active response of regulators is a new phenomenon emerging almost abruptly and very fast. The European Union has undertaken the most proactive policy initiative through the European Green Deal and European Taxonomy for financial regulation making sustainability disclosures mandatory for financial services businesses. Given the reactiveness of regulators, Figure 5.6 shows that even half of the European banks are struggling to meet the regulatory expectations.

With a few exceptions, the regulators in the Islamic finance jurisdictions have mostly not yet responded to the climate challenge. Therefore, Islamic finance's response to climate change is also slow. Nevertheless, in the following, we summarize some relevant points and some progress already made.

1. **Islamic economics and finance response to climate change**

   a. The Islamic financial contracts are generally carbon-neutral because a contract does not need to contain any condition about it not being used for certain specific purposes. However, it is understood that if the use of the contract is not for a Shari'a-compliant purpose, like, for example, musharaka being used to raise capital for an interest-based business, such utilization does not impact the validity of the musharaka contract. Therefore, a Shari'a-compliant financial contract can be utilized to finance a green or brown asset equally. Therefore, not financing a brown asset or encouraging the financing of green businesses is a regulatory and legal concern. This understanding and consideration also drive the Shari'a governance practices, and Shari'a supervisors absolve themselves from the responsibility of using the contracts they approve as Shari'a-compliant. However, perhaps it is an essential issue of Shari'a auditing to restrict the financing of carbon-intensive businesses by Islamic banks, which is also not the current norm.

b. Considering the point raised above, Islamic financial services as expected to be as carbon-intensive as conventional financial services. Figure 5.7(a) shows the sectors that Islamic banks finance. The current business practices in all these areas are known to be high carbon-intensive. Construction - cement, iron highest carbon-intensive sectors, vehicles and transport, industry, etc., are all carbon-intensive. However, unless pertinent data is available and appropriate disclosures are made, it is not easy to make any conclusions.

c. Figure 5.7(b) shows shares of countries in global Islamic banking assets. Predominantly, Islamic banking originates from countries that are carbon-intensive economies. Therefore, it is evident that operating in a high carbon home environment and banks cannot be expected to have a lower carbon footprint. Nevertheless, Islamic banks in Malaysia practice value-based intermediation, which aims to provide a low carbon business environment. In addition, some Islamic banks voluntarily undertake initiatives to offset their carbon footprint. For example, Islamic Bank Bangladesh Limited, Meezan Bank Pakistan, and Al Baraka Banking Group Bahrain disclose their green financing initiatives.

d. All the standards of both AAOIFI and IFSB are carbon neutral as these are adapted from IFRS and BCBS, respectively. We observed above that the IFRS Foundation is on its way to establishing SSB, and BCBS supervision has undertaken research that likely leads to incorporate climate concerns in relevant standards. These changes may also encourage AAOIFI and IFSB to revise their respective standards.

e. The Islamic banks, Takaful companies, and fund managers in other jurisdictions can benefit from the Malaysian VBI and other initiatives (see below) or the Indonesian mandatory sustainability reporting and green finance initiative. These institutions, alternatively, also have the option to signup to the UN Principles of Responsible Banking (PRBs), Principles of Sustainable Insurance (PSIs), and Principles of Responsible Investment (PRIs). However, right now, very few Islamic financial institutions have signed up to these UN-initiated principles.

f. The IsDB has already made pioneering and significant progress in mainstreaming sustainability sukuk. Other corporate, sovereign, and municipal sukuk can learn from this experience to enhance the effectiveness of sustainable finance.

g. The significance of Islamic social finance has been emphasized, especially during the pandemic. Some initiatives originating from Indonesia and Malaysia are focussing on integrating climate and environmental sustainability concerns in awqaf. In addition, some academic conferences, webinars, and academic publications focus on establishing waqf-driven green transformation initiatives.

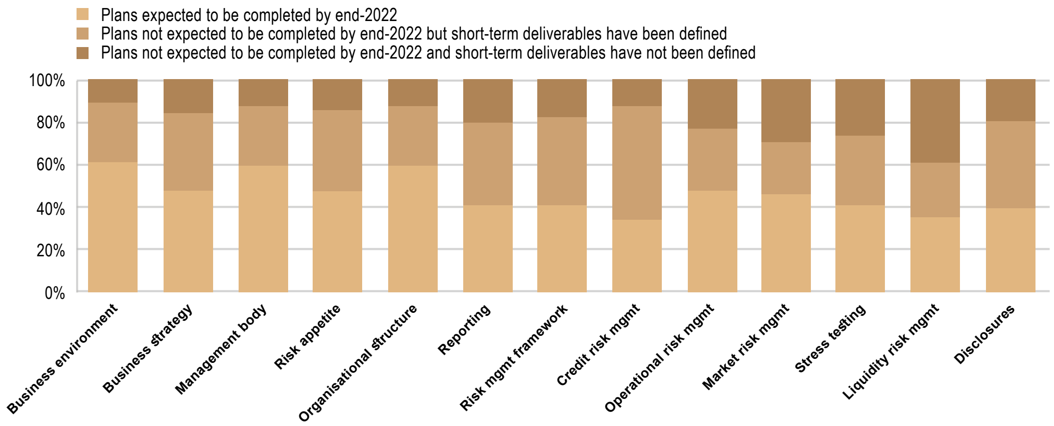
h. "Saudi Arabia's sovereign wealth fund has asked banks to help it develop an environmental, social and governance (ESG) framework, four sources said, a move that could allow it to expand its funding base to attract ESG-focussed investors" Dubai, July 12 (Reuters). Central bank's reserves, sovereign funds, and pension funds will indeed take essential lessons from this significant move, and in the coming years, huge funds could migrate to sustainable finance.

i. Academic programs, intellectual activities, and awareness about sustainable finance are on the rise, and different programs include new content to curriculum and numerous webinars that address the theme of Islamic finance and sustainable development.

j. A growing emphasis on adding sustainability for the new technology is driven initiatives such as FinTech using blockchain and the broader distributive ledger technologies.

k. Some PhD research addresses the impact of breakthrough technologies on energy transition and the role of Islamic finance in the transformation.

Figure 5.6
European Banks' projections on the timing of their alignment with regulatory expectations



Source: European Central Bank (2021)

Figure 5.7(a)
Islamic Banking Sectoral Composition of Financing by Country (3Q20)

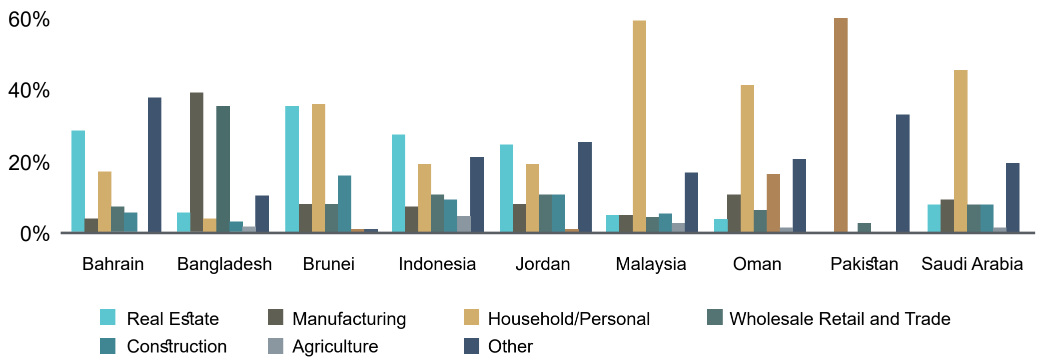
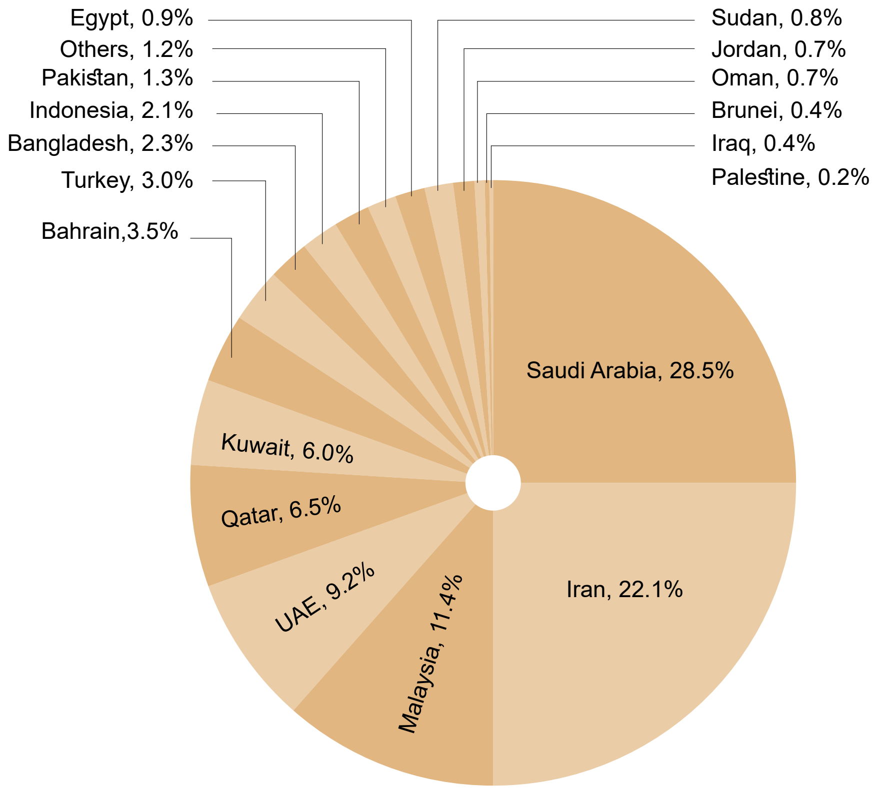


Figure 5.7(b)
Islamic Banking share by Country (3Q20)



Source: IFSB 2021

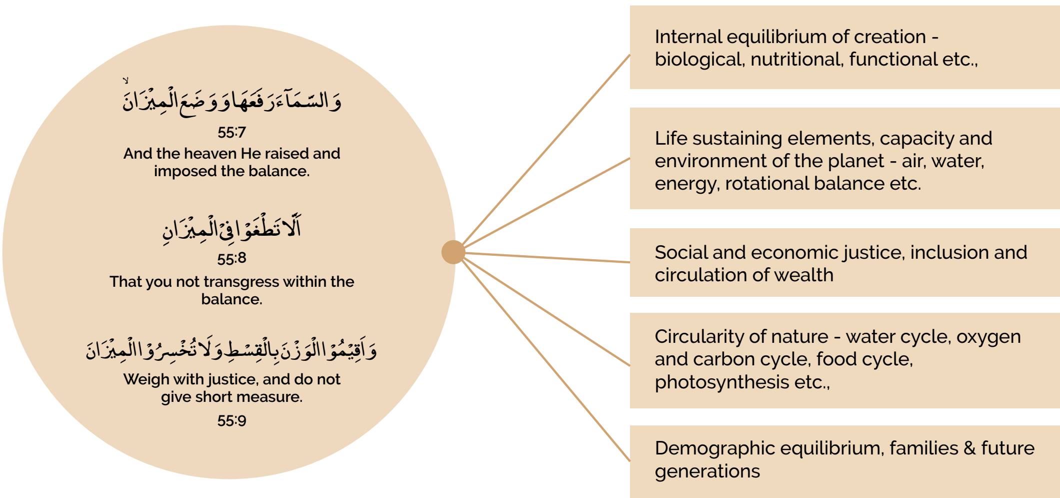
Inherently, Islamic economics and finance are guided by the worldview of a balanced (Wasatiyya) lifestyle, strong abhorrence to israf (waste), tabzir (extravagances and indulgences), riba (commercialization of lending and its financialization), etc. It calls for al-Meezan (universal balance), stewardship (responsibility of human beings as a trustee of Allah on earth), and Maqasid al-Shari'a-based legislation and practices of life, including financial transactions. If these core principles were applied, in practice, the Anthropocene should not have been caused.

However, the emergence of the Anthropocene (manmade climate disaster) is a recent scientific phenomenon. New data has validated that pilling waste and CO_2 emissions from industry and transport impact the earth's resources. Because it is a new phenomenon so, Islamic economics and finance have not recognized climate crises significantly. For example, since the publication of Chapra (2006), there has been a tremendous increase in the literature on Maqasid al-Shari'a and its implications for development and Islamic finance. All these studies use a static framework of five elements of the Maqasid al-Shari'a – religion, life, lineage, intellect, and wealth. The Maqasid al-Shari'a are perspectives-based guideposts for legislation, policy formulation, and strategic management frameworks like the balanced scorecards.

The five elements framework of the Maqasid fails to address remediation of the Anthropocene appropriately. To fill the gap, we suggest a Maqasid framework with seven perspectives –

adding a) trust and responsibility and b) remediation of climate crises and healing ecology and environment. Trust and responsibility are derived from the status of human beings as trustees of Allah on earth. A trustee must behave and act with the highest level of responsibility, in line with the principals. In addressing any challenge, we revert to the source of guidance. Therefore, healing ecology, an unprecedented universal need, is derived from Al-Meezan (the universal balance). In Figure 5.8, we elaborate on the concept of Al-Meezan in the context of the Anthropocene.

Figure 5.8
Understanding Al-Meezan in context of Anthropocene



2. The cost of GET and SDG17

GET will require achieving (net) zero-emissions, near zero-waste, building equity base of green businesses, controlling financialization, requiring businesses to disclose on these and other sustainability criteria set by governments and regulators, cleaning up rivers, seas, and oceans, restoring ecosystems, investing in breakthrough green technologies, greening buildings, and residences, etc. GET, therefore, initially faces additional costs termed as "green premiums"; some estimates show these to be 10 to 16% over and above the cost of business as usual. However, with the pace of technologies and innovations, these costs can be expected to be drastically reduced. Moreover, considering the inter-generational comparison of costs of business as usual and green transformation, the additional costs must be met by financial innovation.

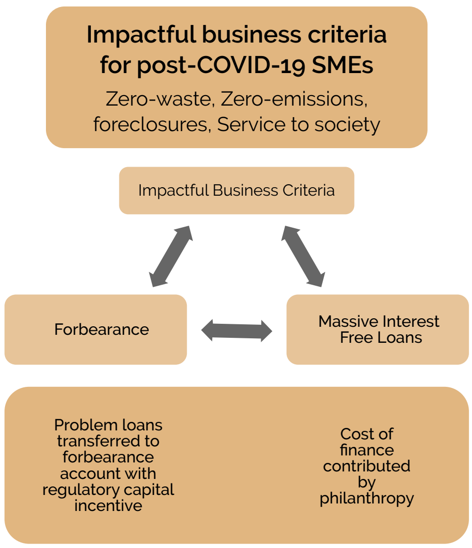
SDG17 – coordination and cooperation for the SDGs – provide a framework for blended finance to generate additional low-cost resources for financing the GET. Blended finance is not a new idea, it has previously been used by the IsDB to finance polio vaccines for Pakistan based on Murabaha, and the cost of financing was contributed by the Bill & Melinda Gates Foundation as a grant, and other international organizations also participated in the 400 million dollars financing with different types of contributions. Because of the blending of commercial and philanthropic finance, the funds were provided to the beneficiary as cost-free. The local scholars' services were mobilized to encourage vaccination against polio. In another sukuk idea, namely One-Wash Sukuk for sanitation, the same concept of blended finance is explored by the IsDB. There are also other examples of blended finance with different levels of success.

If we look at Islamic social finance (awqaf and charities) and Islamic commercial finance, we do not find any coordination as the first group is mandated to be charitable and the second group commercial. Without compromising on these traditionally divergent motivations, working together will create significant leverage to promote the consensus-based GET.

There are numerous examples of purpose-driven activities; promoting those can be a joint objective of Islamic social finance and Islamic commercial finance. Low-cost green housing, education, health sanitation, etc., are examples. One of the significant devastating impacts of Covid-19 has been on micro, small, and medium-sized enterprises (MSMEs). The equity base of most of the SMEs has been wiped away by lockdowns. The restart and rehabilitation of these small businesses have already received massive support from governments and philanthropies. The rehabilitation is an opportunity for the social and commercial finance segments to incentivize green transformation by creating subsidies on equity building. A summary of the core idea is provided in Figure 5.9.

The post-COVID-19 equity building for green SMEs is the good purpose for which social finance. Commercial finance, government finance, and development finance can jointly work in a blended arrangement in which the cost of finance will be subsidized by social and philanthropic finance. With regulatory and government support, problem loans will be restructured and rehabilitated through a forbearance account. Different participants in the arrangement will contribute services and grants based on their specialization and mandates[3].

Figure 5.9
COVID-19 Recovery of SMEs through equity building blended Finance



3. Response of selected institutions to climate change

a) Bank Negara Malaysia (BNM)

Malaysia is leading in establishing a robust climate policy landscape within the Islamic finance jurisdiction areas. The BNM - Bank Negara Malaysia (2018) introduced the Maqasid driven climate-friendly (people, planet, profit) framework for Islamic banks known as Value-Based Intermediation

3. For detail, see Khan (2019) and Khan and Badji (2020).

(VBI), and 14 banks are actively using the framework in their businesses processes and reporting. The framework has also been extended to Takaful and other business segments. In 2021 Malaysia also introduced the "Climate Change and Principle-based Taxonomy," a comprehensive long-term strategic framework to integrate climate targets in financial services and other businesses and requiring disclosures accordingly[4]. The BNM and Securities Commission Malaysia jointly monitor the implementation of the framework. In June 2021, the Joint Committee on Climate Change (JC3), an initiative co-chaired by Securities Commission Malaysia and Bank Negara Malaysia, organized the flagship conference Finance for Change which was attended by over 4,000 international participants[5].

b) Financial Services Authority (Otoritas Jasa Keuangan) OJK Indonesia

In 2017 the OJK introduced Sustainable Finance Umbrella Policy. Sustainability reporting was made mandatory for financial institutions by the OJK in 2019. In 2021, the OJK issued Sustainable Finance Roadmap Phase II as a strategic framework for financial institutions to facilitate the national targets of reducing emissions per the Paris Agreement commitments. The framework applies to the entire financial services sector, including Islamic financial institutions and financial markets[6].

c) The Islamic Development Bank Group

Since 2017, the IsDB group has produced several documents addressing different aspects of the Paris Climate Agreement to align with the bank's operations and helping member countries to follow suit. The climate policy document and the strategic climate framework translate the outcomes and recommendations of the various studies in terms of implementable gaols and policy guidance framework. Figure 5.10 summarizes and integrates the core points of the two documents. There are three significant and visible impacts of this climate policy and strategy. First, the IsDB has made pioneering efforts and significant achievements in issuing thematic sustainable sukuk and strengthening the SDG17 in the blended finance framework for eradicating disease, improving water, sanitation, and housing at affordable financing rates.

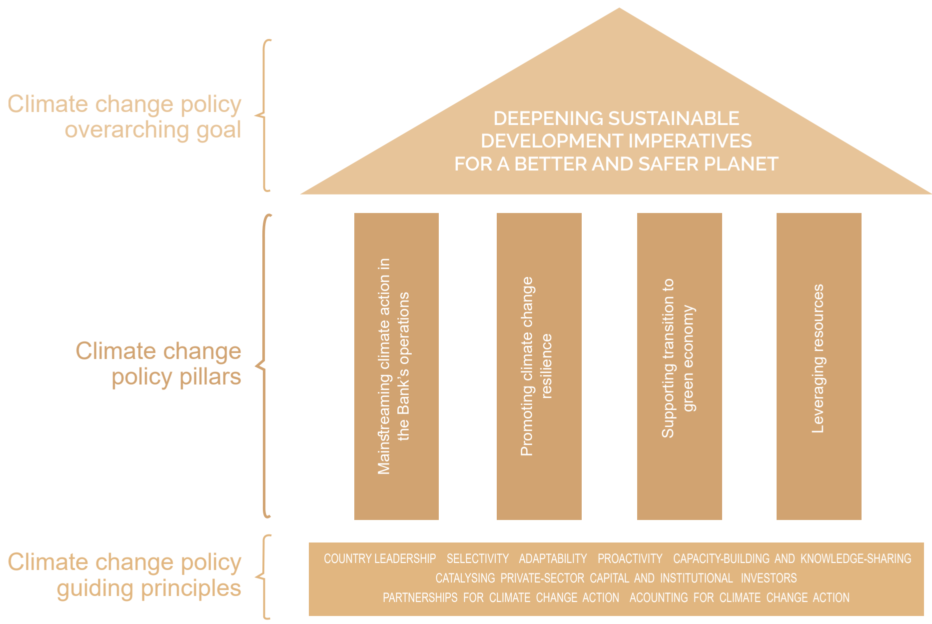
These innovative examples of financing are replicable by the sukuk industry and the overall international development finance. Second, the climate policy and strategy are expected to be translated as a guiding framework for the operations of all members of the IsDB group – ICIEC, ICD, ITFC, and IsDBI. However, this process has been slow and needs to be expedited. Third, the IsDB has organized impactful events to publicize the sustainability agenda and develop collaborative and innovative programs to address the challenges. Fourth, the focus of vital programs like scholarship has been changed to address the challenge of climate change. The IsDB climate initiatives can be used for dialogue among member countries, especially the Islamic financial services (banking, insurance, sukuk, equities) and architectural and infrastructural institutions (AAOIFI, IFSB, IIFM, etc.). The IsDB already has strategic instruments for such purposes which need to be reviewed and updated. Examples of the documents are:

- 10-year framework and strategies for development of Islamic financial services industry;
- Islamic micro-finance development – strategies and initiatives; and
- financial sector assessment template for Islamic finance.

These industry collaborative documents were introduced as parts of the IsDB reform and can be reinvigorated to meet new challenges and opportunities (see Table 5.3 for IsDB group contribution to Islamic finance development.

4. See BNM 2021a.
5. A handy summary of the numerous presentations on climate change are available under the link BNM 2021b.
6. For more details, see OJK 2021.

Figure 5.10
The Islamic Development Bank Group Climate Policy



Source: IsDB (2019a)

It is worth noting that during the 2020 the G20 Presidency was with Saudi Arabia and the IsDB President led the MDBs Working Group. In addition to Saudi Arabia, two other members of the IsDB, namely, Turkey and Indonesia were also in the G20. Regarding the impact on the global policy landscape, the G20 is the most important international platform for development cooperation. The G7 policies are the essential movers of the G20 policies. One crucial focus area for reform by the G20 is the multilateral development banks (MDBs). On August 16, the Treasury of USA issued "Fossil Fuel Energy Guidance for Multilateral Development Banks"[7] concerning limiting the MDBs exposures to the fossil fuel sector. This guidance through the G20 will reach all MDBs, including the IsDB. The guidance note is expected to expedite energy transition by encouraging financing of specific activities and discouraging certain other activities. Regarding its business sustainability, where the ITCF generates the bulk of revenues by financing fossil fuels in the rapidly changing environment, the IsDB needs further strengthening of its climate remediation initiatives and activities and revenue sustainability from non-fossil activities.

d) The Islamic Financial Services Board (IFSB)

The IFSB is one of the most important architectural and infrastructural institutions of Islamic finance. It sets standards, convenes meetings and forums of critical stakeholders, undertakes research, and offers capacity-building events. It publishes the flagship annual "Islamic Finance Stability Reports" (IFSRs)[8]. The IFSRs are useful reports about Islamic finance, highlighting

7. See https://home.treasury.gov/news/press-releases/jy0323
8. The latest available IFSR is for the year 2021, available for download https://www.ifsb.org/download.php?id=6106&lang=English&pg=/index.php.

achievements, assessing the current state, and challenges and opportunities. The IFSR 2021, as well as previous reports, do not mention climate change. Neither any other research event convened by the IFSB mentions the climate challenge. Given the importance the BIS and BCBS, IMF, central banks, and other institutions give to climate change, we consider the IFSB should also have timely involvement in this critical dialogue.

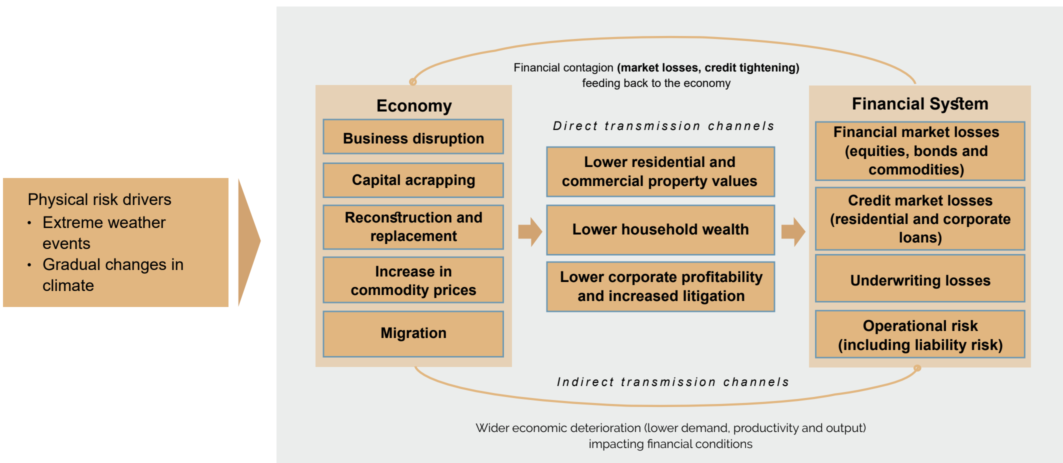
1. Using its convening mandate and capacity, the IFSB can effectively raise awareness among its stakeholders about climate change, emerging global policy landscape, and economic and financial transformations taking a fast pace and the strategic business risk for Islamic finance.

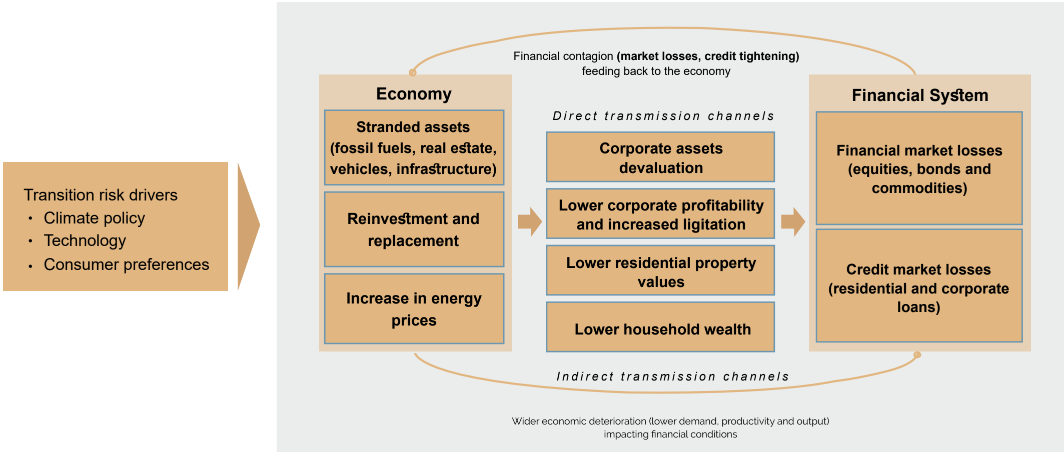
2. Significant research has identified climate-related financial risks, especially in the BIS Green Swan thematic work and the NGFS framework (see Figure 5.11). The two risks identified are physical risks of climate events and transition risks induced by climate policies. The BCBS research tries to relate the credit, market, operational, and liquidity risks exposure to these risks. These new risk identification and mitigation directions are relevant for Islamic finance, and the IFSB-1 Principles of Risk Management in Institutions Offering Islamic Financial Services need to be revisited.

3. Any factors that impact the risk management standards of IFSB will also impact capital adequacy standards, disclosure and transparency standards, and core principles of Islamic banking regulation and supervisory guidelines. The implication is that the overall timely review of the standards is the need of the hour. It will be time and resource-consuming. Now that the BNM has hosted the IFSB and introduced the VBI strategy for Islamic banks and Takaful and other businesses have also issued "Climate Change and Principle-based Taxonomy," a good starting point could be convening events to discuss progress in these initiatives for knowledge sharing.

4. Apart from standard-setting, the IFSB has beneficial initiatives concerning prudential data for Islamic financial services. Climate-related data is scarce, and early incorporation of climate-related data in the prudential data will be of high value for industry researchers.

Figure 5.11
Transmission of climate-related risks to the financial system





Source: NGFS (2020)

e) Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)

Apart from accounting standards and auditing standards, AAOIFI's Shari'a standards of Islamic financial contracts have been of high value for all those who want to practice Islamic finance and those who want to learn Islamic finance. The establishment of AAOIFI was necessitated to enhance transparency in Islamic instruments' financial reporting, adapting the templates of (International Financial Reporting Standards) IFRS.

The IFRS is transforming, and they recently announced that "The Trustees of the IFRS Foundation today announced the formation of a working group to accelerate convergence in global sustainability reporting standards focused on enterprise value and to undertake technical preparation for a potential international sustainability reporting standards board under the governance of the IFRS Foundation"[9]. The means that the IFRS is moving towards the Sustainability Standards Board (SSB), a reporting template that is more integrated like the Global Reporting Initiative Global Sustainability Standards Board (GSSB) to conform to the industry needs for sustainability reporting.

Ideally, AAOIFI should have developed an integrated reporting framework using a Maqasid-based multidimensional but integrated template. However, in retrospect, we can say that such an innovative approach was not possible for the infant industry. However, given the current consensus on an integrated reporting template and even the IFRS moving towards that, AAOIFI must change its reporting template from the current narrow IFRS structure to a broader Maqasid structure for accounting and auditing standards.

As far the Islamic financial contracts are concerned, all the original contracts like mudharaba, musharaka, and salam and all the new structured contracts like murabaha, istisna', ijarah ending in ownership, commodity murabaha and sukuk, etc., are essentially carbon neutral. That means the contract can be used to finance green assets (electric vehicles) or brown assets (fossil fuel

9. See https://www.ifrs.org/news-and-events/news/2021/03/trustees-announce-working-group/

vehicles). However, some contracts can be designed to be used for green financing assets like green loans and a green line of credits. This type of discussion is relevant for financial institutions as explained in recent NGFS "A Status Report on Financial Institutions' Experiences from working with green, non-green and brown financial assets and a potential risk differential"[10]. However, from Islamic finance perspectives form now such discussions are relevant only from academic perspectives. Despite that, should there be any sustainability and ESG awareness concern for AAOIFI and Shari'a supervisors remains a highly relevant question if the industry must respond positively and effectively to the challenge of climate change? The question is especially pertinent as Shari'a's screening of investments at this stage ignores ESG considerations.

f International Islamic Financial Markets (IIFM)

The IIFM mandate covers both money market and capital market instruments, primarily sukuk and equity market instruments. The IIFM has produced several documents for liquidity and risk management instruments and is producing an annual report on sukuk; the 10th-anniversary report was launched in a webinar on 4th August 2021. Sustainability and ESG issues, and climate concerns have not attracted any standards and documents issued by the IIFM. However, the 4th of August webinar also addressed the themes of the ESG issues and sustainability sukuk. It is expected that the IIFM may establish an ESG working group, and the working group will organize certain events.

Good forward, an essential initiative for the IIFM will be to create consensus on the criteria and standards for sustainability sukuk and integrating ESG concerns in existing Shari'a screening as these two areas fall under the IIFM mandate.

g) General Council of Islamic Banks and Financial Institutions (CIBAFI)

CIBAGI is an advocacy think tank for Islamic finance. With regards to climate change response, CIBAFI is one of the most active institutions of Islamic finance as indicated by the following as reported in its Annual Report 2020[11]:

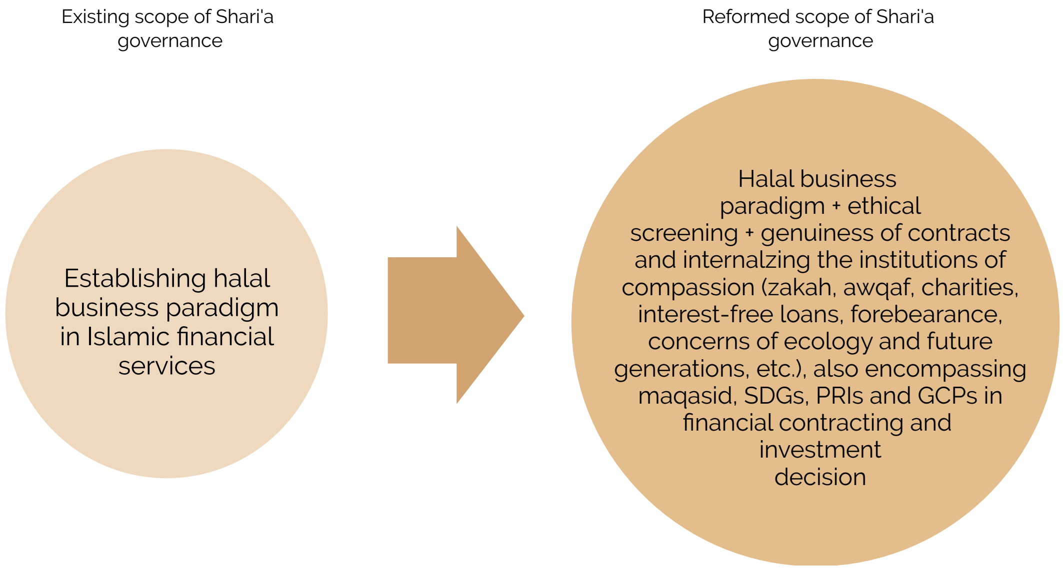
- CIBAFI Issues regular briefings, and the 13th briefing covers "Climate Change and its Implications for the Financial Industry." It undertook a climate risk perception study which was participated by 101 Islamic banks from 35 jurisdictions. Around 33% consider climate risk "fairly important," and almost 39% consider it to be either essential.
- CIBAFI has established a well-represented Sustainability Working Group which has held three meetings so far. The SWG will initially focus on two projects, (1) Sustainability Guide for the Islamic banking industry and (2) Carbon Footprint Measurement Methodology for Islamic financial institutions.
- CIBAFI Secretariat, jointly with BAB, has successfully conducted a webinar with the theme, "Sustainability within the Financial Sector: Practices, Trends and Achievements," on 28th October 2020.
- On 24th December 2020, CIBAFI submitted its comments to the International Financial Reporting Standards (IFRS) Foundation on its Consultation Paper on Sustainability Reporting.

Going forward, one can expect CIBAFI to utilize its convening power to organize awareness and capacity-building events about Islamic finance's response to climate change.

10. See https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf

11. See https://www.cibafi.org/Files/L1/Content/CI2093-1.pdf

Figure 5.12
Scope of reform Shari'a governance



Source: Khan (2019a)

h) Shari'a governance

Shari'a governance is an essential building block of the Islamic finance architecture and infrastructure. However, it is not represented by any designated institution. The OIC Fiqh Academy, national centralized Shari'a boards, IsDB Shari'a board, and AAOIFI Shari'a boards are important boards to constitute the institutional framework of the overall Shari'a governance. The overarching function of Shari'a governance has been to establish the permissibility of contracts and transactions in the narrative of Halal finance. We have argued that Halal, though it is essential, is insufficient in the identified race to responsibility. Shari'a scholars and boards, therefore, have not yet positively responded to the urging need for climate remediation. The Shari'a scholars must respond to climate remediation, and in that case, the scope of Shari'a governance will be significantly expanded, as pictured in Figure 5.12.

Conclusions and Recommendations

In this chapter, we have highlighted the newly emerging perception that the Anthropocene (manmade global warming) has increased climate risks to the top of all risks facing the global economy, the earth, and species. What is more important to note is that the traditional risks directly linked to economic conditions have also aggravated simultaneously, but due to the gravity of the climate risk, those risks remain dormant in our perceptions. We also presented published and credible data about the divergence between the human development index (HDI) and ecological footprint (EF). Developed and emerging countries have achieved high HDI but at the cost of damaging the environment and ecology. On the other hand, the least developed countries have made insufficient progress in HDI therefore they have hardly contributed in destroying the ecological system. In achieving the UN Sustainable Development Goals (SDGs), realizing and creating an alignment between HDI and EF is imperative. Five years of the SDGs timeline has already passed, the remaining 10-years of the SDGs timeline are declared by the UN as the Ecosystems Restoration Decade. It implies that SDGs cannot be achieved without healing and restoring ecology. This requires a new paradigm that can ensure the healing of ecology through the economy so that green economic transformation (GET) can be achieved.

We argued that the ideal target of the GET is the achievement of the highest HDI within the ecological capacity of one earth. Therefore, the developed countries must drastically reduce their ecological footprint to the safe limit of one earth, and to do so without an adverse impact on their HDI requires unprecedented governmental and business involvement. Numerous initiatives in that direction are already being implemented over the last two years. The international financial architecture is transforming, and the national financial infrastructures are undergoing drastic changes focussing on the role of financial services and businesses in talking about global warming and achieving the targets of the Paris Agreement.

The original inspiration of Islamic economics and finance is its focus on responsibility. In practice, however, Islamic finance has been operating within the existing legal and regulatory environment, changing a race towards responsibility. If Islamic finance delays its positive response to these changes, it risks losing its credibility and market share. Hence fast and positive response is the need of the hour for local and global strategic repositioning. In this regard, we reviewed the role of the Islamic finance architecture and infrastructure institutions, and we found the following.

- Islamic finance is a small integral segment of global financial architecture and cannot flourish as a standalone business segment. The changes globally happening need a fast and concerted response from Islamic finance stakeholders.
- IFSB and AAOIFI, the most important institutions of Islamic finance architecture and infrastructure, have yet to respond to the changes that fall in the areas of their respective mandates. For IFSB, these areas are climate-related risks and governance disclosures, and for AAOIFI, these areas are integrated reporting and disclosures.
- Some leading national institutions like BNM and OJK have undertaken wide-ranging national strategic initiatives to address climate-related commitments. Other countries can benefit from these experiences.
- The IsDB Group has implemented important initiatives in the framework of climate policy and SDGs response. However, energy transition also poses challenges to the IsDB group, making it urgent for the group to diversify its revenue sources. The IsDB Scholarship Program's new focus on climate change exemplifies several initiatives in the right direction. The GET is an opportunity for the group entities to increase their training and advisory services to member countries on different aspects of the green transition. This will require updating strategic documents such as IsDB (2019), IsDB-IFSB (2007), IRTI (2008, 2010), for example. Updating these documents will facilitate dialogue on the transition of member countries to green economies and the vital role of Islamic economics and finance.
- There is a comprehensive list of institutions that support the architecture and infrastructure of Islamic finance. However, there is no institutional representation of Islamic social finance segments like awqaf. Moreover, there is a great need for cooperation and coordination of the activities of these various institutions, realizing their respective new roles given the rapidly changing global climate policy landscape and the extensive disruptive opportunities that it will bring. Such cooperation is also needed under SDG17 to create blended finance opportunities for GET.
- Shari’a governance, educational programs, research, and product development are vital components of the financial infrastructure, and these areas of Islamic economics and finance also need resetting.

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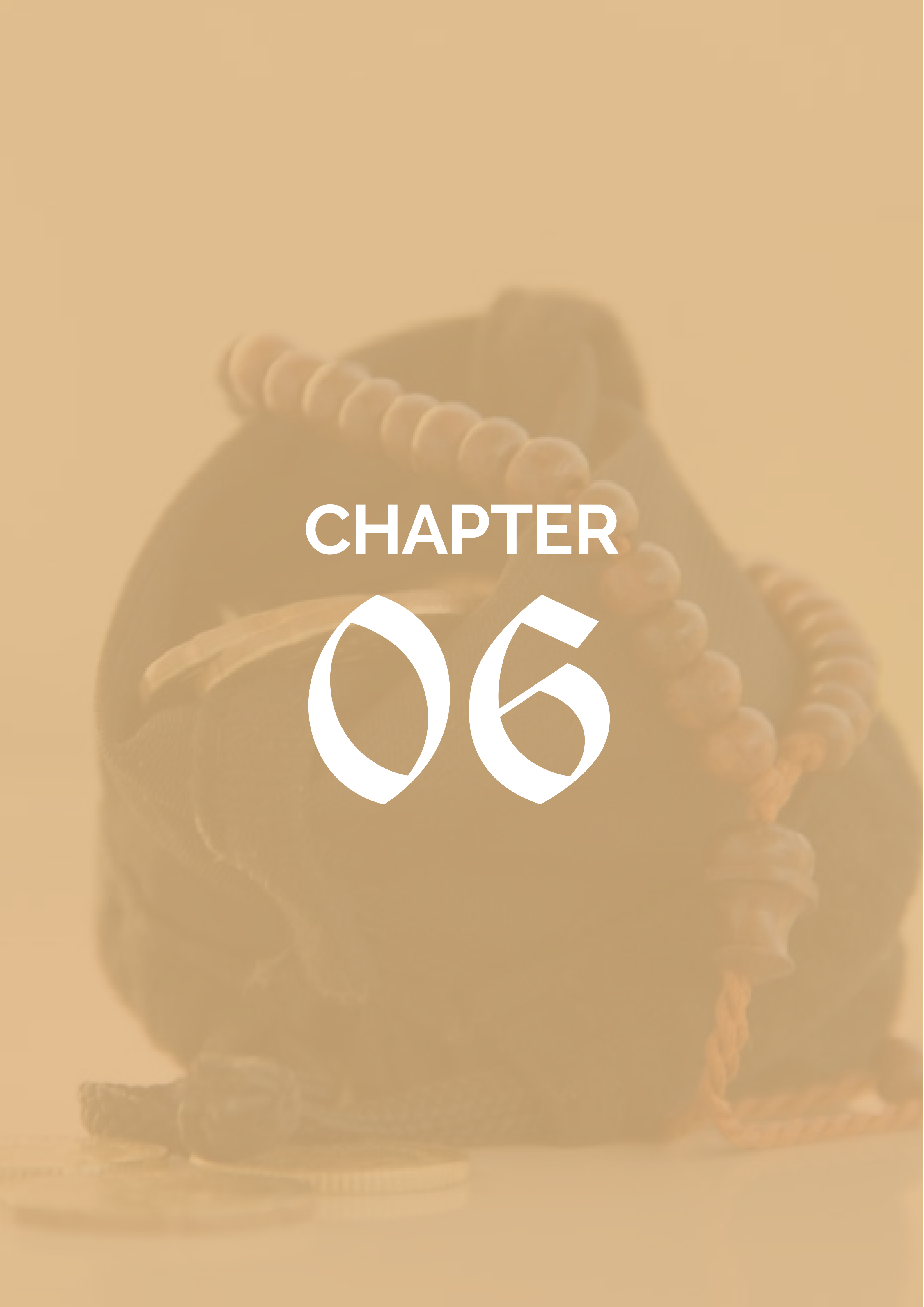


CHAPTER 06

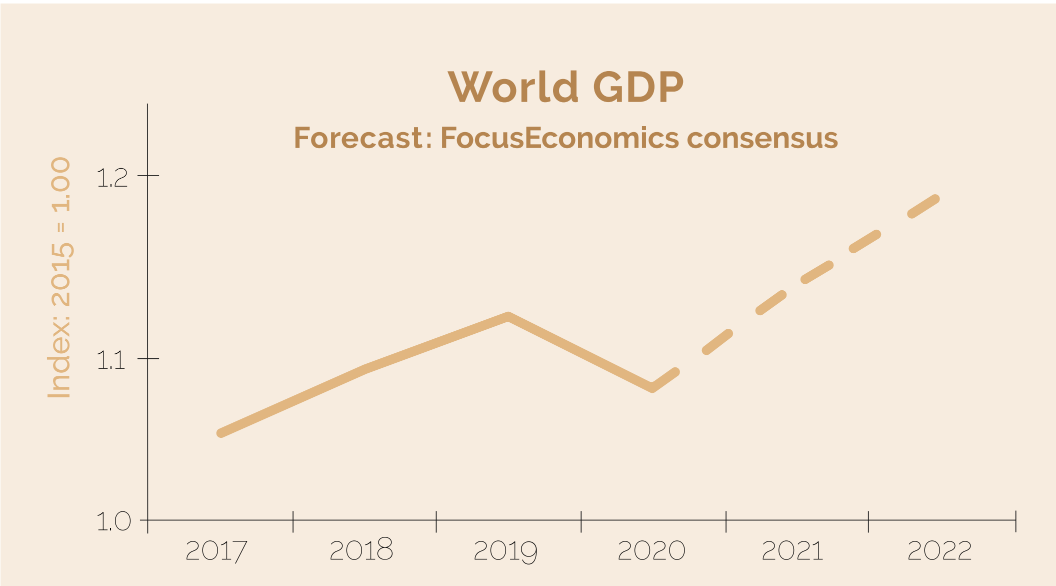
Opportunities to Align the Practice of Islamic Finance with SDGs in a Post-COVID World

Introduction

COVID-19 has appeared to bring back the poverty clock, unemployment, low per capita income, financial instability, and inflation even in developed economies. This pandemic produced hurdles in achieving the sustainable development goals (SDGs) recommended by the United Nations (UN) as a new global development agenda. A series of research papers and reports appeared to give importance to the problem and possible solutions. Islamic finance can alleviate these social and economic abuses through diversified Shari'a-compliant tools and Islamic financial institutions (IsFIs). This chapter explores Islamic finance opportunities to align with SDGs in a post-COVID world to provide relief to those who are affected in this regard. It discusses the possible ways to overcome the socio-economic problems of the day in the framework of Islamic finance. The potential role of Islamic finance in stimulating economic activities for individuals, SMEs, corporations, government, and welfare organizations in the post-COVID world is also highlighted. Therefore, this chapter recommends that countries with a Muslim majority adopt the Islamic financial market products for capital formation, financial inclusion, employment creation, resources mobilization, and investment invitation after surviving pandemic. Likewise, the UN and other international market players are recommended to adopt Islamic finance to achieve SDGs. It is also suggested that the processes critical for implementing the SDGs are reviewed with the help of high quality, accessible, timely, and reliable data. Overall, every economic indicator has performed unsatisfactorily during the COVID-19 pandemic[1].

Different variants of COVID-19 have adversely affected people's economic conditions across the globe. For fear of the spread of the virus, which is highly contagious, almost every country imposed locked down because of which industries, markets and even restaurants have been partially operating, resulting in high prices of products in most of the cases. Other than that, many industries and organizations laid off their employees due to financial crisis. In short, countries everywhere have been bested with high inflation and unemployment due to the COVID-19 induced economic disruption. There has been an extraordinary rise in workers submitting unemployment insurance claims in different countries[2]. On the other hand, people with the job have to deal with psychological stresses emanating from the fear of losing jobs. According to a random estimate, almost 25 million people across the globe are at risk of losing their jobs due to the COVID-19 – study documented that this uncertainty and loss of employment have manifested in high incidents of suicides[3]. Therefore, the 2030 completion deadline of SDGs is at risk from all dimensions in socially and economically weak countries.

Figure 6.1
World Economy Forecast



Source: FOCUSECONOMICS[4]

1. Butterick & Charlwood (2021)
2. (Goldsmith-Pinkham and Sojourner, 2020)
3. (Kawohl and Nordt, 2020)
4. See https://www.focus-economics.com/

The global economy was expected to take off in 2021 at a different pace, as the world would undoubtedly benefit from vaccinations, lockdowns, and coronavirus SOPs[5]. However, it will take time before the full benefit of vaccination is felt in the form of economic stability. In the case of developing countries, the time lag could be even longer. The Organization for Economic Co-operation and Development (OECD), the representative of 38 inter-governmental member countries, has reported: "Prospects have improved over recent months with signs of a rebound in goods trade and industrial production…. Global GDP growth is now projected to be 5.6% this year. World output [was] expected to reach pre-pandemic levels by mid-2021." The International Monetary Fund has also predicted similar growth with additional descriptions for advanced, developing, and low-income developing countries[6] (for details, see Figure 6.2).

Figure 6.2
World Economic Growth Estimates and Projections

Latest World Economic Outlook Growth Projections

	ESTIMATE	PROJECTIONS	
(real GDP annual percent change)	2020	2021	2022
World Output	-3.5	5.5	4.2
Advanced Economies	-4.9	4.3	3.1
United States	-3.4	5.1	2.5
Euro Area	-7.2	4.2	3.6
Germany	-5.4	3.5	3.1
France	-9.0	5.5	4.1
Italy	-9.2	3.0	3.6
Spain	-11.1	5.9	4.7
Japan	-5.1	3.1	2.4
United Kingdom	-10.0	4.5	5.0
Canada	-5.5	3.6	4.1
Other Advanced Economies	-2.5	3.6	3.1
Emerging Markets and Developing Economies	-2.4	6.3	5.0
Emerging and Developing Asia	-1.1	8.3	5.9
China	2.3	8.1	3.6
India	-8.0	11.5	6.8
ASEAN-5	-3.7	5.2	6.0
Emerging and Developing Europe	-2.8	4.0	3.9
Russia	-3.6	3.0	3.9
Latin America and the Caribbean	-7.4	4.1	2.9
Brazil	-4.5	3.6	2.6
Mexico	-8.5	4.3	2.5
Middle East and Central Asia	-3.2	3.0	4.2
Saudi Arabia	-3.9	2.6	4.0
Sub-Saharan Africa	-2.6	3.2	3.9
Nigeria	-3.2	1.5	2.5
South Africa	-7.5	2.8	1.4
Memorandum Low-Income Developing Countries	-0.8	5.1	5.5

Source: IMF, World Economic OUtlook Update January 2021

Being a vital part of the economic and financial system in several Muslim and Non-Muslim countries, it becomes necessary for Islamic finance to provide cost-effective and user-friendly opportunities in these difficult times. Islamic finance offers a paradigm for an equitable distribution of resources to discourage the concentration of wealth in a few hands. Through its several tools such as waqf, zakat, charity, and donations, Islamic finance can solve all the socio-economic objectives outlined in the SDGs[7]. In short, Islamic finance can become an excellent operative vehicle for SDGs in these testing times.

This chapter's main objective is to draw attention of the policymakers in understating the role Islamic finance can play in achieving the SDGs within the framework of Islamic economics

This chapter's main objective is to draw attention of the policymakers in understating the role Islamic finance can play in achieving the SDGs within the framework of Islamic economics. The paper is divided into five sections. The first and second sections comprise the introduction and the history of COVID-19. Section three explains different aspects of SDGs as delineated by the UN. In section four, Islamic finance's potential to meet crises in these challenging times is presented. Finally, in the fifth section, the paper gives recommendations to move forward in the post-COVID-19 world.

Advent of COVID-19 as Pandemic

On 30th January 2020, the World Health Organization (WHO)[8] announced the coronavirus outbreak as the sixth public health emergency of international concern (PHEIC). On March 11, 2020, it was declared a pandemic. The striking similarities of crises in the past eight centuries leading up to COVID-19 have been recounted as well[9]. According to the former chair of the US Federal Reserve, financial imbalances and risks grew over the years to culminate in the 2007–2009 global financial crisis (GFC)[10].

Some believe that the COVID-19 crisis is genuinely different in scope, effects, and severity from past emergencies[11]. Previously, because of lack of facilities, pandemics would result in millions of deaths. However, in this era of information technology, globalization, and economic and financial integration, COVID-19 has been less harmful than its predecessors. That does not

5. Conerly (2021)
6. Source: IMF, World Economic Outlook Update, January 2021
7. Shah et al (2020)

mean coronavirus was not lethal. It did, however, take a toll on lives, economic activities, and social wellbeing. Quarantines and lockdowns brought social unrest, anxiety, insecurity, and unemployment in almost every economy.

Every pandemic had its impact. For example, during the pandemic outbreak in 439 A.H, in Baghdad, the commodity prices skyrocketed, such as the pomegranate price rose to two[12], a chick to two qirat, and cucumber to one qirat[13].

In 575 A.H, another outbreak happened with a severe effect on the markets, which were shut down on more than one occasion. The shortage of supply of goods and services pushed the prices upward[14]. In the first quarter of the twelfth century, the famines and pandemics of Morocco and Andalusia engulfed various cities and killed thousands. As a result, the economy began to deteriorate, and food prices rose manifold, such as the price of 500 grams of wheat increased to 13 dinars[15]. With COVID-19, history is repeating itself. In short, during epidemics, governments took several measures to rescue their economies by exploiting the opportunities at hand.

The COVID-19 pandemic has badly affected communities, businesses, and organizations, pushing the global economy into crisis. Ineffective governmental policies, failure of institutions, and lockdowns have adversely affected the supply chain and production units, especially in China. On the other hand, quarantine and self-isolation policies have decreased the consumption, demand, and utilization of different products and services.

Resources are mainly used to rescue the patients or protect their beloved ones from the pandemic. The governments have recommended immediate relief measures to facilitate the segment of society that quickly fell into the socio-economic trap[16]. Therefore, it is sensible that policymakers and other players in the economy find new opportunities to minimize the harmful impact of the COVID-19 pandemic on the growth of economies.

Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) (please refer to the image on pg. 191), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others and that development must balance social, economic, and environmental sustainability.

8. World Health Organization (2020)
9. Reinhart and Rogoff (2009)
10. Bernanke (2020)
11. Reinhart (2020)
12. Qirat was gold coin having 200mg weight (Shafi, 1999).
13. al-Jawzi (1992)
14. al-Mansur (1968)
15. Sami'l (2018)
16. (Goodell, 2020 and Benassi et al, 2020)

The SDGs are designed to end poverty, hunger, AIDS, and discrimination against women and girls. Creativity, technology and financial resources are necessary tools to achieve the SDGs in every context[17]. They are an urgent call to action for us all to join forces in a global partnership - embodying a universal recognition that we must all act today to make a lasting positive impact on tomorrow[18].

The progress of SDGs worldwide was already behind the target, and the COVID-19 pandemic brings tremendous challenges in realizing all the goals[20]. The pandemic has not only diverted focus from SDGs, but it has also overturned the years of progress. COVID-19's effect on SDG 1 (No Poverty), SDG 2 (Zero Hunger),

SDG 3 (Good Health and Wellbeing), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 17 (Partnership for the Goals) has been the subject of extensive discussion[21]. However, the pandemic's impacts on other SDGs have not received considerable attention.

Development that meets current needs without compromising the future is called sustainable development[22]. The first SDG theory was presented and defined by Bruntland Commission in 1987. Later different definitions emerged, but all of them revolved around the concept presented by Bruntland Commission. In short, the SDGs' evolution and integration into economic, social, and environmental dimensions have been incremental.

According to[23], in the early 60s, sustainable development was primarily seen in the context of material productivity. Therefore, economic development theory played a significant role in the overall development agenda of many countries. Later in the 1980s, environmental protection theory took center stage in the sustainable development paradigm.

The concept of sustainable development clarified that while we strive to improve our present, we also must ensure that these efforts benefit the new generations in the same zest. In this way, both short-term and long-term policies would be developed for the implementation of SDGs.

Researchers have been discussing challenges like energy crises, rising poverty, growing unemployment, health problems, environmental issues, and climate changes for years. Each of these issues causes economic and financial inefficiencies[24]. To overcome these fundamental problems, the 2030 agenda of SDGs was introduced. The Europe 2020 strategy[25] also presented the agenda of growth, employment, and innovation to achieve small, sustainable, and inclusive growth, keeping in mind the environmental issues[26].

17. UNDP (2021), See https://www.undp.org/
18. Shah et al (2020)
19. See https://www.neom.com/
20. Filho et al (2020)
21. (Mukarram, 2020; Adiyoso, 2020; UNDP, 2021)
22. Bruntland (1987)
23. Munasinghe (1994)
24. (Weidou and Johansson, 2004; Jovanovic et al., 2009; Bobylev, 2017; Geissdoerfer et al., 2017).
25. Available at: https://ec.europa.eu/regional_policy/en/policy/what/glossary/e/europe-2020-strategy
26. Available at: https://eurlex.europa.eu/search.html?scope=EURLEX&text=EU+Action+plan+2015&lang=en&type=quick&qid=1633517336325

COVID-19 has affected human life in three dimensions: economy, social life, and environment. First, it pollutes the environment because it survives in the air, surfaces, fabrics for a while and spreads through it[27].

Second, to prevent the spread of the virus, quarantines and lockdowns were introduced with significant impact on unemployment, food shortages, rising food prices, hunger, and poverty. Third, due to the sudden increase in the demand for medicines, the supply of medicines became very low, resulting in high prices. All these things together created an economic imbalance.

Interestingly, the scope of SDGs also addresses economic, environmental, and social problems[28]. It has the prescription to cure existing crises and future shocks. Therefore, targeted actions can help the world achieve the SDGs[29].

The SDGs 1, 2,3, 8, 9, and goals can assist countries during the COVID-19 in poverty reduction, zero hunger, good health and well-being, decent work, economic growth, industrial innovation, infrastructure development, and responsible consumption and production pattern. Therefore, to reduce the worst effects of COVID-19, countries should prioritize their strategies and actions in these directions.

Researchers have identified the gaps in understanding the relationship between Islamic finance and sustainable development in the backdrop of COVID-19 and its obstructive impact on economic growth[30]. Notwithstanding the connection, little effort has been spent to explore their applicability. Therefore, in the next section, we intend to explore the opportunities of Islamic finance as a tool for sustainable development through Islamic financial products.

Opportunities for Islamic Finance

Globally, governments are taking immediate steps to counter the emerging issues resulting from the COVID-19 pandemic. Unlike other traditional economic and financial systems, the Islamic financial system has remained relatively stable and guarded in the face of economic and financial vulnerabilities. A glimpse of this quality was also seen during the financial crisis of 2007-08.

One of the distinguishing features of Islamic banking is that it delivers funds to its clients through its unique products without increasing the level of debt. This quality proves that Islamic banks are more resilient than their conventional counterparts[31]. The literature provides enough evidence regarding the positive role the Islamic banking industry had played in the economic growth even when the whole conventional system was facing crises in 2007-08.

27. EarthSky (2020)
28. (Siong & Hussein, 2008)
29. UN (2020)
30. Millar et al. (2019)
31. (Kayed & Hassan, 2011; Shah et al., 2018)

This is because of its unique nature of operations, products, and services linked with the real sectors of the economy[32]. All stakeholders of the financial system are very sensitive regarding its soundness, and this quality of the financial system determines the efficient channelization of funds throughout the economy. This quality of soundness is a crucial factor in regulating and monitoring the financial performance of the economy. Available empirical literature shows that banking growth is positively related to economic growth[33].

Therefore, the Islamic banking industry was found more resilient after the 2007-08 financial crises. It was also found that Islamic banks showed asset growth and higher credit achievement than their conventional counterpart. Therefore, rating agencies assessed IBs as more favorable for financial stability in the post-crisis era[34]. The theoretical analysis of the Islamic banking performance suggests that Islamic banks had performed remarkably well in the last decade[35].

The quality of inclusiveness in Islamic finance has enabled it to show rapid growth over the globe during its shortage of 4 decades compared to its conventional counterpart. The global Islamic financial industry is submitting 12.71% accumulated annual growth (2009-20) in core markets worldwide[36]. It has increased its total global assets from US$1.063 trillion in 2009 to & US$2.941 trillion in 2020, and it is forecasted to reach US$3.789 or US$5.115 by the end of 2025, depending on the underlying assumptions (see Chapter 1).

These estimates may be adversely affected by the COVID-19 pandemic because strict measures taken by governments to contain its harmful effects will likely slowdown Islamic financial growth[37]. However, Islamic finance has now spread worldwide and is submitting increasing growth rate year by year. Therefore, hopes attached to the Islamic financial system will help the world find a concrete solution to the current economic challenge. Recently, UNDP called for Islamic finance to play its role in these circumstances of economic pandemic crises[38]. While Code-Pandemic has significantly affected the performance of financial institutions, it has also brought some opportunities for them, which will not only improve their reputation and performance but also create employment opportunities for the people of the society. It is a better opportunity for Islamic financial institutions to take advantage of this opportunity because they have various modes of financing compared to their conventional counterparts, which have minimal modes at both sides of their balance sheets. Islamic banks were more stable, having higher capitalization and liquidity reserves before the 2007-08 crises[39]. Similarly, financial products offered by Islamic banks are playing a positive role in economic growth[40]. It was observed that the financial stability of the whole financial system was positively related to Islamic banks[41]. Thus, within the paradigm of Islamic finance, different opportunities may stimulate economic activities, help in capital formation, mobilize economic resources, and produce jobs.

In the multiplicity of Islamic finance opportunities, Islamic microfinance is at the heart of economic revival to enhance the capabilities of poor people to enable them to be financially strong, but its outreach is minimal compared to its conventional counterparts. Therefore, it is necessary to strengthen the targeted segments concerning knowledge and skill through training in the Islamic microfinance business. In a survey of the 255 micro financing institutions (MFIs), Islamic micro financing was less than 1% of the total reach. On the other hand, the survey showed that Shari'a-compliant micro financing played a significant role in stimulating economic activities and their

32. (Bourkhis and Nabi, 2013)
33. (Liang & Reichert, 2006; Shah et al., 2020)
34. Hassan and Dridi (2010)
35. Hussain (2018)
36. Nawaz (2019)
37. See https://www.spglobal.com/ratings/en/
38. Rahman (2020)
39. Beck et al. (2010)

scale effectiveness was also higher than other institutions[42]. Likewise, IsMFIs were playing an influential role in empowering the lower class of society, enhancing their living standards, through four broad modes of finance: PLS, non-PLS, Islamic social enterprise, and charity[43].

Potential Role of Awqaf

In a pandemic, waqf is an essential instrument of Islamic social finance. Muslims have practiced it at every age. The definition of waqf is that while retaining ownership, the benefit of the property should be reserved for all or a particular class. It cannot be sold or transferred. The first waqf in Islam was made by the Holy Prophet Muhammad (PBUH). He donated seven gardens which was the first waqf in Islam.

The second waqf in Islam was done by the second caliph Umar Farooq. After that, in his time, other companions made many waqfs. Whenever the Prophet (PBUH) faced a complex issue, he used to encourage his companions. In response to his encouragement, the companions used to donate the desired thing for the more significant benefit of society[44]. Thus, waqf has a fundamental status in the Islamic financial system. Throughout Islamic history, Islamic Waqf has played a vital role in meeting the needs of the poor and needy, making them financially self-sufficient, equipping Muslims with science and art, providing relief to the sick, and financially supporting the students and scholars[45]. Hence, cash waqf, qard hasan, and zakat can be effectively channeled through Islamic financial institutions so that the poor can have easier access to financial services[46].

The waqf may appear as a more effective form of social finance. Social finance plays an essential role in the contemporary financial environment and has become one of the most prominent financing pillars. The outstanding quality of waqf is its relevance with the economic system by creating investment opportunities from consumption and generating benefits and productive capital[47]. Islamic Development Bank (IsDB) Jeddah introduced the innovative idea of diverting funds from consumption to investment by formulating the Awqaf Properties Investment Fund (APIF). API is a distinctive development model that promotes longstanding financial sustainability. This model establishes real estate and uses its income to empower the civil society and other local institutions working for public welfare[48]. Researchers conducted their studies on the role of waqf in social development and documented that waqf-based Islamic microfinance can be sustainable in the long term[49]. Thus, we can see that waqf based products may appear with a potential role for neglected segments of society in achieving SDGs, especially in a Post-COVID World.

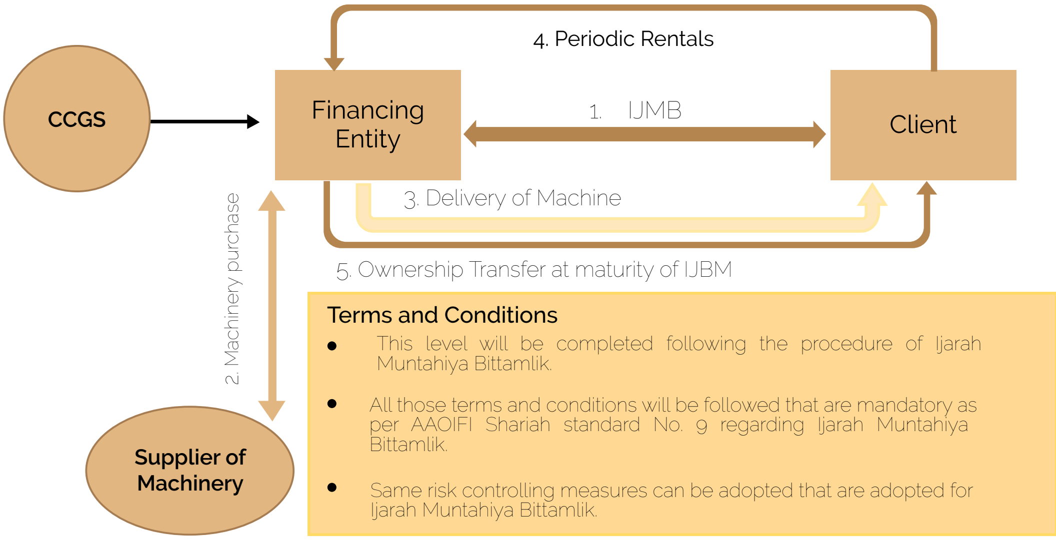
Business Continuity Management

In a pandemic, the financing requirements of an existing business can be fulfilled through different Shari'a-compliant products. For instance, an ijara-cum-murabaha model may contribute to continuing a series of economic activities. This model consists of two separate contracts between financing entities and potential customers. This model will be completed in two levels. At the first level, the client will sign ijara muntahiya bittamlik (IMB) contract with the financing entity through which machinery will be provided to the client. At level two, the client will enter into a

40. Kaleem et al. (2016)
41. Rashid et al. (2017)
42. El-Zoghbi & Tarazi (2013)
43. (Usman & Tasnim, 2016; Rashid et al., 2019; Shah et al. 2019; Hassan et al., 2021)
44. Arif (1994)
45. (Zarqa, 1988; Siddiqi, 2004; Abdel Mohsin, 2013; Haneef et al., 2015; Sulaiman, 2019)
46. Haneef et al. (2015)
47. Feddad (2019)
48. See https://www.isdb.org/pub/annual-report/2019/awqaf-properties-investment-fund-annual-report-2019

master murabaha financing agreement (MMFA) with a financing entity to meet the manufacturing process's need for goods. MMFA consists of various sub-murabaha executed in different time intervals as per prerequisite Shari'a terms and conditions. At level-1, after signing the IMB contract, the financing entity can buy machinery required by the client from a supplier on a musawama basis or any mode it wants. Then it will be delivered to the client against specific rentals per the IMB contract (see Figure 6.3).

Figure 6.3
Level 1-Ijara Muntahiya Bittamlik (IMB)

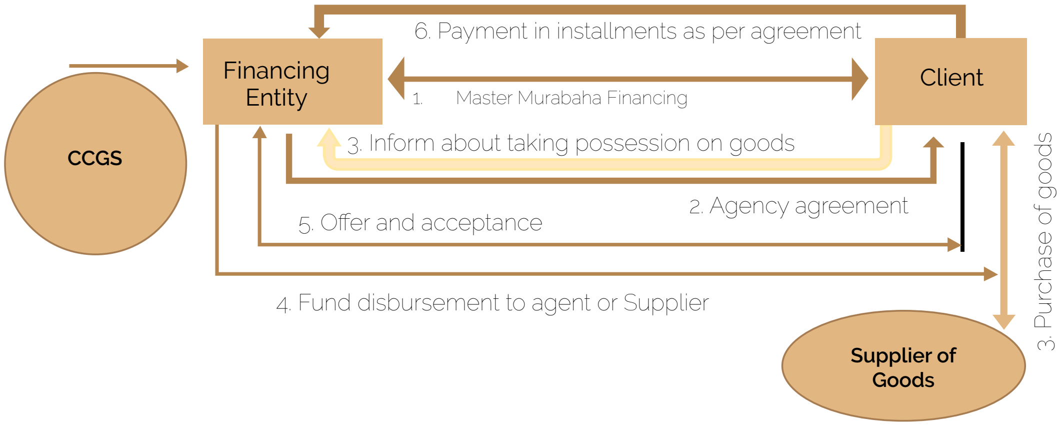


The further procedure of IMB mentioned in the Islamic finance manuals may be followed as per Shari'a principles[50]. At this level, the client itself will decide about the waste collection procedure. For example, it can hire workers to collect waste or buy useable waste from private entities that collect waste and make it clean to sell recycling manufacturing factories. At level-1, CCGS will encourage the financing entity to finance the microenterprise.

There are two options at the second level. At level-2a, the financing entity will sign the MMFA agreement under MPO as per the terms and conditions mentioned in AAOIFI Shari'a Standard No. 8. MMFA will be completed in the same four stages, and the same issues will be considered that are described in books of Islamic finance[51]. After signing MMFA, the client will be allowed to purchase required goods as and when needed from the nominated supplier of goods incapacity of an agent of financing entity. Before consuming the bought goods, the client will inform the Financing entity about purchasing and getting possession of goods on its behalf. Islamic banks will disburse funds to an agent to pay the price to the supplier, or it also has an option to pay the supplier directly[52]. Then the client will make an offer to buy the same from the financing entity at an agreed profit. The client will be allowed to consume it after getting acceptance from the financing entity (see Figure 6.4); otherwise, the murabaha contract will be invalid[53]. This model will work only if suppliers of various goods are different.

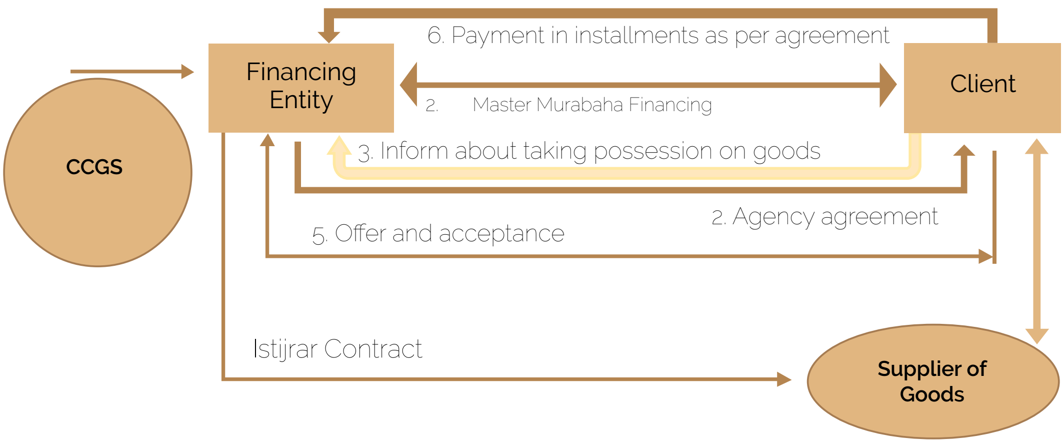
49. (Kahf, 2004, Ahmad, 2007; Manjoo, 2008; Hasan, 2010; Haneef et al., 2015)
50. Ayub (2007)
51. Ayub (2007)

Figure 6.4



The second option of level-2 involves, very rarely used concept in Islamic finance, istijrar. Istijrar is an arrangement in which someone keeps getting the articles of need from a supplier from time to time, as and when needed, without any offer and acceptance or price bargain between the two. Istijrar is of two types: istijrar with deferred payment, istijrar with advance payment. In the former one, the price is paid when the contract is concluded, and accounts are settled. Later, the buyer pays the price in advance to the seller, and accounts are settled towards the end of the contract period[54]. In level-2b, the financing entity will enter an istijrar agreement with the supplier of goods. They will mutually decide on payment settlements. This option will work if all goods are available from a single nominated supplier. The client of the financing entity will enter the contract of MPO, and with it, MMFA will be signed. After buying goods from a supplier, the client will renew the offer and acceptance with the financing entity before consuming it (see Figure 6.5). All other terms and conditions of MPO will be mentioned in AAOIFI Shari'a Standard No. 8.

Figure 6.5
Level 2b-Murabaha-cum-Istijrar



52. Siddique (2017)
53. Ayub (2007)
54. Usmani (2015)

Agricultural and Non-agricultural Waste Recycling

Recent major global environmental initiatives toward a more sustainable society are the SDGs, the New Urban Agenda (NUA), and the Paris Agreement. The role of a sustainable built environment towards energy conservation and wastage management is central to the realization of the SDGs in general and SDG 15 in particular[55]. The idea of waste recycling has emerged from the womb of the necessity of environmental protection, but it brings multi-dimensional economic, health, and other social benefits. As a result, corporate business units and industries started to pay attention to this neglected sector. The most neglected area in the waste recycling concept is agricultural waste recycling which is more diversified than its non-agricultural counterparts. It includes gasifying crops, taking crop stalks as feed, fertilizer, or new building materials, and making manure from livestock excrement. The cycling of life wastes is mainly carried out through separate collection of junk in order to achieve effective waste recycling and reuse. Agricultural waste recycling modes can also be divided into farmers and enterprises[56].

Waste recycling has brought multi-dimensional opportunities for small manufacturing businesses at the micro-level of home-based initiatives by employing the circular economy's waste recycling concept, and these projects can be financed through Islamic microfinancing arrangements. Further, unemployed skilled labor can be financed through various Islamic modes of finance, e.g., musharaka, mudaraba, murabaha, istijrar, and ijara. These agricultural and non -agricultural waste-recycling activities in the framework of Islamic finance will fuel different economic activities of employment and recycling of resources for environmental protection, which will ultimately contribute to achieving SDGs.

Agricultural Waste Recycling: Biogas Plant

Vegetable market waste is usually thrown away without reusing it for any beneficial activity. This waste can be used if it is picked up on time and delivered to dairy farms. Cows and buffaloes will eat it and produce dung which can be used for biogas production. After gas production, instead of wasting manure, it can be benefitted through vermiculture, a valuable technique for recycling kitchen and livestock wastes into a rich organic fertilizer for producing high-protein feed for poultry. Worms are invaluable partners in building the soil in farms.

If worms are fed the manure after biogas production, they convert it into natural fertilizer, which is much better than artificial fertilizer in crop production. Islamic banks, as well as IsMFIs, can finance these projects by developing their financing models. For instance, a Dairy farm can be financed at the first stage on a Mudarabah basis. Cows and buffaloes will be bought from mudarabah investment. To collect waste from various places, vehicles may be financed through Ijarah muntahiyah bittamlik model. In the second stage, biogas and electricity plants can be financed through musharaka or murabaha basis. The Islamic financial sector can effectively achieve SDGs through environmental protection and poverty eradication from this type of financing[57].

55. Opoku (2019)
56. (Vitali et al., 2013; Takolpuckdee, 2014)
57. See https://www.sunfire.co.za/product/biogas/

Fish Market Waste Recycling: Poultry farm Feed

In less developing countries (LDCs), fish waste management is not less than a headache for environment protection management[58]. Fish waste is a viral feed for ducks. It enhances their capability of egg production. According to a report of the department of primary industry, Government of New South Wales, ducks usually begin laying at about 6–7 months of age and should be laying at a rate of about 90% (i.e., 100 ducks laying 90 eggs daily) within five weeks of the onset of laying. English breeds typically maintain more than 50% production for about five months. Peking starts laying eggs when they are about 26–28 weeks of age and can be kept economically for about 40 weeks of production when they have laid about 160 eggs[59]. In LDCs, fish market waste is usually thrown out without using it for any productive purpose. Islamic financing institutions did not draw their attention towards this specific segment of fishery waste management. IsMFIs and SMEs can finance these projects by developing their Islamic financial models to finance the emerging activities in the post-COVID world. This will add economic value and protect the environment through egg and meat production and wastage.

Freelancing in Islamic Finance

During COVID-19, freelancing has become a special blessing to earn, where people have traveled from roots to fruits. Freelancing is emerging as a border-free in the market modern era of information and technology. In other words, it is a contract-based profession where instead of being recruited in an organization, the person uses his skills and experience to provide services to several clients. In simple terms, freelancing is when you use your skills, education, and experience

58. (Arvanitoyannis and Kassaveti, 2008)
59. See https://www.dpi.nsw.gov.au/animals-and-livestock/poultry-and-birds/species/duck-raising/egg-production

to work with multiple clients and take on various assignments without committing to a single employer – the number of assignments or tasks depends on the ability of the freelancer to deliver. Freelancing does not always mean work from home. One might have to work at a client's office, depending upon the type of work and the client's requirements. In this way, we can start from home and move into any organization on the freelancing wings.

Islamic banking and finance has also been the recipient of freelancer's work. It depends the impact Islamic finance leaves on consumers' attitudes, social norms, and perceived behavior by freelancers in the post-COVID world. Similarly, religiosity, subject knowledge, and subjective norms positively impact the intention to adopt Islamic finance as a freelancer. The earning through availing the opportunities of Islamic finance will be helpful for a nation to have a massive cash inflow in their economy, which is an accurate source to achieve the SDGs in rainy days of the current pandemic of COVID-19.

Conclusion

The capacity to deal with the fallout from the COVID-19 has been inconsistent with various solutions. Governments are welcoming proposals to provide relief to the masses and strengthen public infrastructure for the growth of economies. Similarly, the UN wants to achieve the global targets of 17 SDGs intended to meet in 1930. Being part of the economic system, Islamic finance is being awaited to play its role in the pandemic. Inherently, Islamic finance intends to provide socio-economic welfare for humanity based on Maqasid al-Shari'a.

Interestingly, Maqasid al-Shari'a covers all 17 SDGs introduced by the UN. Therefore, it would be accurate to say that achieving the SDGs fulfills the higher objectives of Shari'a, e.g., preservation of life, religion, property, family, and intellect. We have discussed the potential role of Islamic finance in stimulating economic activities for individuals, SMEs, corporations, government, and welfare organizations in the post-COVID world.

After a comprehensive review of the literature, we observed that both concepts, SDGs and Islamic finance, are highly linked in terms of their objective and practical strategies. Therefore, we concluded that Islamic finance could be considered, and indeed, it is a practical device to achieve the fundamental objectives of SDGs. Likewise, environment-friendly Islamic finance models will create employment at three levels: waste collection, production, and marketing. They will also enhance innovative capabilities by creating employment, collecting waste from society, and cleaning the environment.

The vehicle contracts of Islamic financial products, such as mudaraba, musharaka, ijara, murabaha, istijrar, salam, istisna', and diminishing musharaka are highly integrated with the fundamental objectives of the SDGs. These are asset-backed with fair play a role in the financial market. They also downscale resources resulting from efficient allocation of resources by neglected segments of society, which is the need of the day in a post-COVID World. This study recommends that countries with Muslim concentration adopt the products of the Islamic financial market for capital formation, financial inclusion, employment creation, resources mobilization, and investment invitation after spending bitter days of the pandemic. Similarly, this study suggests that international agencies accelerate their speed to accomplish the agenda of SDGs by 2030 by welcoming Islamic financial opportunities in a post COVID world.

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CHAPTER 07

Sustainable Synergies between Islamic Social Finance and Bankable Nature Solutions

Introduction

Our world faces major challenges. The negative impacts that arise from biodiversity loss and climate change are felt by nature and people across the globe. As the number of natural disasters increases, pandemics rise, extreme weather conditions intensify, the wildlife and other species decline. Unsustainable agriculture, mining and generation of energy lead to deforestation, pollution and overexploitation of natural resources.

Healthy nature and ecosystems are key for human wellbeing and development. The United Nations Sustainable Development Goals (SDGs) have been set up to counter the challenges we face. Yet, as the World Economic Forum points out there is a US$2.5 trillion investment gap per year, as only US$1.4 trillion of the required US$3.9 trillion is invested each year to reach the SDGs by 2030.

For preserving and restoring ecosystems alone, the required investment is estimated between US$300 billion to US$400 billion, whereas, only US$52 billion is being invested in such projects.

With the money contributed by governments and philanthropy only, we shall never be able to fill this funding gap. Some asset managers and conservation experts have suggested that the private sector could close more than half of this funding gap by setting up profitable enterprises with a positive impact. Yet, the private sector perceives nature conservation projects as relatively unattractive due to lack of availability of large-scale opportunities, relative illiquid nature of investment opportunities, unconventional nature of risks, relatively low returns and long-time horizons.

Bankable Nature Solutions (BNS) have the potential to shift the existing perception of nature of conservation projects. BNS are financially viable projects which support the development of more climate resilient and sustainable landscapes and economies. Their bankability enables projects to accelerate scaling and replication, realizing large-scale positive impact on nature and communities

Building conservation and nature-based solutions into projects represents a massive opportunity. We need to work with companies, financial institutions and local stakeholders to develop BNS. This way, we can deliver impacts that reduce pressure on ecosystems, drive resilience and sustainability for both People and Nature, while generating positive financial returns for communities and investors.

What is a Bankable Nature Solution?

It is important to have a common understanding of what Bankable Nature Solutions are, before working with them. While there is no single definition, there is agreement about their main characteristics. Bankable Nature Solutions (BNS):

- create positive environmental returns leading to positive biodiversity impacts or climate mitigation and/or adaptation; and
- are acceptable to investors as they have (a combination of) characteristics such as:
  - Cashflow generating activities;
  - Sufficient collateral;
  - A high probability of success;
  - A clear exit strategy;
  - An acceptable risk-adjusted rate of return; and
  - A clear proof of concept and proven track record.

Thus, BNS are solutions for environmental challenges that at the same time generate an acceptable (risk-adjusted) return on the money invested.

BNS are not just different from regular conservation projects because of their source of funding. They are intrinsically different as they are managed by the private sector and as their design is centered around revenue generating activities that help recover project costs and generate a return on investment. BNS can be found across different themes – such as climate-smart agriculture, environmental protection, forestry, water and sanitation, and renewable energy. Compared to conventional (grant-driven) environmental projects, there is not only money flowing into a project, but the project itself also generates sufficient money to pay back investors and generate a positive return.

The investment can be through debt, equity or a combination of both. Hence, a bankable project is not an extra influx of money that can be used in the same way as when receiving grants.

For BNS to function optimally, it is of great benefit to focus on the wider landscape. The landscape approach is about reconciling competing natural resources demands in a way that is best for human well-being and the environment. More specifically, it seeks to integrate conservation, sustainable use and, where necessary, restoration across a landscape mosaic to sustain biodiversity and ecosystem services, whilst ensuring room for subsistence and commercial activities. It focuses on tackling issues together, which no individual stakeholder can solve alone, with the ultimate goal of achieving sustainable landscapes that help to meet the UN SDGs. It acknowledges the complexity in a landscape, provides flexible solutions to adapt to change and integrates multiple objectives for the best results. The landscape approach looks beyond individual projects, creating an enabling environment at scale to attract investors and to support the sustainable financing of landscapes. The Little Sustainable Landscapes Book (2016)[1] has identified three important catalysts to enable integrated landscape management. These include: good governance, market access and sustainable finance. Five essential elements of a landscape approach are:

a) Establishing a multi-stakeholder platform

There are numerous stakeholders involved in a certain landscape, each with different needs and interests. Their views will not always coincide. Negotiation and trade-offs are therefore a key part of the process of realizing sustainable landscapes. Establishing and facilitating equitable exchange and communication between these stakeholders is thereby critical. The starting point is to identify the various interest groups involved and to find ways in which they can meet and interact in a just and effective way.

b) Building shared understanding

To build future pathways together, various stakeholders need to develop a common understanding of the issues in the landscape, the various interests, and the spatial interrelations. It is key to ensure that everyone has access to the same information to make informed decisions about management approaches for a sustainable landscape. The starting point is to assess the natural and social capital in a landscape and to identify longer-term trends and root causes of the issues identified.

c) Collaborative planning

Sharing a common understanding of the issues in a landscape and the diverse motivations helps to identify a negotiated landscape vision with multifunctional objectives. Creating an integrated spatial planning helps to guide stakeholders on how to achieve the landscape vision. This includes a detailed action plan to put these objectives into practice.

d) Effective implementation

Many well-meaning projects fail because of a lack of focus on the implementation phase. During this phase, there might not be enough time and resources, or the right skillset may not be present. Landscape level programs are designed for the long-term and therefore need to be secured from changes in government, donor, corporate or NGO policy to ensure sustainability. For carrying out the work plan, it is crucial to plan realistically, follow rigorously, and monitor carefully. At the same time, these plans need to be adaptive to cope with unforeseen events.

1. A book published by WWF together with GCP, EP, TNC and IDH

e) Monitoring for adaptive management and accountability

Landscape processes are dynamic. We must learn from changes to improve decision-making and management. A good monitoring program proves to be one of the strongest indicators for a project's success. It helps to keep the momentum going by showing the impact realized and to identify when things are not working as planned and changes are needed. Monitoring costs are expected to be about 5-10% of the overall budget.

Bankable Nature Solutions in Action

The Mekong Delta, home to 17 million people in Vietnam, is one of the world's most productive ecosystems with two to three rice crops a year and more than 450 different species of fish. At the same time, it is one of the regions in the world most vulnerable to water and climate disasters. Intensification of human activities and climate change across the entire river basin in six countries have altered natural water and sediment flows. In addition, land and water use within the delta are affecting its ability to cope. As a result, the delta is sinking and shrinking.

The erosion of the riverbed is aggravating saltwater intrusion - sometimes reaching up to 130 km inland - affecting soil fertility and poisoning crops. Land subsidence, aggravated by both groundwater extraction and loss of sediment deposition in the floodplains, make large areas of the delta increasingly more vulnerable to drought and floods.

With the aim to contribute to supporting Vietnam's response to this urgent and massive challenge, WWF and the Dutch Fund for Climate and Development initiated the Mekong Delta Integrated Rice and Aquaculture Project. The vision has been to build a more sustainable and climate-resilient food production model for people, nature and businesses; a model that addresses root causes, is innovative, financially viable and can be scaled up and replicated in other Asian river deltas.

The Mekong Delta, home to 17 million people in Vietnam, is one of the world's most productive ecosystems with two to three rice crops a year and more than 450 different species of fish

Rice and Shrimp pilot

The project will be implemented at five sites with different conditions. It started in Ca Mau Province, the most southern part of the Mekong, in August with the conversion of 30 to 50 hectares. During the one-year test phase, 110 hectares of sixty farmers will be converted.

Following proof of concept, Minh Phu is seeking a €35 million ten-year loan to implement the full project from the second quarter of 2022. With the help of its partners, it will introduce the new way of farming on 30,000 hectares by 2028. But Minh Phu's ambitions are much bigger than that.

Other partners in the project are TV Food Company Ltd., a rice exporter, the Vietnamese local government of three provinces and Deltares, a leading Dutch applied research institute into deltas. Their co-funding takes the total project budget to €800K.

From monoculture to mixed rice-shrimp aquaculture ponds

In the original model, farmers cultivated rice as an intense monoculture on one part of their land and shrimp on the other. Diseases spread easily and the high use of chemical fertilizers, pesticides and antibiotics killed all biodiversity. Meanwhile, the farms became more and more vulnerable to droughts and the intrusion of salt into their land.

To create a climate-resilient landscape (in line with the Vietnamese government's climate plan), the Mekong Delta Integrated Rice and Aquaculture Project has designed mixed rice-shrimp aquaculture ponds. The ponds produce rice and freshwater shrimps in rainy seasons, and raises brackish-water shrimps in dry seasons and periods of saltwater intrusion.

The project

The first phase is to restore the natural sedimentation process to allow the mixed rice paddies to be fertilized naturally by shrimp manure and nutrient-rich flood sediment. Current practices and associated infrastructure have disconnected the river channels from the floodplain thus most fields are not flooded by river water in the delta notably to avoid the effect of chemicals and pathogens. By reconnecting the paddies and ponds to the natural river channels, which remain relatively clean, healthy sediment can flow into the paddies again.

Separate intake channels for clean water and discharge channels for used water will be created. This will be done using probiotics and photosynthesis bacteria rather than antibiotics and chemicals to reduce toxic ammonia, sulfide and pathogens in the water without consuming oxygen and to decompose organic matter into smaller particles.

A sedimentation and nursery ponds will collect the mud that will be spread onto the soil once a year, raising land levels and naturally fertilizing the soil. Deltares, which is advising on the sedimentation process, estimates that the land can rise by 6 to 10 centimeters per year while the subsidence is two to four centimeters annually, so a net elevation gain in the face of global sea level rise.

Higher yields through responsible production

It is estimated that farmers can increase their shrimp production fourfold: from around 214 kilos per hectare per year in the old model to 800 kilos per hectare per year in the new responsible model. Farmers are expected to increase their income by 3.5 times thanks to the growing international demand for sustainable shrimp and cutting out middlemen by selling directly to Minh Phu.

The farmers will receive training and technical assistance, but also put their own skin in the game. They contribute their land, time and hard work while paying €1,115 in operating costs. Minh Phu will support farmers in pre-financing their inputs (e.g., seedlings etc.) by lending straight to the farmers with the need for collateral and without charging a premium.

> Farmers can increase their shrimp production fourfold: from around 214 kilos per hectare per year in the old model to 800 kilos per hectare per year in the new responsible model

Bankable Nature Solutions and Islamic Finance

The goal of Islamic finance is to preserve and circulate wealth by using assets, ownership and property rights in a way that prevents harm and meets the needs of individuals and society in a manner that is just, fair, and equitable, while allowing for wealth redistribution should any imbalances occur.

Maqasid al Shari'a (MAS), further states that society has the responsibility of caring for private and public interest and to keep others from evil and harm to be able to fully attain societal welfare. Islamic finance believes that money has no inherent value by itself, because money "increases or decreases in value only when joined with other resources for the purposes of productive activities" and that social gains are more important than individual benefits.

It is easy to see how the principles of Islamic finance, described above, can be applied to promote pro-poor development and environmental protection as they are both consistent with the MAS.

The Arab Forum for Environment and Development (AFED) specifically mentions that Islamic finance is ripe for contributing towards SDG 1, 2, 3, 5 and 16 to enable those in the base of the pyramid to get out of the poverty trap. This is due to the deep-rooted history of Islamic finance and "bringing societal good with their rigorous moral and social criteria and emphasis on inclusiveness and broad understanding of business–society relations.

Islamic finance is ripe for contributing towards SDG 1, 2, 3, 5 and 16 to enable those in the base of the pyramid to get out of the poverty trap

The protection of the planet and the environment, climate management and adaptation, are all goals that also conform directly with MAS. The Islamic Declaration on Climate Change also proves the alignment on the need to tackle climate change. The declaration demands the Islamic community to reduce greenhouse gas emissions (GHGs) and for wealthy nations to "invest in the creation of a green economy."

The Barriers in the Sector

In practice, the Islamic finance sector has not contributed towards these social or environmental objectives in the way that it was anticipated. The sector has instead invested much below its potential and has been cited as experiencing a potential "mission-drift", with experts demanding much more from the sector to actually contribute towards social and environmental development.

Many experts believe that Islamic development finance has not yet extended itself to "understanding the critical value that ecosystem services and a healthy environment provide to society". So, whilst the compatibility between Islamic finance and the global goals on climate change, biodiversity conservation, and the environment is high, its implementation is low. The same is believed by those working in ESG in the Arabian Gulf region. While there is clear overlap on social and environmental issues and Islamic finance, little convergence has been realized.

Experts state that while some progress has been made on social dimensions of Islamic finance, "environmental considerations seem to be less of a focus in the Islamic finance industry". Some banks, such as FAB in UAE, have been following the equator principles and the IFC Performance Standards, however.

Most of the literature cites that the main barriers hindering the Islamic finance sector from investing in the SDGs are lack of regulation, lack of Shari'a governance in green Islamic finance and lack of financial incentives. For example, issuing green products are more complex and costlier than their conventional counterparts. To counter this, markets such as Malaysia and Singapore offer subsidies for green issuance verification to decrease operational costs and increase supply.

There is, however, an evolving vision for the future of Islamic finance. Academia is calling for a sector that promotes shared prosperity and sustainable growth by increasing its support towards social and environmental development and to consider financial and non-financial performance in decision making.

Current State of Sustainable Conventional and Islamic Finance in MENA

WWF commissioned a study[2] to gain insights into MENA regions, as a primer to help it understand how to engage with key stakeholders in the MENA region working in the financial sector (with particular interest in Islamic finance).

The Middle East and North African (MENA) region, is a diverse and culturally rich part of the world, made up of: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Palestine (the occupied territories of Gaza & the West Bank), Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the United Arab Emirates and Yemen. There are approximately 380 million people living in the MENA region and Islam is the predominant religion[3].

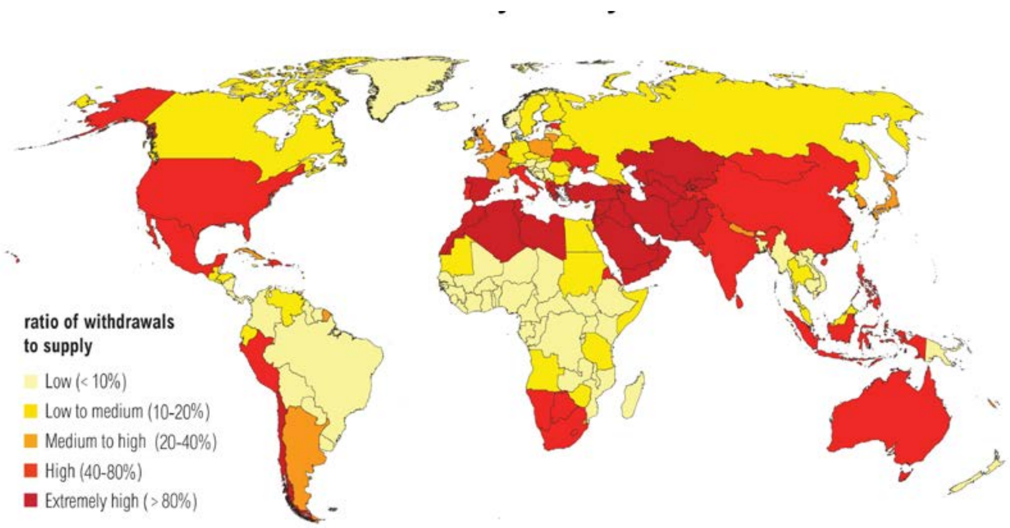
2. Earth Matters Consulting (2020): Understanding Islamic Finance for the Freshwater Practice. Unpublished
3. Desilver, D. and Masci, D. (2019). World Muslim population more widespread than you might think. [online] Pew Research Center. Available at: https://www.pewresearch.org/fact-tank/2017/01/31/worlds-muslim-population-more-widespread-than-you-might-think/

Countries in the MENA region have historically faced many challenges, including war, instability, rapid urbanisation, high unemployment, water stress, and harsh climates. Additionally, many countries in the region, particularly the Arabian Gulf countries, have been heavily reliant on fossil fuels to bolster their economy and were deeply impacted by the 2014 drop in oil prices[4].

Furthermore, future projections of climate change anticipate rising sea levels, changes in precipitation, and increased temperature, humidity, water acidity and further water stress[5]. More specifically, future projections of climate change show the region facing some of the highest water stress in the world[6] (Figure 7.1), with 12 of the 15 most water stressed cities in the MENA region[7] as shown in Figure 7.2.

However, many GCC countries tend to publicly focus less on water stress, due to the perception of having high access to water from the infrastructure developed to supply desalinated sea water. This perception has led to GCC countries having a greater focus on in securing new renewable energy capacity.

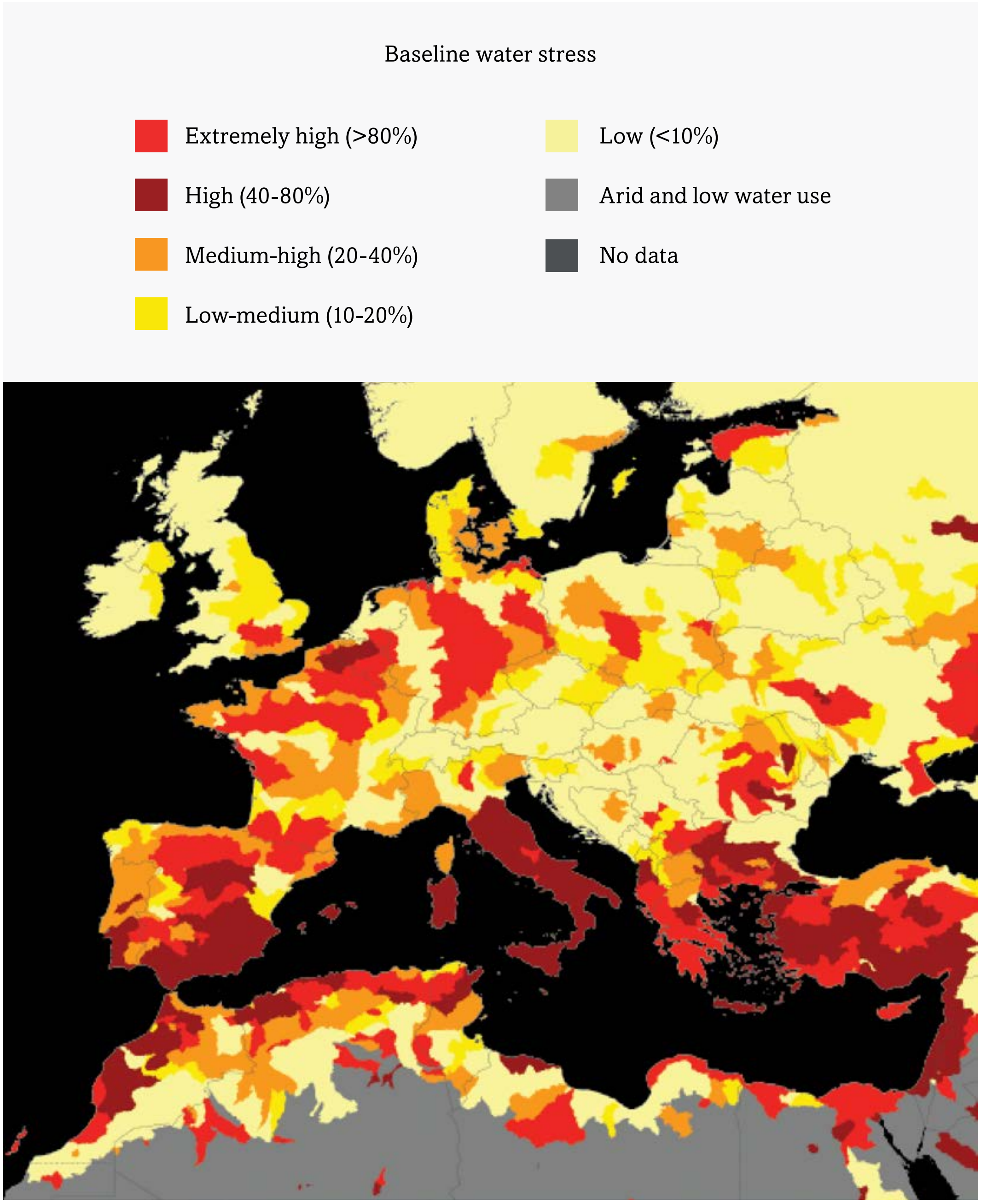
Figure 7.1
Water Stress by Country 2040 (WRI, 2015)



4. CFA Institute & UNPRI (2019). ESG Integration in Europe, The Middle East, and Africa: Markets, Practices, and Data. [online] Available at: https://www.gulfbondsukuk.org/wp-content/uploads/2019/03/UNPRI-ESG-integration-March-2019.pdf
5. EWS-WWF & Acclimatise (2017). UAE Climate Change Risks & Resilience: An overview of climate change risks to 12 key sectors (unpublished).
6. World Resources Institute (2015). Aqueduct projected water stress country rankings. Available at: aqueduct-water-stress-country-rankings-technical-note.pdf (wriorg.s3.amazonaws.com)
7. World Resources Institute (2020). Aqueduct Tool (Online). Available at: https://www.wri.org/aqueduct/

Figure 7.2
Water Stress by Country 2040 (WRI, 2015)

THE MIDDLE EAST AND NORTH AFRICA IS THE MOST WATER-STRESSED REGION ON EARTH



8. Asdaa BCW (2019). 2019 ASDA'A BCW Arab Youth Survey White Paper. [online] Available at:https://www.arabyouthsurvey.com/pdf/downloadwhitepaper/presentation-whitepaper.pdf

9. AGEDI (2017) Sea Level Rise Primer. LNRCCP. CCRG/GCF/AURAK/IO. [online] Available at: https://agedi.org/download/15187/

10. Formerly the UAE Ministry of Environment and Water (MoEW)

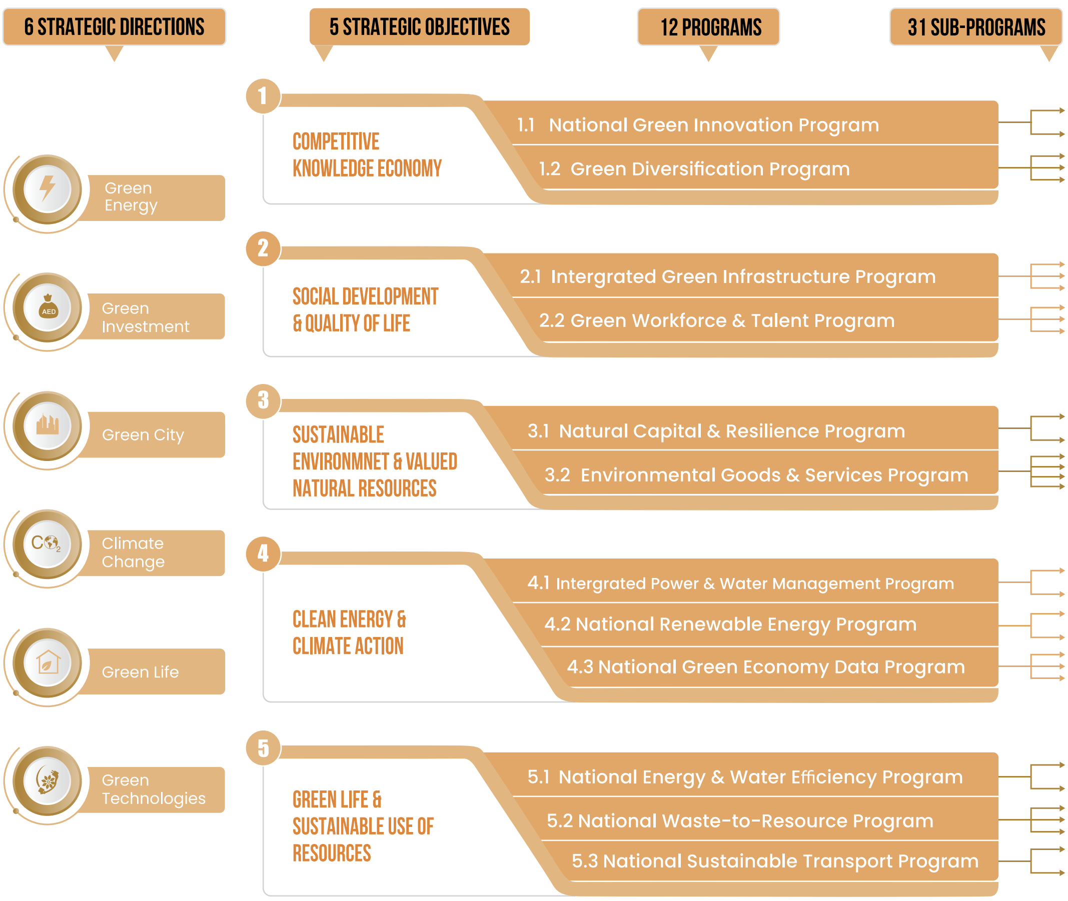
11. UAE Ministry of Climate Change & Environment (2015). State of Green Finance in the UAE UAE Green Agenda 2015-2030 The first national survey on contributions of financial institutions to Green Economy. [online] Available at: https://www.moccae.gov.ae/assets/f0dbe459/state-of-green-finance-in-the-uae.aspx

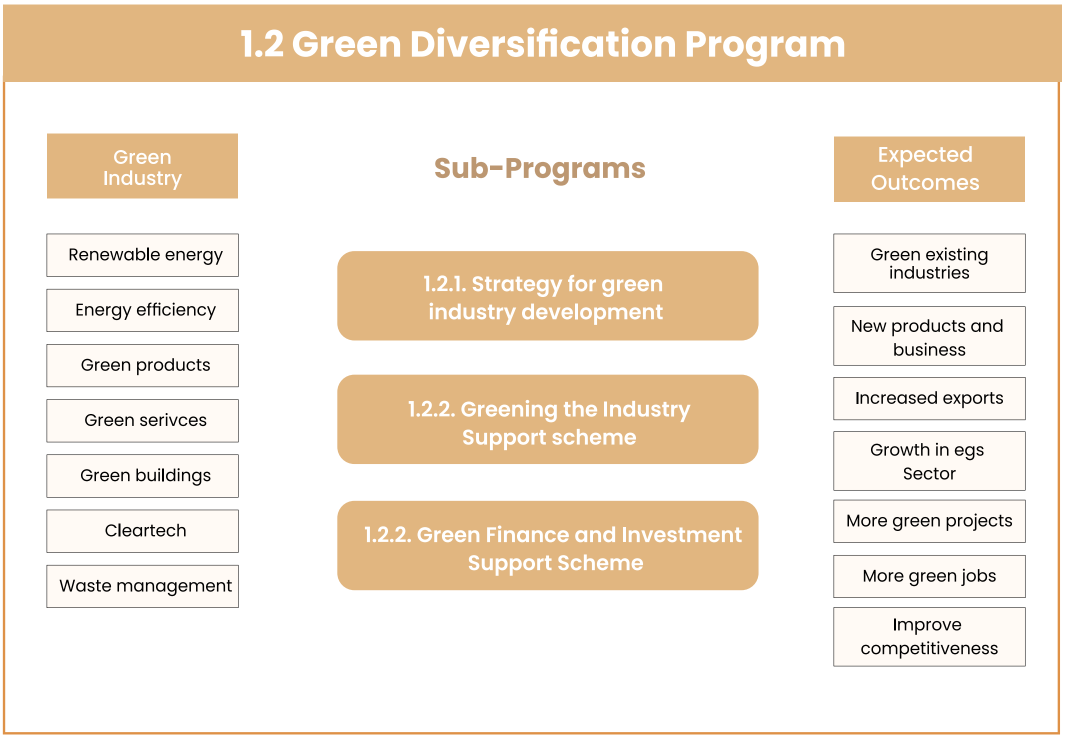
However, change is taking place across the region. The decreasing cost of renewables, global alignment on the Paris Agreement, need for diversification and pressure from youth on government to provide higher quality services (education, housing, energy subsidies, safety and jobs)[8] have presented a prime opportunity for the region to re-evaluate their strategies and build a stronger, more inclusive and resilient future. This shift has brought many new stakeholders to the table. The following section will provide a summary on some key advancements in the conventional Sustainable/Green Finance space in MENA. Additionally, countries in the GCC, especially the UAE, have conducted studies on sea level rise and projections are increasingly being accounted for in planning processes. Furthermore, the rate of ground water and oil extraction will also naturally lead to subsidence and a relative increase in sea levels. There are no public studies on the combined effect of climate change induced sea level rise and land subsidence[9].

The UAE

At the federal level, the UAE Ministry of Climate Change and Environment (MoCCAE)[10] has been leading on efforts related to sustainable finance. In 2015, the UAE cabinet adopted the 2015-2030 Green Agenda as an action plan to implement the country's Green Growth Strategy. The strategy includes programs on Green Finance and Investment with the objective to "stimulate the financial sector to invest in green projects and business"[11] (Figure 7.3). In 2015, MoCCAE conducted a survey and collected responses from 79 conventional and Islamic institutions to understand their perspectives on green finance. The key barriers listed by institutions to initiating or growing their activities in green finance were:

Figure 7.3
The UAE Green Agenda 2015-2030 & Green Diversification Structure





1. enforcement was not adequate;
2. that the sector risk was too high;
3. payback period was too long; and
4. profitable projects were lacking[12]

In 2018, MoCCAE launched the National Climate Change Plan (NCCP) 2017-2050 aimed at tackling climate change mitigation and adaptation efforts in the country, with green finance being listed as a key enabler to the plan[13]. The plan recognises that green finance is gaining momentum but that "stronger enforcement of policies and regulations in linking bankable projects and financiers is needed".[14] At the emirate level, MoCCAE partnered with the UN Environment Finance Program Initiative (UNEP FI) in 2016 to launch the Dubai Declaration on Sustainable Finance to convene the finance sector to enable a climate-resilient, inclusive green economy and sustainable development[15]. The signatories are a mix of UAE institutions, both Islamic and conventional.

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12. Ibid
13. UAE Ministry of Climate Change and Environment (2018). National Climate Change Plan of the United Arab Emirates 2017-2050.
14. Ibid
15. UAE Ministry of Climate Change and Environment (2016). Dubai Declaration of financial institutions in the United Arab Emirates on sustainable finance. Dubai.
16. Arab Forum for Environment and Development (2018). Financing Sustainable Development in Arab Countries. [online] Available at: https://www.greenfinanceplatform.org/research/financing-sustainable-development-arab-countries
17. Dubai Green Fund, details available at: https://www.dgf.ae/

In 2017, the Dubai Electricity and Water Authority (DEWA) launched a US$27 million fund to finance clean energy and other green projects[16,17]. The extent to which it will fund projects outside Dubai is unclear at present.

In 2019, the Dubai International Financial Centre (DIFC) and the Dubai Financial Market (DFM) launched the Dubai Sustainable Finance Working Group, to "create a sustainable financial hub in the region, particularly in the areas of Environment, Social and Governance (ESG) integration, cultivating sustainable companies and green financial instruments, and encouraging responsible investing"[18].

Similarly, in January 2019, the Abu Dhabi Global Market also launched the Abu Dhabi Sustainable Finance Declaration, supported by 25 signatories representing a mix of banks, government entities and investment and development authorities[19]. In 2019, the Abu Dhabi Securities Exchange also launched disclosure guidelines[20] for all listed companies to report on ESG, which are mapped according to the following UN Sustainable Development Goals (SDGs): Water (SDG6), Climate Action (SDG13), Energy (SDG7), Responsible Consumption & Production (SDG12), Reduced Inequalities (SDG10), Gender Equality (SDG5), Good Health & Well-Being (SDG3), Decent Work & Economic Growth (SDG8) and Peace Justice & Strong Institutions (SDG16).

In January 2020, the 'UAE Guiding Principles for Sustainable Finance' was launched by: Abu Dhabi Global Market; MOCCAE; the Central Bank of the UAE; the Insurance Authority of the UAE; the Securities and Commodities Authority; the Dubai Financial Services Authority; the Dubai Islamic Economy Development Centre; the Abu Dhabi Securities Exchange, Dubai Financial Market and Nasdaq Dubai. The principles were developed to boost implementation of sustainable finance, defined broadly as ESG integration, in the UAE's financial sector and equally to Islamic institutions and Shari'a-compliant entities[21].

In 2017, the first green bond of the region was issued for US$587 million by the First Abu Dhabi Bank[22] (FAB). The green bond aims to finance projects both in the UAE and internationally with the objectives of addressing climate change through investing in renewable energy, energy efficiency and sustainable water management (Figure 7.4)[23]. Currently the bond finances project in the UAE, Morocco, France and the United States and finances projects that meet sustainability criteria which include: sustainable management of living natural resources, terrestrial and aquatic biodiversity conservation and climate change adaptation, amongst other[24].

18. Dubai International Financial Centre (2019). DFM and DIFC launch Dubai Sustainable Finance Working Group.[online] Available at: https://www.difc.ae/newsroom/news/dfm-and-difc-launch-dubai-sustainable-finance-working-group/

19. Abu Dhabi Global Markets (2019). 25 Key UAE Public and Private Entities Committed For Declaration at Abu Dhabi Sustainability Week. Available online at: https://www.adgm.com/media/announcements/25-key-uae-public-and-private-entities-committed-for-abu-dhabi-sustainable-finance-declaration

20. Abu Dhabi Securities Exchange (2019) Environmental, Social and Governance (ESG) Disclosure Guidance for Listed Companies. Available online at: https://adxservices.adx.ae/WebServices/DataServices/contentDownload.aspx?doc=1704806

21. Zawya (2020). First set of guiding principles on sustainable finance published by leading financial authorities in the UAE. Available online at: https://www.zawya.com/uae/en/pressreleases/story/First_set_of_guiding_principles_on_sustainable_finance_published_by_leading_financial_authorities_in_the_UAE-ZAWYA20200115122444/

22. Green Bond originally launched in March 2017 by the National Bank of Abu Dhabi (NBAD) before merging with First Gulf Bank (FAB, 2019).

23. First Abu Dhabi Bank (2019). Green Bond Report 2019. [online] Available at: https://www.bankfab.com/-/media/fabgroup/home/about-fab/fab-green-bond-2019.pdf?view=1

24. Ibid

Figure 7.4
Use of Proceeds of FAB Green Bond (FAB, 2019)

FAB Green Bond Framework eligible categories	SDG category	Project description	Allocated amount (USD) as of 31 March 2019	Location	Share of total portfolio financing	Eligibility for green bonds	Renewable energy capacity generation	Annual GHG emissions reduced/ avoided*	Other indicators
Renewable Energy	7, 13	Financing the development of solar plants	52,470,320	UAE	8.94%	100%	100MW	175,000 tons of CO_2 every year	-
Renewable Energy	7, 13	Financing the development of solar plants	46,438,835	UAE	7.91%	100%	1,177MW	7,000,000 tons of CO_2 every year	-
Renewable Energy	7, 13	Financing the development of solar plants	15,695,272	Morocco	2.67%	100%	150MW	222,000 tons of CO_2 every year	-
Energy Efficiency	7, 9	Financing the development of green buildings	226,000,000	USA	38.50%	100%	-	-	LEED Silver Certification
Energy Efficiency	7, 9	Financing the development of green buildings	57,461,582	UAE	9.79%	100%	-	-	LEED Gold Certification
Energy Efficiency	7, 9	Financing the development of green buildings	28,653,957	France	4.88%	100%	-	-	BREEAM Excellent Rating HQE Exceptional Grade
Energy Efficiency	7, 9	Financing the development of green buildings	50,000,000	USA	8.52%	100%	-	-	LEED Gold Certification
Energy Efficiency	7, 9	Financing the development of district cooling projects	17,950,782	UAE	3.06%	100%	-	-	245,000 Refrigerant Ton (RT), utilises up to 50% less electricity consumption compared to conventional air-cooled chillers.
Energy Efficiency	7, 9	Financing the development of district cooling projects	51,539,343	UAE	8.78%	100%	-	-	90,000 Refrigerant Ton (RT), utilises up to 50% less electricity consumption compared to conventional air-cooled chillers.
Sustainable Water Management	6	Financing the development of wastewater plants	40,789,910	UAE	6.95%	100%	-	-	Treatment of 430,000 m3/day of wastewater Access to sewage treatment and re-usable water for a Population Equivalent of over 2,150,000 units

In 2017, Emirates NBD launched a Green Auto Loan to UAE residents to promote electric and hybrid cars. The bank offers applicants to waive the processing fee and offers half a percent reduction on applicable loan rates to stimulate the use of the green loan[25].

Other MENA Countries

In 2016, Morocco launched in National Roadmap for Sustainable Finance strategy, which aims to develop sustainable finance instruments and products, ensure disclosure, extend governance to ESG, promote financial inclusion, and build capacity in sustainable finance[26]. Since then, Morocco has developed guidelines for green and social bonds, guidelines on ESG and Corporate Social Responsibility (CSR) reporting and have authorised two Socially Responsible Investment (SRI funds)[27].

Additionally, the region's biggest sovereigns (Kuwait, Saudi Arabia, UAE and Qatar) have signed onto the One Planet Sovereign Wealth Funds Framework and are part of the founding working group to integrate climate change considerations in investments[28].While there are some emerging examples of action, there is no coherent region wide strategy or policy to enhance sustainable finance (e.g., like the European Union). Sustainable finance can, therefore, still be considered as a new and emerging topic in the MENA region as regulatory infrastructure and policy framework are beginning to be developed[29]. Furthermore, 'green Islamic finance' would naturally be a subset of this broader movement in sustainable finance and, therefore, can be considered as being in its infancy. For example, a review Saudi Arabia's contribution towards the SDGs and the Saudi Vision 2030 yielded in no tangible actions in the area of sustainable finance[30,31,32]. Most of the other countries in the region are recipients of development assistance and climate funds for energy efficiency and renewable energy projects[33].

The Opportunity for Islamic Social Finance in MENA

There are multiple terms that lend themselves to the intersection of Islamic finance and social and/or environmental development. However, the opportunity of Islamic finance with the SDGs, ESG integration and impact investing is of particular interest here.

It is easy to see how the principles of Islamic finance can be applied to promote pro-poor development and environmental protection as they are both consistent with the MAS. As stated above, Islamic finance has the for contributing towards SDGs 1, 2, 3, 5 and 16 (please refer to the figure on pg. 191) to enable those in the base of the pyramid to get out of the poverty trap. This is due to the deep-rooted history of Islamic finance and "bringing societal good with their rigorous moral and social criteria and emphasis on inclusiveness and broad understanding of business–society relations.[34,35]

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25. Arab Forum for Environment and Development (2018). Financing Sustainable Development in Arab Countries.[online] Available at: https://greenfinanceplatform.org/sites/default/files/downloads/resource/AFEDReportfinancingSDinArabCountries2018-.pdf
26. UN Environment & World Bank (2017). Roadmap for a Sustainable Financial System. [online] Available at:http://documents.worldbank.org/curated/en/903601510548466486/pdf/121283-12-11-2017-15-33-33-RoadmapforaSustainableFinancialSystem.pdf
27. Moroccan Capital Market Authority (2019). Green Bonds in Morocco: the regulator's experience. [online] Available at: https://www.ifc.org/wps/wcm/connect/e2e391bb-bb17-4b11-8cc1-52ba486d4d01/Green+Bonds+in+Morocco_02072019.pdf?MOD=AJPERES&CVID=mQwMGpM
28. One Planet Sovereign Wealth Funds. (2019). One Planet Sovereign Wealth Funds. [online] Available at:https://oneplanetswfs.org/
29. Arab Forum for Environment and Development (2018). Financing Sustainable Development in Arab Countries.[online] Available at: https://greenfinanceplatform.org/sites/default/files/downloads/resource/AFEDReportfinancingSDinArabCountries2018-.pdf
30. Kingdom of Saudi Arabia - Vision 2030 (2018). Towards Saudi Arabia's Sustainable Tomorrow: First Voluntary National Review 2018 - 1439. [online] Available at:https://sustainabledevelopment.un.org/content/documents/20230SDGs_English_Report972018_FINAL.pdf

The protection of the planet and the environment, climate management and adaptation, are all goals that also conform directly with MAS. The Islamic Declaration on Climate Change also proves the alignment between Islamic scholars on the need to tackle climate change. The declaration demands the Islamic community to reduce greenhouse gas emissions (GHGs) and for wealthy nations to "invest in the creation of a green economy"[36]. However, as stated earlier, the Islamic finance sector in practice has not contributed towards these social or environmental objectives in the way that it was anticipated. The sector has instead invested much below[37] its potential[38] and has been cited as experiencing a potential "mission-drift", with Islamic economists demanding much more from the sector to actually contribute towards social and environmental development[39].

Many experts believe that Islamic development finance has not yet extended itself to "understanding the critical value that ecosystem services and a healthy environment provide to society". So, whilst the compatibility between Islamic finance and the global goals on climate change, biodiversity conservation, and the environment is high, its implementation is low. The same is believed by economists working in ESG in the Arabian Gulf region. While there is clear overlap on social and environmental issues and Islamic finance (Figure 7.5), little convergence has been realised. Experts state that while some progress has been made on social dimensions of Islamic finance, "environmental considerations seem to be less of a focus in the Islamic finance industry".

Figure 7.5
Comparison of ESG, Islamic Finance & Conventional Finance (CFAI & UNPRI, 2019)

■ Never ■ Rarely (low levels) ■ Sometimes (medium levels) ■ Often (high levels) ■ Always

PRACTICE	ESG INVESTING	ISLAMIC FINANCE	CONVENTIONAL FINANCE
Systematic ESG integration	Medium levels	Low levels	Low levels
Screening	High levels based on client-specific/fund-specific screening policies	100% application based on shariah	Low levels
Company engagement on environmental and social issues	High levels	Low levels	Low levels
Voting	High levels	Low levels	Medium levels
Dividends	No restrictions	100% of dividends are subject to a "purification" process	No restrictions
Interest/ riba earned	No restrictions	No riba permitted	No restrictions
Security lending	High levels with leading practitioners applying rules that ensure they can vote	No security lending permitted, assets must be owned, and riba is prohibited	High levels
Shorting	Low levels	No shorting permitted and assets must be owned	Low levels
Restriction on high leverage	No restrictions	100% application to avoid earning riba directly and indirectly through exposure to high-interest earning companies	No restrictions

31. Kingdom of Saudi Arabia (2017). Saudi Vision 2030. Available online https://vision2030.gov.sa/sites/default/files/report/Saudi_Vision2030_EN_2017.pdf

32. UNEP Finance Initiative (2018). Sustainable Finance Country Profile: Saudi Arabia. [online] Available at:http://unepinquiry.org/wp-content/uploads/2018/10/Saudi_Arabia.pdf

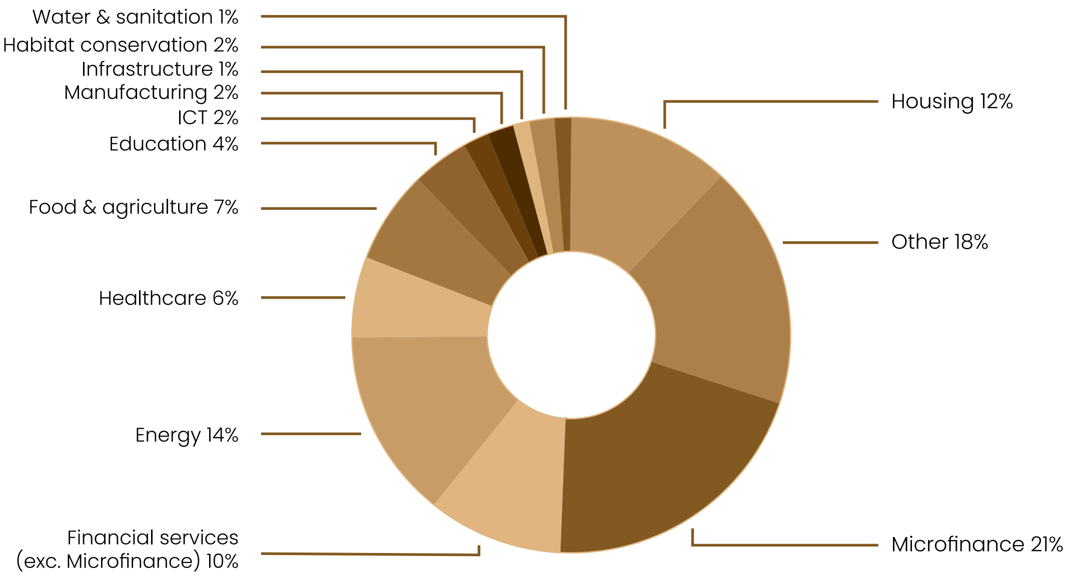
33. Arab Forum for Environment and Development (2018). Financing Sustainable Development in Arab Countries. [online] Available at: https://greenfinanceplatform.org/sites/default/files/downloads/resource/EDReportfinancingSDinArabCountries2018-.pdf

In similar vein, the impact investing[40] space has also been positioned as having the potential to intersect with Islamic Finance. Impact investing has the potential to fund an estimated $1 trillion towards the SDGs[41], but its investments towards water and sanitation and habitat conservation are still small, at 1% and 2% invested respectively (Figure 7.6)[42]. However, despite the synergies between Islamic finance and impact investing the interactions between the two sectors is limited[43].

Despite the synergies between Islamic finance and impact investing the interactions between the two sectors is limited

Most of the referred literature cites that the main barriers hindering the Islamic finance sector from investing in the SDGs are lack of regulation, lack of Shari'a governance in green Islamic finance and lack of financial incentives. For example, issuing green products are more complex and costlier than their conventional counterparts. To counter this, markets such as Malaysia and Singapore, offer subsidies for green issuance verification to decrease operational costs and increase supply.

Figure 7.6
Conventional Impact Investments by Sector in 2015 (IICPSD/UNDP, 2014).



34. United Nations Development Programme Istanbul International Center for Private Sector in Development (UNDPIICPSD), Islamic Development Bank Islamic Research and Training Institute (IRTI) (2017). I for Impact: Blending Islamic Finance and Impact Investing for the Global Goals. [online] Available at: https://www.undp.org/content/dam/istanbul/docs/IRTI_UNDP%20IFII%20Report%20EE_V3.pdf
35. CFA Institute & UNPRI (2019). ESG Integration in Europe, The Middle East, and Africa: Markets, Practices, and Data. [online] Available at: https://www.gulfbondsukuk.org/wp-content/uploads/2019/03/UNPRI-ESG-integration-March-2019.pdf
36. Ibid
37. Amount not cited
38. Ahmed, H., Mohieldin, M., Verbeek, J., and Aboulmagd, F. (2015). On the sustainable development goals and the role of Islamic finance. World Bank Policy Research Working Paper No. 7266. Available at SSRN: https://ssrn.com/abstract=2606839.

There is however an evolving vision for the future of Islamic finance. Academia is calling for a sector that promotes shared prosperity and sustainable growth by increasing its support towards social and environmental development and to consider financial and non-financial performance in decision making[44,45] (Figure 7.7).

Figure 7.7
Envisioned Future for the Islamic Finance Landscape (Bank Negara Malaysia, 2018)

Envisioned Future Financial Landscape
Driven by long term and wider objective (profit, people and planet)
Performance measurement considers both financial and non-financial aspects
Innovation to create values for all
Impact-based approach that fosters good conduct
Meaningful and active roles of key stakeholders (consumers, employees and public)

Modelling the Opportunities for Islamic Social Finance

While the climate and development sectors are a natural fit to the landscape in which Islamic finance is permitted to operate, financial proposals around such projects inevitably need to be structured following Islamic principles as well to attract participation from custodians of Islamic capital in both government and the private sectors.

39. Obaidullah, Mohammed, Managing Climate Change: The Role of Islamic Finance (Jan 01, 2017). IES journal Article, Volume 26, Issue 1, 2018. Available at SSRN: https://ssrn.com/abstract=3303687 or http://dx.doi.org/10.2139/ssrn.3303687

40. Impact investing is defined as investors who seek a mix of financial profits (high to low) & social/environmental impact (IICPSD/UNDP, 2014).

41. Date not cited.

42. IICPSD/UNDP (2014). Islamic Finance and Impact Investing. [online] Available at: https://www.undp.org/content/dam/istanbul/docs/Islamic_Finance_Impact.pdf

43. United Nations Development Programme Istanbul International Center for Private Sector in Development (UNDPIICPSD), Islamic Development Bank Islamic Research and Training Institute (IRTI) (2017). I for Impact: Blending Islamic Finance and Impact Investing for the Global Goals. [online] Available at:https://www.undp.org/content/dam/istanbul/docs/IRTI_UNDP%20IFII%20Report%20EE_V3.pdf

44. World Bank & Islamic Development Bank (2017). Global Report on Islamic Finance: Islamic Finance - A Catalystfor Shared Prosperity? cb. [online] Available at: https://openknowledge.worldbank.org/handle/10986/25738

Introducing Dutch Fund for Climate and Development – Model for Islamic Social Finance

While there may be multitude of opportunities suitable for Islamic finance, Dutch Fund for Climate and Development provides an exceptional and unique preposition that Islamic finance sector can take the lead from and showcase a very powerful implementation model of MAS and SDGs in a commercially viable and socially impacting manner.

Dutch Fund for Climate and Development – A Powerful Strategy of Sustainable BNS

As noted earlier, the extraordinary scale and urgency of the climate crisis has led to an increase in global flows of climate-related investment in recent years – resulting in real changes across the world. But global climate finance remains well short of the overall target and most of the funds are focused on mitigation. Annual flows to projects with an adaptation impact in developing countries continue to lag far behind. Blending public funds with private sector finance can help close the current funding gap and support the most vulnerable groups in addressing climate and development challenges. High quality projects that bring a development as well as a financial dividend are needed to ensure such blending is effective." – this is the motivation behind establishment of Dutch Fund for Climate and Development (DFCD) that was launched in 2019, salient features of which are reproduced below:

- The FMO-led consortium aims to deliver such projects through innovative management of the DFCD, unleashing a flood of new climate-smart investments.
- The alliance of FMO (The Dutch development bank), CFM (Climate Fund Managers), SNV (a not-for-profit international development organization, working in Agriculture, Energy, and Water, Sanitation & Hygiene) and WWF harbor a wealth of international expertise in finance, banking, social development and environment.
- This expertise is deployed to construct a pipeline of high-quality, bankable projects to contribute to (i) real development impact in climate-vulnerable communities; (ii) deepen resilient economic growth; and (iii) enhance the adaptation and mitigation efforts in developing countries.
- The DFCD focus is on a set of high impact investment themes within four key Rio Marker sectors: – water, agriculture, forestry and environmental protection – all of which are critical to tackling climate change and achieving the Sustainable Development Goals. The chosen focus areas are where there is the most pressing need for investing in low-carbon, climate-resilient projects in vulnerable countries. They also offer the significant opportunities for impact and improving development outcomes and are consistent with the priorities of developing countries as stated in their Nationally Determined Contributions under the Paris Agreement. These themes also have a clear link to Dutch climate diplomacy efforts and core strengths of Dutch business: exports of technology, knowledge and services in water infrastructure, and agriculture.
- The DCFD also enhance the health of critical ecosystems – from rivers to tropical rainforests, marshes to mangroves. This will help protect communities and cities from the increasing frequency of extreme weather events and benefit the vanishing biodiversity that provides people with water, food and medicine – and so much more.
- The high impact investment themes are: (i) Climate resilient water systems and freshwater ecosystems: drinking water and sanitation infrastructure, restoration and sustainable management of wetlands, headwaters and floodplains; (ii) Boost food security with climate smart agriculture: funding more sustainable, efficient and productive approaches from

45. Bank Negara Malaysia (2018). Value-based Intermediation: Strengthening the Roles and Impact of IslamicFinance. [online] Available at: http://www.bnm.gov.my/index.php?ch=57&pg=137&ac=612&bb=file

smallholder farmers to agri-business; (iii) Forestry for the future: promoting afforestation and reforestation; and (iv) Protecting the environment, protecting people: restoration of ecosystems, such as wetlands and mangroves, which are nature's best defences against extreme floods, droughts and storm surges.

- The DFCD is structured with three separate but operationally linked facilities, each with a specific sub-sector focus and role across the project lifecycle: the Origination Facility, the Water Facility and the Land Use Facility.
- Managed by WWF-NL and SNV collectively, the Origination Facility is positioned exclusively for project identification and (pre-)feasibility development activities with a cross DFCD thematic subsector focus. This window seeks to leverage the landscape strategy for activity sourcing and develop opportunities into viable business cases for the two investment windows. The Origination Facility provides grant funding and TA for its activities.
- An Origination Facility is the engine of this transformative DFCD, turning embryonic ideas into bankable business cases. Working with local companies and stakeholders, bankable projects are developed using a landscape approach in which building the resilience of an entire ecosystem will benefit the communities and businesses that depend on them. The facility will develop 35 projects to the stage where they can then be picked up by one of the DFCD's other two finance facilities for further development, matchmaking and investment, or undertaken by others.
- Managed by CFM, the Water Facility targets investments that have graduated from the Origination Facility in sectors related to water and sanitation infrastructure, as well as environmental protection. The Water Facility contributes to the development, construction and operational phases of investments. To achieve this the Water Facility provides development grants, equity for construction and operational debt to projects. It utilizes the proven fund structure of Climate Investor One and targets a €50 million Development Fund, a €500 million Construction Equity Fund and a €500 million Refinancing Fund.
- The Water Facility also source opportunities from CFM's external networks and provides post-construction phase community development and TA. The Water Facility focuses on providing construction equity into water infrastructure and environmental protection projects. By providing risk-bearing equity capital, it will be able to crowd-in further investors to help ensure that 30 projects are fully financed and implemented.
- Managed by FMO, the Land Use Facility targets investments that have graduated from the Origination Facility in sectors relating to agroforestry, sustainable land use and climate resilient food production. The Land Use Facility has at its disposal the full range of financial instruments offered by FMO to provide growth finance to companies, including grants, equity and debt.
- It also sources opportunities from FMO's external networks and provides post-construction phase community development and TA financing. The Land Use Facility will provide growth finance by deploying a range of financial instruments to overcome barriers to private sector investment in climate-smart agriculture and forestry projects – with the aim of ensuring 25 projects reach financial closure.
- Using these facilities, DFCD will leverage €500 million–€1 billion of private finance over the lifetime of the DFCD (until 2037), generating a significant multiplier effect with the €160 million from the Ministry of Foreign Affairs. As these funds are revolving and keep growing, they ensure financial sustainability and real impact at local and global scale. The Consortium also expects all projects to be 50% co-funded, while several Origination Facility projects will be very suitable for external public sector funding – and hence will mobilize these funds as well.

- The Consortium is governed through a DFCD Advisory Board, which role is primarily to: (i) monitor/report/evaluate the implementation & progress and financial & impact results of the three Facilities; (ii) act as a general forum for communication; and (iii) monitor significant trends in global climate policy & finance and assess their relevance for the DFCD.

Islamic Fund for Climate and Development – A Model Proposition

Given that most Islamic financial institutions are in the GCC, there is therefore an important opportunity to highlight the link between water stress, climate vulnerability and the role for Islamic financial institutions (among other stakeholders) to reduce these risks.

The study[46] referred to in preceding gave WWF insights into Islamic finance sector, as a primer to help it understand how to engage with key stakeholders in the MENA region working in Islamic finance sector with a view to having them take part in initiatives similar to the DFCD. The study identified opportunities and synergies between Islamic finance [including, Islamic Social Finance (zakah, sadaqa, waqf and Islamic microfinance)] and the BNS conservation and climate related projects. Study highlights useful insight into the size and significance of IsBF industry which is currently estimated to have about US$2.941 trillion of assets (close to half of which is in the GCC alone or close to 2/3rd in the MENASA region including GCC and close to 1/4th in South-East Asia region). The study also revealed that custodians of Islamic capital remain keen and interested in participating commercially viable BNS projects. This interest has been identified amongst a vast variety of Islamic finance stakeholders including Islamic financial Institutions, sovereign / multilateral organizations, family offices, high net worth individuals, fund managers, and philanthropic organizations.

WWF and Ajman University Center for Excellence in Islamic Finance (AU-CEIF) have jointly thought through the possibility of creation, launch and promotion of an Islamic version/tranche of DFCD – 'Islamic Fund for Climate and Development (IFCD). Following the model and approach of DFCD and leveraging on the expertise and track record of its Consortium members, IFCD has the potential to offer a market leading opportunity to Islamic finance sector in BNS space. While creation of IFCD will require Shari'a structuring, compliance, and governance system; consortium should well be able to manage and run such a strategy with support and partnership of various stakeholders of Islamic finance sector.

46. Earth Matters Consulting (2020): Understanding Islamic Finance for the Freshwater Practice. Unpublished

CHAPTER 08

Leveraging Islamic Social Finance to Achieve the SDGs

Learning from UN's Experience

Introduction

The COVID-19 pandemic has affected us in various ways and at different levels, but amongst the most distressed have been the refugees, internally displaced persons (IDPs) and other people of concern. By the end of 2020, 80 million people were forcibly displaced globally. The pandemic does not only raise concerns on the spread of COVID-19 infections, but also on the exacerbation of the already pressing issues faced by the refugees. These include food insecurity and malnutrition. One-third of all refugees and IDPs combined live in the top-10 most food-insecure countries, of which Muslim-majority countries are suffering acute food insecurity. Other dilapidating impacts have been on education, jobs, shelter, and the marginalized communities (women and children).

The 17 Sustainable Development Goals (SDG) by the United Nation are set to help evade the ever-increasing human crisis through responsibility and collaboration. It is an ideal roadmap for individuals, corporates, international institutions and governments to plan for a safer and sustainable economy.

Islamic social finance is a sector that aligns perfectly with the SDGs. It promotes socio-economic balance and can effectively address issues like income distribution and poverty alleviation, which the conventional finance has not been able to address adequately. Globally, the Islamic finance assets are valued at US$2.941 trillion[1]. The Islamic social finance instruments, such as zakat, sadaqa, waqf, sukuk and Islamic microfinance, collectively are estimated to surpass the US$1 trillion mark annually.

Most refugees, IDPs and other people of concern originate from, or are hosted by the Organization of Islamic Cooperation (OIC) member countries. Realizing this, the UN agencies are now increasingly taking initiatives to leverage Islamic social finance tools to meet the SDGs and support refugees globally.

The Islamic social finance instruments, such as zakat, sadaqa, waqf, sukuk and Islamic microfinance, collectively are estimated to surpass the US$1 trillion mark annually

One of the leading examples is United Nations High Commissioner for Refugees (UNHCR), the UN Refugee Agency. In 2020, through its Refugee Zakat Fund, UNHCR reached over 2.1 million beneficiaries in 13 countries through US$61.5 million in zakat and sadaqa funds. Like UNHCR, other UN agencies are also investing in integrating zakat and sadaqa in their initiatives and are also exploring other Islamic social finance tools.

These tools include waqf, sukuk and Islamic microfinance instruments. Apart from UNHCR, other UN agencies willing to adopt Islamic social finance include: United Nations Children's Emergency Fund (UNICEF), The World Food Programme (WFP), United Nations Development Programme (UNDP) and United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). The recent developments across the UN agencies, with a special focus on UNHCR, will be the focus of this chapter (see Table 8.1).

1. GIFR estimate at the end of 2020.

Islamic Social Finance for United Nation Agencies and Sustainable Development Goals

An introduction to United Nation (UN) agencies

The Islamic finance sector is massive and booming worldwide. As stated previously. At the end of 2020, the Islamic finance assets were valued at US$2.941 trillion, a 7.61% increase from previous year. It is expected to grow at a rate between 6.54% (conservative assumption) and 14.84% (generous assumption) in the next 5 years[2]. Within Islamic social finance, zakat plays an important role. The precise amount paid by donors is impossible to ascertain, since some zakat donations are done informally from donor to recipient, and often in-kind than in cash. However, some institutions have reported that the estimated size of annual zakat ranges between US$200 billion and US$1 trillion[3].

Humanitarian needs are at its all-time peak, especially due to the impact of the COVID-19 pandemic. At the end of 2020, around 80 million people were forcibly displaced worldwide. Many of the communities and people in need originate from or are located in Muslim-majority countries. With that, UN agencies are now increasingly leveraging Islamic social finance tools to achieve the SDGs and support the vulnerable in these countries.

> The estimated size of annual zakat ranges between US$200 billion and US$1 trillion

UNHCR
The UN
Refugee Agency

United Nations High Commissioner for Refugees (UNHCR)

UNHCR, the UN Refugee Agency, is a UN agency working to save lives, protect rights and build a better future for refugees, internally displaced communities and stateless people. UNHCR was founded in 1950 and is headquartered in Switzerland. It currently operates in 134 countries around the world.

U N
D P

United Nations Development Programme (UNDP)

UNDP is the global development network of the UN. It promotes technical and investment cooperation among nations to support poverty eradication, reduce inequalities and exclusion, and build resilience for a sustained progress. It plays a critical role in helping countries achieve the SDGs. UNDP was founded in 1965 and is headquartered in the United States. It currently operates in over 165 countries around the world.

2. See Chapter 1.
3. UNDP. 2018 Sep7. Zakat for the SDGs. Retrieved from https://www.undp.org/blogs/Zakat-sdgs

The World Food Programme (WFP)

WFP is the food-assistance branch of UN, focused on hunger and food security, and is the largest provider of school meals. It provides food assistance for people recovering from conflict, disasters, and the impact of climate change. Founded in 1961, WFP is headquartered in Rome and currently operates in over 80 countries around the world.

United Nations Children's Emergency Fund (UNICEF)

UNICEF, also known as the United Nations Children's Fund, is a UN agency responsible for providing humanitarian aid to children worldwide, to defend their rights and help them fulfil their potentials. UNICEF was founded in 1946 and is headquartered in the United States. It currently operates in over 190 countries around the world.

United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

UNRWA is a UN agency that supports the relief and human development of Palestinian refugees. Sister UN agencies share skills and expertise with UNRWA in addition to projects benefiting Palestine refugees in other multi-sectorial areas. Founded in 1949, UNRWA is headquartered in Amman and in Gaza.

For centuries, Muslim communities, states and organisations have been using the power of religiously mandated communal solidarity for the purposes of economic and social development and charitable giving. This is evidenced in the central role that waqf and zakat agencies play in the economy of any given Muslim country as vectors of both economic stability and economic growth.

UN agencies would immensely benefit from collaborating with such entities, and more so by complementing their local knowledge and expertise with the UN's international reach, efficiency, and capabilities to serve a common purpose. A brief introduction of the UN agencies actively involved in adopting Islamic social finance follows.

Sustainable Development Goals (SDGs) as the Global Agenda

The 2030 Agenda for Sustainable Development was adopted in 2015 by the UN General Assembly to achieve the Sustainable Development Goals (SDGs) by the year 2030. This followed the Millennium Development Goals, which ended in 2015. These goals are presented in Figure 8.1.

Figure 8.1
UN's SUSTAINABLE DEVELOPMENT GOALS

These SDGs seek to alleviate symptoms of a broken and unsustainable economic system that are at the root of all inequalities around the world. The exploitative economic practices have led to not only the impoverishment of communities and states, poverty, and hunger, but also to irreversible global issues such as climate change. Climate change has been contributing to increasing inequalities globally, as low- and middle-income countries are affected by the economic practices and resulting air pollution of the handful of industrialized countries.

Complying with the SDGs is a shared responsibility of governments, industries, international institutions and the general public. It provides a roadmap to combat some of the pressing global issues through commitment and collaboration.

Table 8.1
UN Agencies, SDG and Islamic Social Finance Instruments Mapping

Agency	Most relevant SDGs	Relevant Islamic Social Finance Instruments
UNHCR The UN Refugee Agency	#1 - No poverty, #2 - Zero hunger, #3 - Good health and well-being, #4 - Quality education, #6 - Clean water and sanitation, #7 - Affordable and clear energy, #8 - Decent work and economic growth #11 - Sustainable cities and communities, #17 - Partnerships for the goals	Zakat/ Sadaqa (obligatory/voluntary charity) Waqf (endowment) Islamic microfinance
UNDP	All 17 SDG goals are relevant	Zakat/ Sadaqa (obligatory/voluntary charity) Waqf (endowment) Sukuk (bonds) Islamic microfinance

World Food Programme

Most relevant SDGs

#1 - No poverty,
#2 - Zero hunger,
#3 - Good health and well-being,
#6 - Clean water and sanitation,
#8 - Decent work and economic growth,
#9 - Industry, innovation and infrastructure,
#12 - Responsible consumption and production,
#17 - Partnerships for the goals

Relevant Islamic Social Finance Instruments

Zakat/ Sadaqa (obligatory/voluntary charity)
Waqf (endowment)

unicef

Most relevant SDGs

#2 - Zero hunger,
#3 - Good health and well-being,
#4 - Quality education,
#5 - Gender equality,
#6 - Clean water and sanitation,
#8 - Decent work and growth,
#10 - Reduced inequalities,
#17 - Partnerships for the goals

Relevant Islamic Social Finance Instruments

Zakat/ Sadaqa (obligatory/voluntary charity)
Waqf (endowment)

unrwa

Most relevant SDGs

#1 - No poverty,
#2 - Zero hunger,
#3 - Good health and well-being,
#4 - Quality education,
#6 - Clean water and sanitation,
#7 - Affordable and clear energy,
#8 - Decent work and economic growth,
#11 - Sustainable cities and communities,
#17 - Partnerships for the goals

Relevant Islamic Social Finance Instruments

Zakat/ Sadaqa (obligatory/voluntary charity)
Waqf (endowment)
Islamic microfinance

Islamic Finance's Inherent Social Impact Characteristics

Like the SDGs, Islamic finance provides related core principles for creating a sustainable and just economic order, coupled with various tools for governments, industries, international institutions and individuals. In response to the widely accepted yet fundamentally flawed economic paradigm, governments (in Muslim and non-Muslim countries) and organisations have explored Islamic economics and finance to promote change through participative economic practices with a holistic approach towards the individual, society, and their collective well-being.

Islamic finance hit the spotlight, following the 2008-2009 global recession, when it became evident that the economic meltdown might not have occurred had the non-exploitative and fiscally responsible values that permeate Islamic economics were more widely adopted. This even led Christine Lagarde, then French Finance Minister (now head of the European Central Bank, and previously head of the IMF) to peddle the virtues of Islamic finance and vowed in 2008, "to make Paris a great centre for Islamic finance".

So why is the conventional financing system exploitive? Excessive debt and its servicing are the striking features of interest-based system, where yesterday's debt can be repaid by taking out more debt today. It does not only stifle economic growth but also causes social disparities and creates huge gaps between the rich and the poor. It also renders ineffective the efforts made by governments and international institutions, such as the UN, World Bank and IMF, to reduce poverty. Despite the growth in many parts of the world, a large number of people are unemployed, half-fed and mistreated as a consequence of unhindered market forces. There is a need to reduce asset distributional inequalities, and Islamic finance can play its part in striking a balance between the social and economic aspects of the human society in many parts of the world. It can effectively address issues like income distribution and poverty alleviation, which conventional finance has not been able to address as effectively. Some key features that make Islamic finance distinct from conventional finance include:

- Socio-economic and distributive justice, a comprehensive system of ethics and moral values.
- Prohibition of interest, excessive uncertainty, gambling and all other games of chance.
- Emphasis on social welfare system based on mutual help, character building, behavioural changes, and the system of zakat to dignify the poor.
- Right of capital to enjoy a just return with the condition that it also bears the liability of risk of any loss.
- The debtor cannot be charged any amount over the amount of debt owed, although debt would typically have built in it the margin of profit for the creditor as debt creation is permitted only through an actual trade of a legitimate and compliant asset.
- Loans are only granted in limited circumstances but for no interest – such loans are, therefore, used to cater for consumption needs of poor and needy or temporary overdraft needs of some businesses and the Islamic microfinance model that employs interest free loan as the financing model.

Indeed, Islamic finance can help create a sustainable and just economic order through its various tools that encourage risk-sharing, economic participation, and social cohesion resulting from mandatory and recommended acts of charity. It prohibits practices such as market speculation and interest (including excessive and exploitative interest) both of which has been among the main reasons for successive economic crises.

The range of Islamic finance instruments, as opposed to the ones based on interest, include sale of goods on mark-up in price, sharing of profits and losses through partnerships, lease of assets, forward sale and the like. One should also mention Islamic social finance tools such as zakat, sadaqa, waqf, qard hasan (interest free loans) and Social Sukuk. These tools are being widely used by states and organisations alike, including now various UN agencies, for the achievement of the SDGs.

In fact, the World Humanitarian Summit, held in Turkey back in 2016, had brought in more emphasis on the role of Islamic finance in the global humanitarian movement. One of the recommendations states: 'The Global Islamic Finance and Impact Investing Platform and numerous other Islamic finance initiatives will expand the financing base for crisis affected people. The global crisis response platform, soon to be operationalized by the World Bank, will also provide resources for risk mitigation and crisis response to low- and middle-income countries, with an emphasis on those hosting refugees[4].

Islamic Social Finance Instruments

The Islamic social finance can be classified into three broad categories:

- Philanthropy: zakat (obligatory charity), sadaqa (voluntary charity) and waqf (endowment)
- Social investment: sukuk (Islamic bonds)
- Islamic microfinance

Zakat

Zakat is obligatory almsgiving mandated by Islamic law. It must be paid by all Muslims who meet certain wealth criteria (nisab). It is calculated 1/40 (2.5%) of one's accumulated wealth over the course of a lunar Islamic year. It can be financial or in-kind (gold, silver, crops, livestock, etc.). It is usually given to those most in need, as an immediate form of assistance, rather than an investment. In some Muslim-majority countries, zakat is collected and distributed by the state, while in others, this is done by semi-governmental or private foundations or institutions. In many cases, zakat is given directly to its beneficiary by the donor, without going through an intermediary.

Zakat is especially aligned with the SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-Being), 4 (Quality Education), 6 (Clean Water and Sanitation), 8 (Decent Work and Economic Growth) and 10 (Reduced Inequalities)

As zakat is distributed mainly in the form of direct cash assistance to beneficiaries or in the form of goods, it contributes to alleviating poverty, as well as enabling beneficiaries to gain, through said cash assistance, better access to healthcare, education, and clean water. It also stimulates economic growth and helps reduce inequalities. As such, zakat is especially aligned with the SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-Being), 4 (Quality Education), 6 (Clean Water and Sanitation), 8 (Decent Work and Economic Growth) and 10 (Reduced Inequalities).

Sadaqa

Sadaqa is recommended almsgiving and applies the same Shari'a principles for application as for zakat. For instance, both sadaqa and zakat cannot be used to establish an alcohol shop, or a pork butchery. The only difference is that zakat is a mandatory charity, while sadaqa is a voluntary charity. Also, while sadaqa isn't as quantifiable as zakat, it remains to be a viable source of funding that can be utilized for various activities that go beyond cash and goods, to include services and infrastructure. An interesting form of Sadaqa is called Sadaqa Jariya. It allows for a charitable gift to continue benefiting people, even after the donor has passed away. It can take, for instance, the form of a school, hospital or water well built, and maintained for a positive long-term effect in the community.

Waqf

A waqf (plural awqaf) is an endowment on assets used for education, religious and charitable causes. This endowment can be structured on underlying immovable assets, such as real estate, or it may be structured as a cash-waqf — utilizing financial assets (such as investments in Islamic securities/sukuk) to generate returns. The latter, a more modern approach compared to the traditional real estate based approach, is being increasingly adopted by charitable organisations to generate funds to serve beneficiaries.

The purpose of a waqf is to benefit the community with its proceeds. A waqf is usually (but not always) given in perpetuity, with no intention of being reclaimed by the donor. Awqaf have been used for development and humanitarian purposes in lower-income countries, including providing for basic needs (housing, food security, disaster relief, clean water access, sanitation facilities), education (building of schools and universities), health (building of hospitals) and community development (creation of related business associations and workforce development). Waqf assets are estimated at anywhere between US$100 billion[5] and US$1 trillion[6].

Through their role in providing for communities around them as well as facilitating access to healthcare and education, awqaf have been contributing towards the SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-Being), 4 (Quality Education), 6 (Clean Water and Sanitation), 8 (Decent work and economic growth), 9 (Industry, innovation, and infrastructure), 10 (Reduced inequalities) and 11 (Sustainable Cities and Communities).

4. "Outcome of the World Humanitarian Summit - Report of the Secretary-General (A/71/353) - World." ReliefWeb, reliefweb.int/report/world/outcome-world-humanitarian-summit-report-secretary-general-a71353.
5. 2020 UNHCR Annual Zakat Report, Zakat.unhcr.org/wp-content/uploads/2020/04/IP-English-Impact-Full-Final.pdf
6. The World Bank, 2019, Maximizing Social Impact Through Waqf-Solutions, documents1.worldbank.org/curated/en/930461562218730622/text/Maximizing-Social-Impact-Through-Waqf-Solutions.txt.
7. Sukuk Monitor - Refinitiv, 2020, Sukuk Bulletin Q3 2020, www.refinitiv.com/perspectives/wp-content/uploads/2020/12/Refinitiv-Sukuk-Bulletin-Q3-2020.pdf.

> Waqf assets are estimated at anywhere between US$100 billion and US$1 trillion

Sukuk

Sukuk are like bonds and are asset-based securities that can be used to finance a diverse range of projects, especially in real estate. A sukuk holder is given ownership of a designated asset or pool of assets, which then allows them a share of the revenue of the said asset. This market is growing, and sukuk are being issued at more than USD150 billion per year[7]. Given the wide range of projects that can be funded, sukuk can contribute to the SDGs 3 (Good Health and Well-Being), 4 (Quality Education), 5 (Gender Equality), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action), 14 (Life Below Water), 15 (Life on Land) and 16 (Peace Justice and Strong Institutions).

> Sukuk can contribute to the SDGs 3 (Good Health and Well-Being), 4 (Quality Education), 5 (Gender Equality), 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry Innovation and Infrastructure), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action), 14 (Life Below Water), 15 (Life on Land) and 16 (Peace Justice and Strong Institutions)

Islamic microfinance

Islamic microfinance tools are used by Muslims around the world as an alternative to conventional banking methods, which include interest-bearing loans. They can meet the specific needs of lower-income Muslim populations, especially in terms of promoting livelihoods and socio-economic inclusion in a way that is compliant with their values. Islamic microfinancing is also widely used in developing countries, including non-Muslim countries, and contribute significantly towards achieving the SDGs. Islamic microfinance include the following tools:

- Qard hassan: which is a widely used tool and consists of interest-free loans.
- Takaful: which is a form of cooperative insurance where participants contribute to a fund which would then be used to help other participants in case of need.
- Standard Islamic finance tools: used to provide financing to micro and small beneficiaries on the basis of partnership, trade, and other such means.

These tools not only help in procuring basic needs, but also promote economic growth, social collaboration and access to equal opportunities. It works towards achieving virtually all the SDGs. Each tool, if properly used and at its full potential in the relevant communities, can substantially help achieve several of the SDGs. The potential of Islamic charitable giving and participative finance, taking into account zakat, sadaqa, awqaf, sukuk and Islamic microfinance tools, surpasses the $1 trillion mark each year. Prime reasons being:

1. The central role that charity plays in the spirituality of almost 2 billion Muslim people worldwide; and
2. The obligatory nature of many of these tools, whereby zakat payment is incumbent upon most Muslims (namely those financially capable of paying it), as is Shari'a-compliant banking (including microfinance) for Muslims who seek financing or investments for their projects.

UNHCR's Commitment to Leveraging Islamic Social Finance

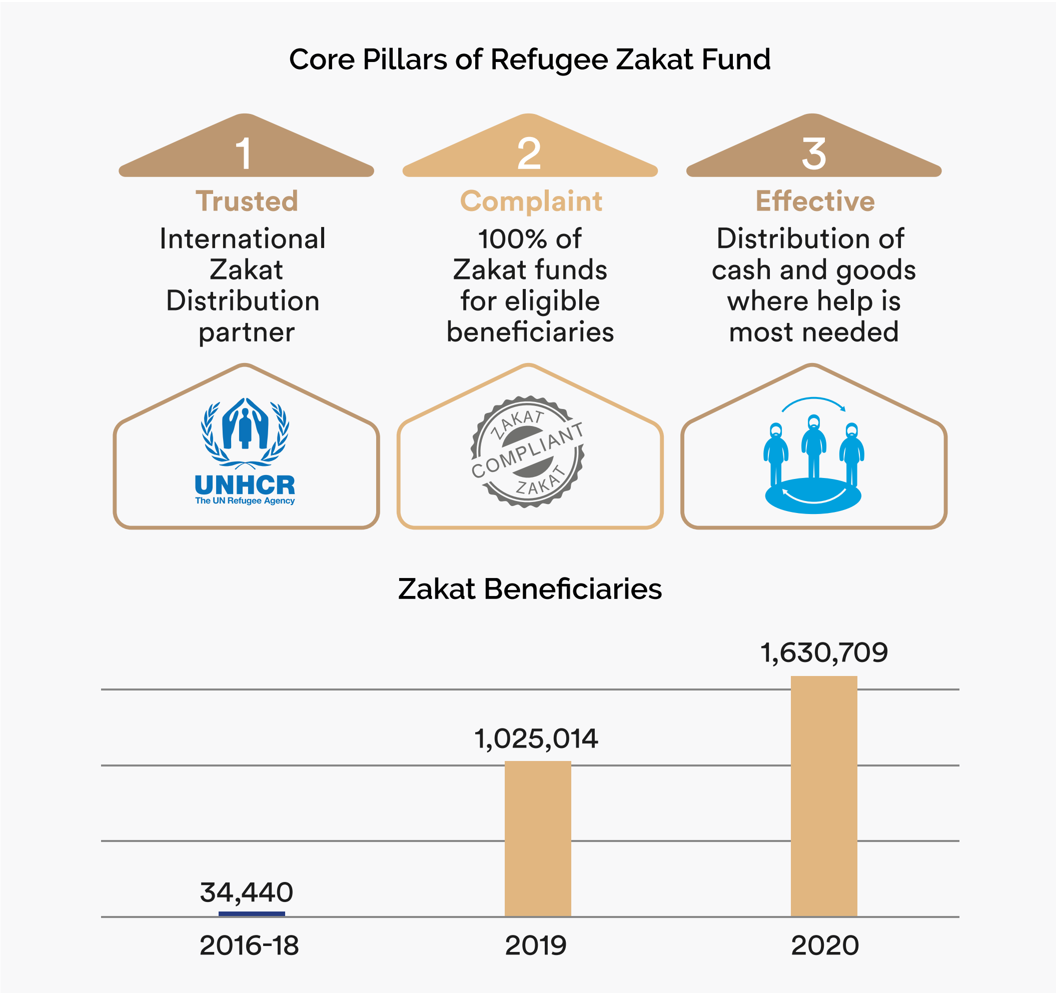
The United Nations High Commissioner for Refugees (UNHCR), the UN Refugee Agency, is a global organization working to save lives, protect rights and build a better future for refugees, internally displaced communities and stateless people. Since 1950, UNHCR, together with partners and communities, works to ensure that everybody has the right to seek asylum and find refuge from violence or persecution. UNHCR is committed to work closely with governments that host refugees, to ensure that the 1951 Refugee Convention is honored. The COVID-19 pandemic has had a devastating impact on the zakat eligible countries and their Internally Displaced People (IDP) and refugees, not as much as due to the implications on public health but due to the pandemic crippling the global economy and supply chains. The OIC member countries, while comprising 25% of the world's population, are hosts to more than half of the world's displaced people – over 43 million displaced people.

UNHCR has demonstrated high commitment towards Islamic social finance to support the ever-increasing needs of the people of concern (including refugees and IDP) in the OIC region. It has launched several Islamic social finance related initiatives to achieve its goals. Some of these include:

The Refugee Zakat Fund

The Refugee Zakat Fund, launched in 2019 by UNHCR, to harness the power of zakat and transform the lives of people under its mandate, namely refugees, IDPs and other people of concern. It offers primarily cash assistance to refugees and IDPs originating from and located in Muslim-majority countries, such as Yemen, Jordan, Lebanon, Iraq, Bangladesh, Mauritania, and Egypt, among others. In 2020, the Refugee Zakat Fund was able to reach over 1.6 million beneficiaries in 10 countries, through US$48.5 million in zakat funds. Counting sadaqa, this number goes up to over 2.1 million beneficiaries in 13 countries, with a total of US$61.5 million received. The number of beneficiaries saw a 59% increase from 2019, and the total amount of donations a 42% increase (up from US$43.4 million). This markedly shows the potential of zakat and the need to harvest it efficiently and responsibly, not least by UN agencies. Through its various programmes funded by zakat, UNHCR is achieving goals 1 (No poverty), 2 (Zero hunger), 3 (Good health and well-being), 4 (Quality education), 6 (Clean water and sanitation), 8 (Decent work and economic growth). Through microfinance, that UNHCR is currently piloting in collaboration with local entities, it will be working towards achieving additional SDGs such as 9 (Industry, innovation, and infrastructure) and 10 (Reduced inequalities). By creating partnerships for the goals, it also contributes towards goal 17 (Partnerships for the goals). This is summarised in Figure 8.2.

Figure 8.2
Core Pillars of Refugee Zakat Fund and Beneficiaries



Source: UNHCR, Refugee Zakat Fund, Islamic Philanthropy 2021 Annual Report

Virtual Fundraising Programs

The 2020 global Ramadan campaign 'Every Gift Counts' played an important role in supporting more than 41,000 people in need. With the holy month taking place under COVID-19 preventative measures and many people staying at home, UNHCR launched innovative virtual fundraising programs, including partnerships with TikTok and YouTube, followed by a Guinness World Record for the "Most Views for an Iftar Livestream Globally".

GiveZakat App

UNHCR launched the mobile application arm of its Refugee Zakat Fund, GiveZakat. The mobile app allows users to calculate zakat, check reporting information in real-time, and donate both zakat and sadaqa funds easily and quickly. Donors making a zakat donation through the app can track the journey of their donations until it reaches beneficiary families. Donors can also make one-off or monthly sadaqa donations and can check the various fatwas (rulings by Islamic jurisdictions) and endorsements received by UNHCR.

Waqf

UNHCR is also exploring other Islamic social finance tools such as the possible establishment of a cash-waqf. A mechanism where the seed capital raised is invested to generate profits that would then fund refugee and IDP programmes.

Other UN Agencies Commitment to Leveraging Islamic Social Finance

United Nations Development Programme (UNDP)

At the end of 2019, 79.5 million people worldwide were displaced, including 26 million refugees. Around 54% of these people of concern were hosted by zakat eligible countries. The COVID-19 pandemic turned an already worsening situation into a greater crisis. Conflict has continued despite the pandemic, and in certain countries, it has been aggravated by the disease. In mid-2020, an estimated 46 million people had to flee the conflict and persecution within their countries[8].

The United Nations Development Programme uses Islamic social finance tools, in collaboration with such entities as BAZNAS in Indonesia (applying zakat towards local SDG projects), Badan Waqaf Indonesia (developing a digital platform for waqf contributions), the Indonesia Ministry of Finance (supporting the issuance of green sukuk), Islamic Development Bank (IsDB) to support SDG goals worldwide and others. UNDP's efforts are contributing towards the achievement of virtually all the SDGs.

The World Food Programme (WFP)

Globally, 80% of the people of concern are vulnerable to food insecurity and malnutrition, one-third of which live in the top-10 most insecure countries. With the pandemic adding to the burden of acute food insecurity, the situation is expected to worsen, especially in the OIC countries such as Nigeria, South Sudan, and Yemen[9].

8. 2021 UNHCR Annual Zakat Report, https://Zakat.unhcr.org/wp-content/uploads/2021/04/UNHCR-Islamic-Philanthropy-2021-Annual-Report-final.pdf
9. 2021 UNHCR Annual Zakat Report, https://Zakat.unhcr.org/wp-content/uploads/2021/04/UNHCR-Islamic-Philanthropy-2021-Annual-Report-final.pdf

WFP is also using zakat and sadaqa to fund its projects and overcome food insecurity. During the holy month of Ramadan and Eid al-Fitr this year, WFP launched a zakat campaign through its ShareTheMeal fundraising app, providing Muslims around the world the opportunity to support WFP's initiatives while fulfilling their religious charity obligations. WFP partnered with IsDB and its Shari'a Board to ensure collection and distribution of zakat funds is done in accordance with Shari'a requirements. Hence, WFP contributes actively towards the achievement of the SDGs 1 (No poverty), 2 (Zero hunger), 3 (Good health and well-being), and 6 (Clean water and sanitation).

United Nations Children's Emergency Fund (UNICEF)

There are over 30 million forcibly displaced children globally.[10] Prior to the COVID-19 pandemic, access to education was limited, with a refugee child twice as likely to be out of school as a non-refugee. The situation worsened due to the pandemic. In Turkey, the second largest OIC host country for the people of need, around 760,000 refugee children have been affected by school closures.[11] Other pressing issues exacerbated by the pandemic impacting refugee children in the OIC and globally include gender-based violence, child trafficking and malnutrition. In Afghanistan, for instance, nearly half of the refugee children face acute malnutrition[12].

The United Nations Children's Emergency Fund (UNICEF), in collaboration with the Islamic Development Bank (IsDB), created the Global Muslim Philanthropy Fund for Children, collecting zakat and sadaqa. Like UNHCR, it aims to harness the power of Islamic philanthropic tools to raise funds for its programmes and provide for the wellbeing of children in Muslim-majority countries. This fund aims to provide children with access to safe water, nutrition, education, health, and protection, therefore contributing towards the SDGs 2 (Zero hunger), 3 (Good health and well-being), 4 (Quality education) and 6 (Clean water and sanitation).

United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

At present, 438,00 Palestinian refugees remain in Syria, 73% of which are women and children. The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) estimated that 91% of the Palestinian refugees are more in need of cash and in-kind food assistance[13].

UNRWA is now also collecting zakat to support and assist those under its mandate, namely Palestinian refugees. In 2019, UNRWA and the OIC member countries decided to establish a waqf endowment fund (housed within IsDB) to support Palestinian refugees. The waqf will allow governments, corporates and individuals to participate in the sustainability of UNRWA's programmes. Like UNHCR, UNRWA is contributing towards goals 1 (No poverty), 2 (Zero hunger), 3 (Good health and well-being), 4 (Quality education), 6 (Clean water and sanitation), 8 (Decent work and economic growth).

10. UNHCR. 2020 Dec 8. Refugee Population Statistics Database. Retrieved from https://www.unhcr.org/refugee-statistics
11. UNICEF. 2021 Feb 8. UNICEF Turkey COVID-19 Response End year Situation Report 2020. Retrieved from https://reliefweb.int/ report/turkey/unicef-turkey-covid-19-response-end-year-situationreport-2020

Conclusion

Islamic social finance has the potential to become a sustainable financing model and meet the SDGs as well. As a charity, it also plays an important role in the lives of almost two billion Muslims worldwide. The core principles of Islamic social finance are highly aligned with the spirit of the SDGs, to create a sustainable and just economic order.

These principles include: channelling funds to the real economy by promoting risk sharing; prohibition of excessive speculations, interest, gambling and all other games of chance; and limiting debt to the value of assets. Islamic social finance tools that dignify the poor include: zakat, sadaqa, waqf, social sukuk, and Islamic microfinance.

UN agencies have realized the potential of Islamic social finance and leveraged its tools to meet the humanitarian needs that have reached its ever high due to the COVID-19 pandemic. UNHCR has played a central role in supporting over 2.1 million beneficiaries in 13 countries through its zakat and sadaqa funds.

> The experience of the UN agencies over the last few years in tapping into Islamic social finance to achieve the SDGs is still at the early stages but the potential is immense for Islamic social finance to create a real impact of social good across global communities

Other UN agencies have also facilitated zakat donations, such as WFP's zakat campaign through ShareTheMeal fundraising app, UNICEF's Global Muslim Philanthropy Fund for Children. UNDP and UNWRA are also enabling zakat giving in accordance with the Shari'a principles. Awqaf is also gaining traction, with UN agencies such as UNHCR, UNDP and UNRWA exploring waqf (cash-waqf and digitalizing waqf endowment) through partnerships. UNDP is also adopting other Islamic social finance tools, such as issuance of green sukuk.

12. OCHA. 2021 Feb 18. Afghanistan: COVID-19 Multi-Sectoral Response Operational Situation Report, 18 February 2021. Retrieved from https://reliefweb.int/report/afghanistan/ afghanistan-covid-19-multi-sectoral-response-operationalsituation-report-18

13. UNRWA. 2021 June 15. SYRIA: UNRWA - Humanitarian Snapshot, March & April 2021. Retrieved from https://www.unrwa.org/resources/reports/syria-unrwa-humanitarian-snapshot-march-april-2021

The experience thus far of the UN agencies over the last few years in tapping into Islamic social finance to achieve the SDGs is still at the early stages but the potential is immense for Islamic social finance to create a real impact of social good across global communities. The share of zakat harnessed through international organisations is only a fraction of what it could be and, despite the fact that zakat collection and distribution through UN agencies is growing at an exponential rate, there is still a lot more to be done.

UN Agencies must strive harder, both through increased legitimacy (by means of religious endorsements and the compliance monitoring that it entails) and better publicity, to position themselves globally and in the collective Muslim psyche, as transparent and effective collectors and distributors of zakat.

Closer collaboration and cooperation are also needed between international organisations and local players (such as zakat houses and waqf authorities) to combine local knowledge and expertise with transparency, efficiency and international reach. Finally, UN agencies need to look beyond zakat and awqaf, and realize the invaluable potential of sukuk and Islamic microfinance as crucial elements of economic development and poverty reduction in Muslim countries as well as powerful weapons in the fight for global peace and equality.

CHAPTER 09

The Role of Indonesia's Sovereign Sukuk

in Capital Markets Post COVID-19

Background and Milestone of Sukuk Negara

As a country with the largest Muslim population in the world, Indonesia has an encouraging record of sukuk issuance. The journey started in 2002 when the National Shari'a Council, the Indonesian Ulama Council (DSN-MUI), released a fatwa on Shari'a bonds. PT Indosat issued the first Shari'a bond in 2002 to finance its business expansion. The term sukuk, which is also referred as Islamic bonds in Indonesia, came into use in 2006 when the Capital Market Supervisory Agency – Financial Institutions (BAPEPAM-LK, now Indonesia Financial Service Authority/OJK) issued regulations regarding the issuance of Shari'a[1] securities.

In 2008, through the Ministry of Finance, the Indonesian government took part in developing the sukuk market and issued Sovereign Shari'a Securities (SBSN) or Sukuk Negara after enacting Law Number 19 in the Year 2008. The main objective behind launching sukuk was to finance the state budget deficit and raise capital for projects listed on the state budget. Accordingly, three securities companies took part as the selling agents of the government to float the issuance on 26 August 2008 through the Islamic Fixed Rate (IFR) series in the domestic primary market via a book-building method.

After the debut issuance, the government continued developing several formats of sukuk instruments using various issuance methods, both in the domestic and international market, from 2008 to 2013. Retail Sukuk, Hajj Fund Sukuk, Islamic treasury bills, and projects-based sukuk were introduced in the domestic market.

In addition, the government has been using regular auction, green-shoe options, private placement, and book-building issuance methods. Sukuk Negara Indonesia (SNI) series was introduced in 2009 for the international market using standalone documentation. Intending to issue sukuk regularly, the government decided to establish in 2011 the Islamic GMTN Program for its global sukuk issuance. Once it had established benchmarks and infrastructures for the Sukuk Negara, the government started focusing on increasing the share of its sovereign sukuk in proportion to its conventional bonds in the domestic market during 2014-19. In 2016, as part of the continuous development of innovative financing instruments, the government introduced a non-tradable saving sukuk for retail investors. Going forward, online retail sukuk was also introduced in 2018.

Due to the largest share of SNI issuance across several fields and areas, along with the introduction of green sukuk, the Indonesian government has been recognized internationally as the most prominent sovereign sukuk issuer in the US dollar. In 2020, the government introduced the Primary Dealer System of Sukuk Negara and the Waqf Sukuk. The idea was to dovetail Sukuk Negara with Islamic social finance through the Cash-Waqf Linked Sukuk scheme.

Sukuk Negara Structure

The development of various Sukuk Negara structures is essential primarily to provide flexibility for the government in issuing and managing Sukuk Negara. Therefore, the sukuk structure has been developed with several aspects, including compliance with the Shari'a principles, the available underlying assets, acceptance of the structure in the domestic and global markets, and the needs for the issuance and management of Sukuk Negara.

In addition, Sukuk Negara's structure is to abide by Article 3 of Law Number 19 of the Year 2008, which states that Sukuk Negara might be issued under Shari'a contracts, such as ijara, mudaraba, musharaka, istisna' and any other contract that does not contradict with the Shari'a principles.

1. As in Indonesia, Shari'a is preferred over Islamic to refer to Islamic banking and finance, we shall use the term nationally preferred in the country.

The government developed four sukuk structures based on ijara contracts. The first is the ijara sale and leaseback structure. It is a well-known structure that uses tangible leased assets as the underlying collateral for the sukuk. In this case, state-owned assets are used as underlying collaterals in the form of land and buildings. Since it represents ownership of tangible leased assets, the Sukuk Negara using this structure is tradable in the secondary market. This is in accordance with the AAOIFI Shari'a Standard Number 17 (4/2/5) on the tradability of leased tangible assets.

The second is the ijara al-khidamat structure, in which case the underlying asset's services are used, namely Hajj services. The Sukuk Negara that uses this type of structure represents ownership of services available in the future (certificates of ownership of described future services), referring to the AAOIFI Shari'a Standard No. 17 (3/2/4). This type of Sukuk Negara is non-tradable.

The third is the ijara asset to be leased structure used to issue Sukuk Negara to finance the government projects. Therefore, it is categorized into types of sukuk that represent ownership of tangible assets promised to be leased (sukuk al-milkiyya al-maujudat al-mau'ud bisti'jariha), as referred to in AAOIFI Shari'a Standard Number 17 (3/1).

Finally, the fourth is the wakala structure. Sukuk wakala is a partnership-based sukuk. In AAOIFI Shari'a Standard Number 17 (3/6/3), it is referred to as investment agency sukuk representing projects or activities managed on wakala basis through an agent to manage activities on behalf of sukuk holders.

Sukuk wakala is expected to provide an alternative to Sukuk Negara to gain flexibility in the use of contract, utilization of state-owned assets, optimization of potential underlying assets (such as procurement of goods and services), tradable in the secondary market, as well as widely accepted in domestic and international markets.

Shari'a Approval of Sukuk Negara

As a regular issuer of Islamic capital market instruments both nationally and internationally, the Indonesian government must obtain Shari'a scholars' permission before issuing a Sukuk. For domestic issuance, the Indonesian Ulama Council (MUI) permission is necessary, but for international market launch, approval from both MUI and some internationally acclaimed Shari'a scholars is obtained.

MUI is a religious institution with the jurisdiction to give fatwa on Islamic finance and economics. MUI's skills in ensuring conformance between Islamic laws and Islamic financial institutions in Indonesia is highly crucial. The purpose of setting up the National Shari'a Council (DSN-MUI) by the MUI was to address fiqh muamalat. The permission to DSN-MUI to give fatwa was granted on-demand from Islamic financial institutions.

DSN-MUI has so far issued five BSN-specific fatwas relevant to the Sukuk Negara issuance and the various Sukuk Negara structure that include sales and leases, ijarah assets for leasing, and wakala. Additionally, the DSN-MUI also provides Shari'a opinions on each SBSN issuance. To date, DSN-MUI has given 24 Shari'a opinions on Sukuk Negara.

Development of Sukuk Negara

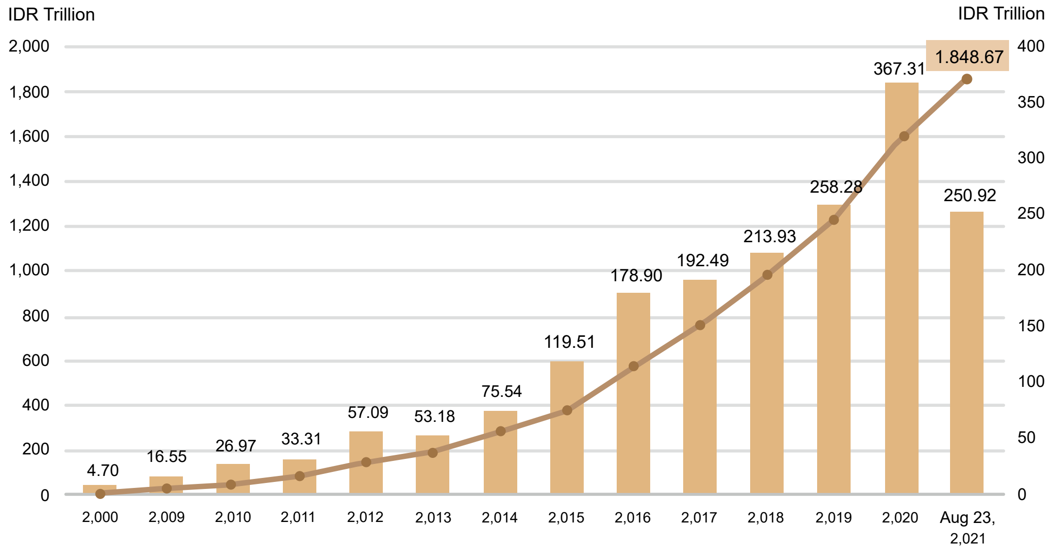
The Indonesian government issued Sukuk Negara in 2008 to expand alternative financing sources for the state budget and to develop Islamic financial markets. Since its 13 years journey, the Sukuk Negara has developed remarkably in volume and strength at national and international markets. These achievements have resulted from continuous effort and development of Sukuk Negara as an active, profound, and liquid sukuk market.

Sukuk Negara has been arduously supported and enhanced with a legal framework, structure, underlying assets, methodology of issuance, categories of instruments, a market, and an investor base, both domestic and international.

a) Consistent Growth in Sukuk Negara Issuance (2008 - August 2021)

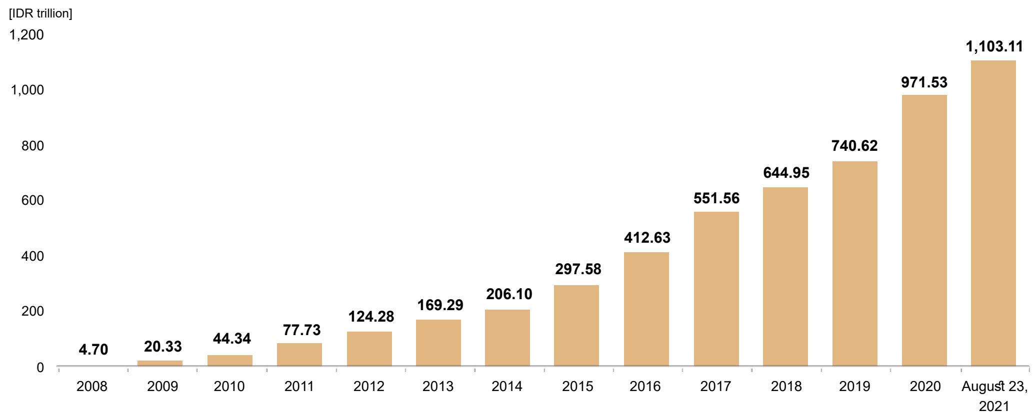
Since the enactment of Law Number 19 the Year 2008 on Sovereign Shari'a Securities, Sukuk Negara issuance has reached IDR1,848.67 trillion, using various issuance methods (auction, book building, private placement), both in domestic currency (IDR) and foreign currency (USD). This growth shows the instrument's role in financing the state budget deficit, infrastructure projects, and the development of Islamic financial markets (see Figures 9.1 & 9.2).

Figure 9.1
Sukuk Negara Issuance 2008 – 2021 (YTD)



The value of outstanding Sukuk Negara both in the domestic and international markets as of August 23, 2021, is IDR1,103.11 trillion, or around 19% of the government's total government securities (SBN).

Figure 9.2
Outstanding of Sukuk Negara 2008 – 2021 (TYD)



Sukuk Negara has been available for different target investors and financing purposes. The Project-Based Sukuk (PBS) significantly dominates the issuance size.

In 2020, the total issuance of Sukuk Negara was IDR367.31 trillion, or 42.20% higher than total issuance in 2019 (IDR258,31 trillion). From the total issuance in 2020, IDR331.65 trillion (90.29%) was issued in the domestic market, and USD2.5 billion (9.71%) was issued in the international market.

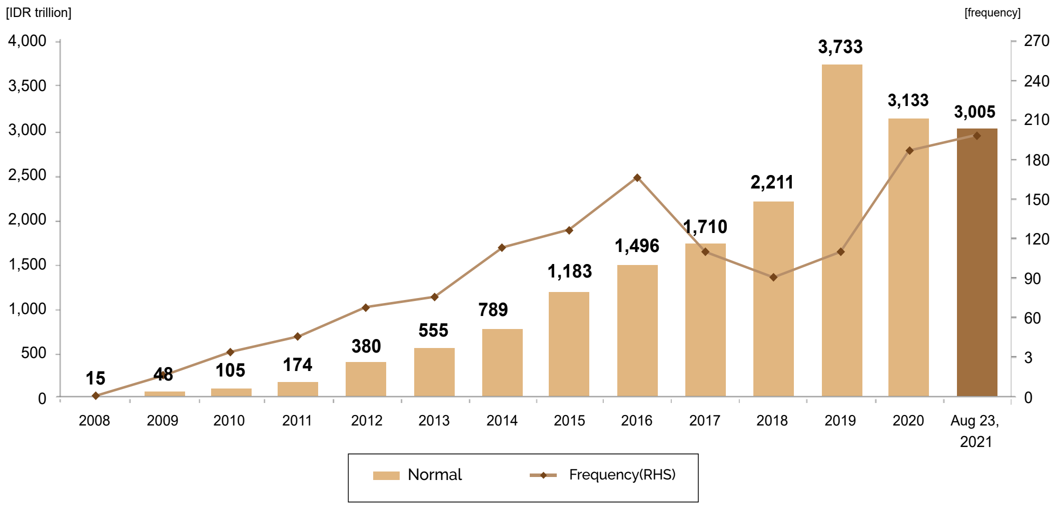
The Sukuk Negara issuance in 2020 increased significantly due to the mounting needs for microfinancing in a COVID-19 affected world. In addition, as the state budget deficit widened in 2020 due to pandemics, Sukuk Negara issuance increased by 42.2% compared to IDR258.28 trillion in 2019.

To handle health and economic recovery during the pandemic, the government developed the National Economic Recovery Program (PEN) in 2020-2021 with an allocated budget of IDR699.43 trillion and IDR744.75 trillion, respectively. Financing the state budget through Sukuk Negara is an option the government exercises to accelerate the national economic recovery program. Whereas the Project Financing Sukuk is the most strategic fiscal instrument issued for the development of infrastructure and service facilities.

b) Domestic Secondary Market Performance

In terms of the management of Sukuk Negara, the availability of supply of tradable instruments is one aspect that supports liquidity in Sukuk Negara. Therefore, the government continues to increase the share of tradable Sukuk Negara year on year. As the number of tradable Sukuk Negara issuance increases, so does the trading volume of Sukuk Negara in the secondary market. As shown in the chart below, Sukuk Negara's secondary market performance has increased steadily over the years. The average daily trading of Sukuk Negara in 2020 was IDR3.13 trillion from 187 transactions. Meanwhile, until August 23, 2021, the average daily trading of Sukuk Negara reached IDR3.00 trillion from 197 transactions (see Figure 9.3).

Figure 9.3
Average Daily Trading of Domestic Sukuk Negara 2008 – 2021 (YTD)



c) Prospects of Sukuk Negara

- **Rapid growth of Islamic finance industry assets in Indonesia**

During the COVID-19 pandemic, Indonesia's Islamic finance industry assets grew 22.71% (YoY) to IDR1,801.40 trillion from the previous year's IDR1,468.07 trillion. Those assets come from Islamic banking (33%), Islamic non-banking (7%), and Islamic capital market (60%). It shows that Islamic finance has had the resilience to survive the pandemic and makes a real contribution to the national economy. (Indonesian Islamic Finance Development Report, LPKSI-OJK, 2020).

- **Larger potential investors: Islamic and Conventional**

Despite the impact of the COVID-19, investors are emphasizing the long-term growth prospects. Investors' confidence in the country's growth potential through Islamic finance can be gauged from the amount of investment Indonesia received in 2020, which was at the tune of 25 percent of the total investment. Other than the Islamic investors, many conventional investors have also chosen Islamic financial instruments as part of their investment portfolio.

- **Potential demand vs limited supply**

That the demand for sukuk issuance, both in domestic and international markets, is growing is reflected, among other things, in the high amount of funds available to the Islamic financial institutions despite limited Islamic financial instruments.

- **Strong support from authorities: establishment of National Committee for Islamic Economy and Finance (KNEKS)**

The government of Indonesia has established a National Islamic Finance and Economy Committee known in Indonesia (KNEKS) to lead, coordinate, and synergize the Islamic economy's stakeholders' efforts. The President of Indonesia, His Excellency Joko Widodo, chairs the committee. The key functions of KNEKS are to strengthen, expand, and develop the Islamic economy to support national economic development.

- **Project financing sukuk: progressing preparation and availability**

Project financing sukuk has also shown significant progress. In 2013, the allocation of project financing Sukuk was only IDR800 billion, while in 2020, the value increased significantly to IDR27.35 trillion. The number of government institutions initiating the project financing sukuk is also increasing. In 2013 there was only one institution today they are nine. In 2020, 730 projects were implemented by 606 works units.

d) Challenges to Sukuk Negara

- **Buy and hold behaviour**

The tendency to buy and hold by sukuk investors makes the mechanism for transferring ownership of sukuk inefficient. Therefore, it leads to slow market growth and exposes sukuk investors to higher liquidity risk.

- **Higher yield expectations and price discovery mechanism**

On average, the yield of Sukuk Negara is still higher than its conventional counterparts, such as the government debt securities or Surat Utang Negara. This resulted in a higher cost of issuing Sukuk Negara. In addition, investors in Sukuk Negara tend to require a liquidity premium, as Sukuk Negara is considered less liquid than Surat Utang Negara in the secondary market.

- **Market infrastructure development**

Because of the rising need to finance the state budget and development of infrastructure, a complete market set-up is in calling to support Sukuk Negara. Therefore, the organization of market infrastructure followed by best practices is required.

- **Diversification of underlying assets**

With an increase in the issuance of Sukuk Negara every year, there will also be an increase in the number of underlying assets. It is, therefore, necessary to diversify the underlying assets to facilitate the increasing issuance of Sukuk Negara. In addition, the diversification may make the management of Sukuk Negara flexible and boost issuance.

Innovation in Sukuk Negara

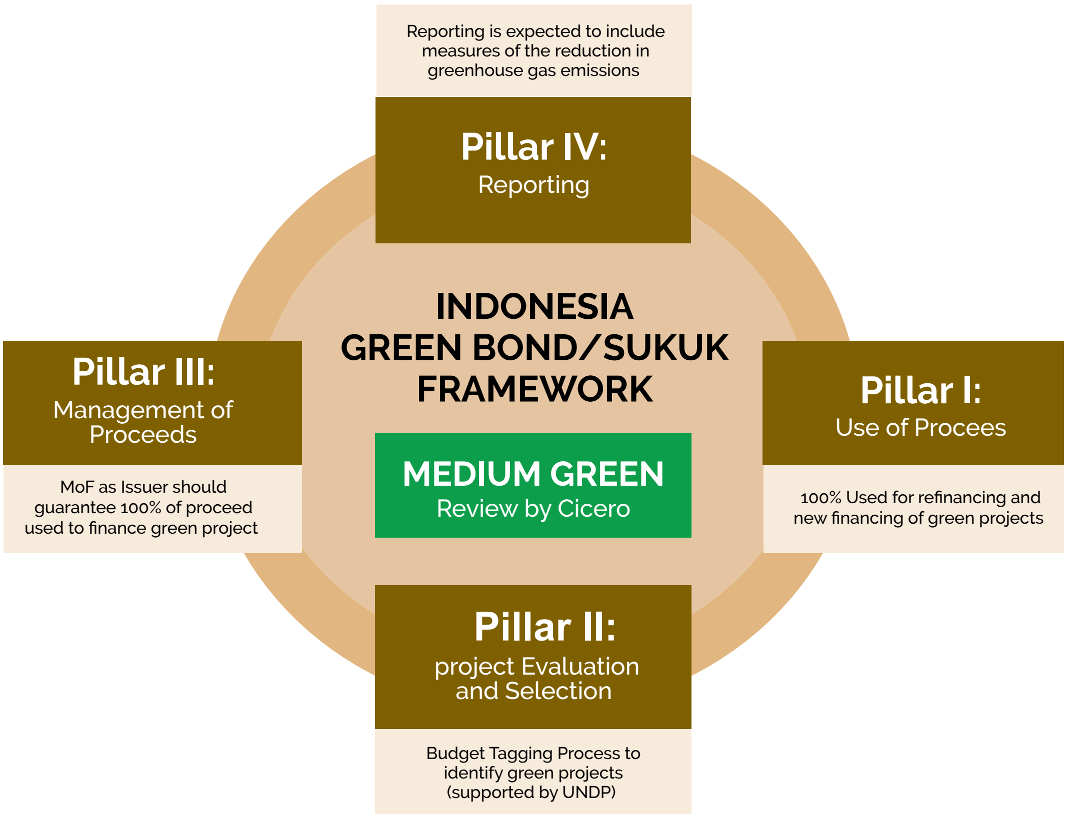
1. Green Sukuk

a) Background

Indonesia is committed to combating climate change and is the signatory of the Paris Agreement (2016). The timeline and percentage reduction in greenhouse gases have been delineated in the Nationally Determined Contribution (NDC) document, according to which the country will strive to reduce greenhouse gas (GHG) emissions up to 41% by 2030.

With the support of the United Nations Development Program (UNDP), the Ministry of Finance has also implemented the Climate Budget Tagging (CBT) mechanism to monitor and track government expenditures incurred on climate change mitigation and adaptation activities. The CBT mechanism allows the government to assess the financing needs to achieve the GHG emission reduction target, which comes to IDR3,461 trillion (US$247 million) from 2018 to 2030, or about IDR254.4 trillion (US$17.55 million) annually.

Figure 9.4
Republic of Indonesia Green Bond/Sukuk Framework



The Indonesian government started green financing initiatives in 2017 with the Green Bond and Green Sukuk Framework (Figure 9.4). The Framework was developed based on the Green Bond Principles (GBP) and intended to facilitate the issuance of green bond or green sukuk to finance projects supporting low emissions and to adopt climate-friendly activities. This also includes the biodiversity sector. The Indonesia Green Bond and Green Sukuk Framework received acclamation from CICERO and obtained a "Medium Green" shade, which is an assurance that the listed sectors have met the requirements and are in line with the national vision of carbon emission reduction.

b) Global Green Sukuk

Indonesia successfully issued the world's first Sovereign Green Sukuk worth USD1.25 billion in the international markets in 2018. The proceeds were used to finance renewable energy, resilience to climate change, sustainable transport, energy and waste management, and energy efficiency projects. It also supports the achievement of SDGs, particularly SDGs 7 (Affordable and Clean Energy), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation, and Infrastructure), 11 (Sustainable Cities and Communities), and 13 (Climate Action). After receiving a positive response from the international markets, the government launched the second $750 million Global Green Sukuk in 2019. It made Indonesia the first country to issue Green Sukuk for two consecutive years. Keeping to its commitment to sustainable financing, the government issued the third $750million Green Sukuk in 2020 with a tenor of 5-year (see Table 9.1).

Table 9.1
Global Green Sukuk

	1st Issuance	2nd Issuance	3rd Issuance	4th Issuance
Issuance date	March 2018	February 2018	June 2020	June 2021
Volume	USD 1.25 Bio	USD750 Mio	USD750 Mio	USD750 Mio
Tenor	5 years	5.5 years	5 years	30 years
Yield	3.75%	3.9%	2.3%	3.55%

Despite the COVID-19 induced uncertainty, Indonesia successfully issued another global green sukuk worth USD750 million, with a 30-year tenor and a yield of 3.55%. It was the first-ever 30-year tenor green sukuk launched in world history. Some of the other features of this green sukuk are its lowest yield spread over US Treasury and coupon, oversubscription rate of 4.55 times, and attracting around 57% of global green investors. This issuance manifests Indonesia's commitment and contribution to sustainable financing and its capacity to attract foreign investors towards Shari'a-based sustainable financing.

c) Retail Green Sukuk

Innovation has not been carried out only in the international markets but also in the domestic markets through the issuance of retail green sukuk of IDR1.46 trillion and savings sukuk of IDR5.4 trillion in 2019 and 2020, respectively (see Table 9.2).

Table 9.2
Domestic Green Sukuk (Retail)

	1st Issuance (ST006)	2nd Issuance (ST007)
Issuance date	November 2019	November 2020
Volume	IDR 1.4 Trillion	IDR 5.4 Trillion
Tenor	5 years	2 years
Yield	6.75% (Floating with floor)	5.5% (Floating with floor)

d) The retail green sukuk was also the world's first retail green sukuk issued by any country to individual investors through online subscription. Through the savings sukuk (ST) series, the retail green sukuk reached more than 24,000 individual investors from all provinces in Indonesia; the majority (50% on average) is millennial. In accordance with the Green Bond and Green Sukuk Framework, the proceeds have been used to fund national projects in the state budget. The issuance of green bonds/green sukuk could serve as a benchmark for issuers in the corporate and private sectors.

Through the Savings Sukuk (ST) series, the Retail Green Sukuk reached more than 24,000 individual investors from all provinces in Indonesia; the majority is millennial

e) Green Sukuk Issuance Process

The Preparation Phase

Ministry of Finance, through the Directorate of Islamic Financing, prepares the implementation of the green sukuk on the annual financing strategy. Data from the Fiscal Policy Agency (BKF) and the underlying asset of Indonesia Sovereign Sukuk are used in the preparation process. Furthermore, the Ministry of Finance established a working group for the development of green sukuk reports. The team comprises the Ministry of Finance Internal Team (Fiscal Policy Agency, Directorate General of Budget, Directorate General of Budget Financing, and Risk Management), National Development Planning Agency (BAPPENAS), Ministry of Environment and Forestry (KLHK), and related line ministries. The timeline and work plan are also developed for the Annual Green Sukuk Report.

The Issuance Phase

The green sukuk is launched when the Green Sukuk/Bond Framework is ready, and the selection of the projects and allocations of the proceeds have been finalized. For a successful launch, an effective marketing strategy and awareness campaign are run in collaboration with the Joint Lead Managers (JVMs). The awareness campaign combines social media (in the case of retail issuance), videoconference, and other electronic platforms.

The Green Impact Report Phase

The government is required to issue the Green Impact Report every year (see Figures 9.5 & 9.6). It contains a brief introduction of all the green projects to be financed, the allocation value, and the estimated emission reduction benefits. Lastly, an independent institution reviews the report for an impartial assessment. So far, the government has issued three green sukuk reports. The reports were reviewed by KPMG (2019), PWC (2020), and EY (2021). All of them received applaud for adopting a suitable green sukuk issuance framework.

Figure 9.5
Green Sukuk Impact Report

2. Cash Waqf Link Sukuk (CWLS)

Through the Ministry of Finance, Ministry of Religious Affairs, Central Bank of Indonesia, and Indonesian Waqf Board (BWI), the Government of Indonesia is committed to supporting the development of Islamic social finance in Indonesia. The waqf development program was launched among other initiatives through Cash Waqf Linked Sukuk (CWLS) during IMF-World Bank annual meeting held in Bali on October 14, 2018. CWLS was designed to develop asset creation waqf to finance various social activities in society. It is implemented to facilitate the waqif so that he/she can invest their funds in the safe and productive investment instrument. The objectives of CWLS are as follows:

- To consolidate the cash waqf and other social funds for supporting productive waqf through various social project/activities managed by nazir (waqf assets manager)
- To support the National Shari'a Finance development, especially cash waqf industry, to strengthen the national financial ecosystem
- To support Shari'a banking role as the collector of cash waqf (LKS-PWU)
- To become part of Indonesia's financial development and innovation program, particularly in social investment
- To become part of investor and government bonds/sukuk instrument

In CWLS, the waqif provides a certain amount of funds, either for permanent or temporary use for social purposes, through a waqf manager (nazir). The waqf manager invests the cash waqf in sovereign sukuk mainly issued for public projects like road construction, public markets, healthcare, education, etc. During the CWLS tenor, the waqf manager receives a return on sukuk in a discount or coupon. The waqf manager uses the return to finance tangible projects like construction or the development of newly-asset waqfs such as healthcare clinics, Islamic boarding schools, and other social infrastructures or intangible things like empowerment programs for low-income societies. On the maturity date, the CWLS principal redemption is paid by the government to the waqf manager, which in turn is returned 100% by the waqf manager to the waqif (in case of temporary cash waqf) or further invested in other social programs (in case of permanent cash waqf).

CWLS Issuance Milestones

The first issuance of CWLS, named SW-001, was printed on March 10, 2020, by BWI as nazir. It was also officially launched on October 21, 2020. The return of CWLS series SW-001 was used to develop Retina and Glaucoma Centre at Achmad Wardi Ophthalmic Hospital, Serang, Banten. In addition to that, its return was also used to do free cataract surgery of the poor at Achmad Wardi Hospital, targeting 2,513 patients in five years. Between October 2020 and March 15, 2021, a total of 1,927 patients were treated. The majority of patients were from Serang due to the proximity of location and easy transit access. The second issuance of CWLS was issued on November 26, 2020, in the retail market under series SWR-001 with a 2-year tenor and a fixed return rate of 5.5% per annum.

Its proceeds reached IDR 14.91 billion. The return shall be used in programs that have a social and economic impact on the community, such as education, healthcare, agriculture, farming, and Small Medium Enterprise (SME) empowerment program. Although the total issuance was not substantial, the CWLS SWR-001 series drew 1,041 Waqifs during its first issuance, out of which 1,037 were individual waqif.

The government introduced the third CWLS, under the SWR-002, series in the first quarter of 2021. The SWR-002 offered a return of 5.57% per annum with a tenor of 2 years and accounted for IDR24.14 billion – a 62% increase compared to SWR-001. This series is the first CWLS that can be purchased online specifically for individual waqif. The SWR-002 reached 591 waqif in all Indonesian provinces. The 588 individual waqif amounted to IDR15.66 billion, and three institutional waqif amounted to IDR8.48 billion. Having observed the real output of CWLS (SW-001, SWR-001, and SWR-002) and the social programs/projects implemented under nazir, it is expected that the CWLS will continuously develop and attain a positive response from society. Therefore, cooperation and collaboration from all related parties are expected to achieve productive waqf, primarily through CWLS in the future.

3. Project Financing Sukuk (PFS) / Project-Based Sukuk

The issuance of Sovereign Sukuk (SBSN) exclusively for project financing has become an effective and novel source of project financing in Indonesia. The Project Financing Sukuk was developed in 2013 to finance the government infrastructure projects earmarked in the state budget. In addition to that, it also financed to improve the existing infrastructure with the limited state budget funding.

Project Financing Sukuk (PFS) has raised IDR145.84 trillion since its first inception in 2013. It has covered the financing need of 3,447 central government projects spread over 34 regions in Indonesia. These projects are associated with transportation, roads, bridges, education, religion, national park, water resources, agriculture, and research laboratories. There has been a steady increase in the number of projects, highlighting PFS as a significant source of project financing tool. During the COVID-19 pandemic, Project Financing Sukuk became a strategic fiscal instrument to recover the national economy. As a result, in 2020, the PFS disbursement reached 90.96%. It is an indication that the PFS has successfully maintained its performance during the pandemic, but it has also contributed to the economic recovery through financing projects in the real sectors.

The achievement of PFS projects compared to other financing resources encouraged the local industry participation in labor-intensive sectors. In addition to that, the government also issued a discretion policy tool to execute projects affected by COVID-19. PFS, a strategic fiscal instrument, serves as a reliable alternative source for national infrastructure financing during a pandemic and expectedly post-pandemic to bolster economic growth.

4. Retail Online Sukuk Negara

Since 2009, through the Ministry of Finance, the government has regularly issued retail SBSN to individual investors of Indonesian citizens. As a result, since 2009, the government has managed to issue Sukuk Retail worth IDR243.45 trillion, comprising as many as 473,434 investors. To increase financial inclusion and address the rapid change of information technology, the government initiated a breakthrough in the retail SBSN by introducing an online system in 2018.

Now investors could buy retail sukuk through the distribution partner interface that connects in real-time with the-SBN. The implementation of the e-SBN is a manifestation of the government's commitment to provide safe and easy investment alternatives to the individual investor and to meet the financing needs of the state budget. E-SBN has also been instrumental in expanding the domestic investor base. The online distribution platform becomes very important when we face mobility restrictions to prevent the spread of COVID-19. The investor registration process, ordering transactions, and payments of SBSN Retail are integrated into one system integrated with the State Revenue Portal.

Through E-SBN, registration and order forms no longer have to be filled in and signed manually. Then, the payment process previously made through debiting or depositing cash can be done now through over the counter (teller), ATM, internet banking, EDC, mobile banking, electronic wallet (e-wallet) bank transfer, virtual account, e-commerce institutions, and FinTech companies. Access to this payment service is 24/7, with the capacity to deposit 1,000 transactions per second. In addition, investors who successfully pay for the billing code receive the NTPN code as proof of ownership of SBSN retail online. The E-SBN also supports the National Non-Cash Movement (GNNT), which aims to increase public awareness of using non-cash payment facilities for financial transactions. SBSN Retail series consists of three tradable retail sukuk and six Sukuk Tabungan with a total issuance of IDR74.06 trillion and 192,736 investors. The average participation rate of young people (millennial) has also increased from the previous 30% to 39% of total investors.

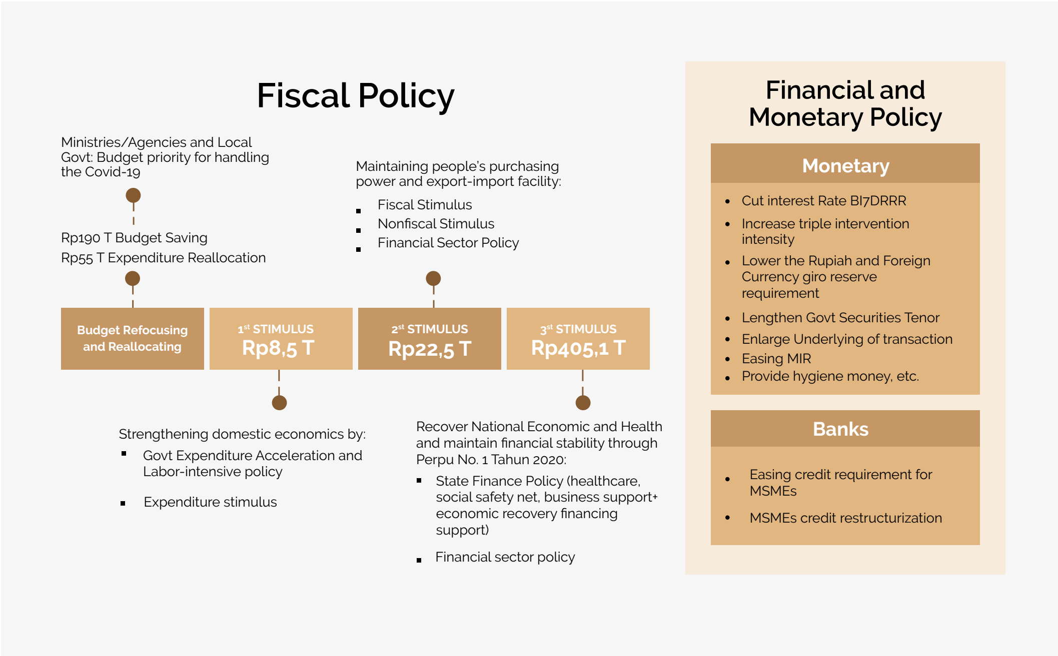
Sukuk Negara and Economic Recovery Program

COVID-19 has changed many things. The year 2020, which opened with hopes for global economic recovery, turned out to be a challenging year for many countries in the world. After being declared a pandemic on March 11, 2020, by WHO, COVID-19 has become a real threat that affects the health sector and disrupts other aspects such as social, economic, and financial.

The COVID-19 pandemic has created a snowball effect from a health crisis to a substantial economic crisis. From quarantine to social restrictions, life has come to a standstill due to declining consumption, delayed investment, and hampered foreign trade activities. Governments responded with swift policy priorities, focusing on fiscal policy and the state budget to compensate for the economic and health care costs.

Various responsive policies have been implemented in all regions in Indonesia. Policies such as budget refocusing, economic recovery programs, government regulation substitute for law (Perppu), and the implementation of the burden-sharing scheme. Along the way, various adjustments are made to respond to a highly dynamic and often unpredictable situation. Improvements continue to be made based on the results of policy evaluations to ensure the achievement of outputs and sustain the country. It was possible because of synergy between the Central and Regional governments' state institutions, legislative bodies, supervisory and audit associations, and the community.

Figure 9.6
Green Sukuk Impact Report



a) The Rising Financing Needs

In response to this extraordinary event, the government uses the state budget as the main instrument for intervention in fiscal policy. Moreover, the government gets the assistance of related institutions such as the Financial System Stability Committee (KSSK), which also consists of Bank Indonesia (BI), the Financial Services Authority (OJK), and the Deposit Insurance Corporation (LPS), to jointly coordinate in bringing the country out of the COVID-19 induced economic crisis.

In 2020, the government made an economic plan requiring excessive spending with declining revenues resulting in the budget deficit. Though at the start of the year, the government had announced a state budget with the lowest deficit since 2011. That changed, however, as COVID-19 struck. The budget deficit was first from 1.76% to 5.07% and later to 6.34%. The significant financing needs forced the government to shift its strategy from front loading to back loading. However, the government quite rarely does this because the back loading strategy has historically been risky.

b) Sukuk Negara Issuance Strategy to contribute to the National Economic Recovery

The target for Sukuk Negara issuance in 2020 was set to IDR367.82 trillion, an increase of 42% from 2019. Sukuk Negara forms 24% of the total government securities issuance. The issuance of Sukuk Negara in 2020 was the highest annual increase since 2008. Though the government has achieved its 2020 target, some strategies may support it further to enhance its performance:

- Implementation of the primary dealer system: A full implementation of the primary dealer system to increase the demand of Sukuk Negara liquidity in the secondary market.
- Become part of the Joint Agreement between Bank Indonesia and the Ministry of Finance regarding the issuance of government securities in the context of the COVID-19 pandemic as mandated by Law Number 2 of the Year 2020. In addition, the Joint Agreement regulates BI's role as a standby buyer if the government securities auction target is not met.
- Improving public awareness.

- Increasing the frequency of issuance of tradable retail sukuk because the demand for tradable retail sukuk is greater than that of non-tradable.
- Adding innovative products like Cash Waqf Linked Sukuk
- Making regulatory adjustments and developing market infrastructure to increase the investor base.

c) Sukuk Achievements During the Pandemic

The performance of Sukuk Negara in 2020 during the pandemic has been remarkable and rewarding. Some of the achievements are listed below:

- As a result of the easing policy of the banking statutory reserve requirement and the macro prudential liquidity buffer, the demand for Sukuk Negara by Banks has been high, amounting to IDR110.19 trillion.
- Retail sukuk issuance recorded the highest mark in history in 2020 by fetching IDR37.81 trillion.
- In terms of yield, the global Sukuk Negara in 2020 recorded the lowest yield in the history of government securities issuance for five and ten years.

In short, no limitations caused by the pandemic stopped the government from developing innovative, innovative, and productive financial instruments. In addition, all the limitations caused by the pandemic did not stop the government from continuing to develop innovative instruments for the people of Indonesia, through the issuance of sukuk waqf and green sukuk.

During 2020, the government issued sukuk waqf twice through the CWLS series with private placement and book-building methods. The issuance of the sukuk waqf is a form of the government's commitment to support the development of social investment and the development of productive waqf in Indonesia. Through sukuk waqf, the government facilitates cash waqf, both temporary and permanent, so that they can place their money waqf in safe and productive investment instruments. In addition, the issuance of CWLS is also an effort by the government to support the development of the Islamic financial market, especially the cash waqf industry. CWLS is also expected to create inclusive and sustainable economic growth, such as eradicating poverty, reducing inequality and increasing productivity.

The issuance of retail CWLS series SWR001 is a form of the government's commitment to support the National Waqf Movement, assisting the development of social investment and the development of productive waqf in Indonesia. After the success of the issuance of sukuk waqf in private placement, the government again innovated to issue the retail sukuk waqf series SWR001 offered to individual Indonesian citizens.

> The 3G Best Green Initiative of the Year 2020 from Cambridge IFA was a testimony to the government's excellence in using green sukuk

In addition to social investment, in 2020 the government issued green investment instruments twice as a manifestation of the government's commitment to reducing the impacts of climate change. The first issuance was carried out in the international market amounting to USD750 million (5-year tenor). This issuance in the international market shows the government's commitment, leadership and contribution in the global community regarding climate change financing. Global Green Sukuk issuance in 2020 is the issuance of green sukuk for the third time in the global market. This transaction is carried out in line with the government's 2020 financing plan, including to accommodate the needs of the APBN in handling the impact of the COVID-19 pandemic as well as to strengthen Indonesia's position in the global Islamic financial market and support the development of Islamic finance in the Asian region. The second issuance was carried out in the domestic market through the ST007 series with green format, which is the second retail green sukuk issued by the government after the first with ST006 which was issued in November 2019. ST007 is offered on November 2020 with a coupon of 5.50% (floating with floor).

In addition to the phenomenon of SBSN issuance, SBSN issuance in 2020 received appreciation from the world community by obtaining several awards, such as the 2020 International Islamic Finance Awards from The Asset Triple A, the 3G Best Green Initiative of the Year 2020 from Cambridge IFA, Best Green Bond from The Asset Triple A, and Largest Green Sukuk in 2020 from Climate Bond Initiative (CBI).

CHAPTER 10

Islamic Economic Development

Post COVID Policy of Bank Indonesia

Relevance of Moral Values and Halal Sectors in an Islamic Economy

The performance of Islamic economy sector and Islamic financial institutions during the pandemic has created a renewed sense of it being the source of economic growth for Indonesia. Consequently, policymakers in Indonesia are reviewing the role of Islamic economic sector in mitigating pandemic-induced unemployment and poverty. Moreover, the ability of Islamic finance and economics to solve socio-economic problems through the application of its unique principles must also be reviewed with sympathy.

Islamic economic has two essential characteristics: moral values and halal products. The former concerns zakat, prohibition of interest and gambling, including unhealthy speculative behaviour. The latter concerns provision of healthy products for the community and environment-friendly production processes. Zakat, sadaqa and waqf are the instruments used for the implementation of moral values. These principles of Shari'a increase the purchasing power of the financially broken recipients to meet their basic needs. They are also used to provide business opportunities to underprivileged communities. In a similar vein, the of prohibition of interest and gambling prevents misallocation of resources, expedites financial intermediation, and enhances productivity and economic activities.

As argued in other chapters of this report (e.g., Chapter 5) Islamic social finance can contribute significantly to the development of not only national economies but also has relevance to global development agenda, if the Islamic economic and the financial principles are put into practice correctly in the development of the real sector. Different models of Islamic social finance discussed in this report highlight that Islamic social finance impacts both the supply side and the demand side of the economy. Moreover, moral values and halal products develop and encourage social harmony and ecological conservation. Thus, Islamic social finance offers a complete package for economic development.

Indonesia is aware of the potential of the Islamic social finance in achieving sustainable economic growth and prosperity. Therefore, Indonesia is seriously encouraging the development of Shari'a-based economic applications that include Islamic commercial finance, Islamic microfinance, Islamic social finance, and the halal sectors. The Islamic commercial finance sector comprises Islamic banks, insurance, capital markets, pawnshops, and financing companies. The Islamic microfinance sector has more than 4,000 Islamic microfinance institutions following different business models. The Islamic social finance sector comprises more than 500 Islamic social fund Institutions.

In Indonesia, t]he Islamic commercial finance sector comprises Islamic banks, insurance, capital markets, pawnshops, and financing companies. The Islamic microfinance sector has more than 4,000 Islamic microfinance institutions following different business models. The Islamic social finance sector comprises more than 500 Islamic social fund Institutions.

The halal sector in the country has made a foray into Muslim fashion, halal cosmetics, halal food and drinks, and Muslim-friendly tourism. The Islamic economic applications used in the halal industry complement the Islamic economic practices in the financial sector.

Indonesia's Islamic finance serves almost every segment of society: medium-large business groups, micro-small enterprises groups, and poor groups through commercial finance, microfinance, and social finance sectors.

The Islamic finance sector must support productive economic activity in the real sector. Both are carried out on moral values and Shari'a principles embodied in four values and six characteristics, given in the Figure 10.1.

Figure 10.1
Values and Characteristics of Shari'a Principles

CHARACTERISTICS	VALUES
The absolute ownership of God 1	1 Controlling individual assets
Justice 2	2 Inclusive income distribution
Cooperation in goodness 3	3 Productive transactions
Balanced growth 4	4 Profit and loss sharing
	5 Social participation for a public interest
	6 Transactions based on cooperation and justice

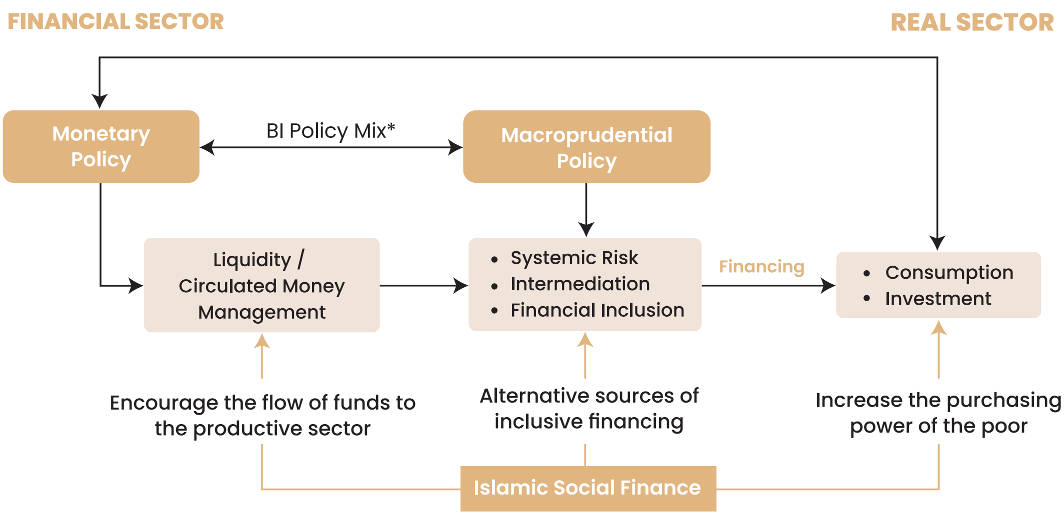
Based on the values and basic principles, Islamic financial instruments are unique and, at the same time, superior. As stated earlier, it is pertinent to note that the scope of Islamic finance is not limited to Islamic commercial finance, but it also encompasses Islamic social finance, such as zakat,sadaqa, and waqf.

Bank Indonesia's Post-COVID Policy Mix and the Role of Islamic Social Finance

The Islamic finance sector in Indonesia is still dominated by Islamic banking-based commercial financing instruments, financial markets, and capital markets (equity) relevant for financing large and medium-sized businesses, including corporations. However, in order to cater to a large number of small and micro businesses, Islamic microfinance is also playing a significant role. The magnitude of Islamic microfinance can be gauged from the number of SMEs served by Shari'a microfinance institutions and Shari'a savings and loans financing cooperatives/units. In addition to that, micro and small business sectors are also supported by revolving funds.

The Islamic social finance instruments are developed and strengthened to sustain economies of scale and limited cash flow of small businesses to cover legal and collateral expenditures. On the other hand, zakat is more focused on redistributing wealth to assist the poor in maintaining their purchasing power. In the long run, all these instruments are expected to achieve the Sustainable Development Goals (SDGs), such as reducing poverty, overcoming hunger, improving health and education, and reducing social inequality. Ultimately, Islamic social finance aims to reach people who cannot access other financing instruments for entrepreneurial ventures. This initial support usually reflects in multiplier economic effect as well as social and holistic inclusiveness.

Figure 10.2:
BI Policy Mix and the Role of Islamic Social Finance



Source: Bank Indonesia

Due to the economic uncertainty caused by COVID-19, Indonesia developed the concept of complementary and mutually reinforcing relationships between monetary and macroprudential policy for economic growth and financial stability[1] (see Figure 10.2). As a result, the Bank Indonesia policies – monetary, macroprudential, and payment systems – all are being used in an effective and integrated manner for both conventional and Islamic financial sectors, with a particular emphasis on Islamic social finance.

Monetary policy is directed to achieve stability in asset pricing (financial and housing) to ensure that an asset price bubble (which commonly builds up during economic upswings) does not burst and result into financial crises and economic recession. Moreover, monetary policy also affects the circulation of money in the economy according to the monetary target. Accordingly, the Shari'a-compliant monetary policy focuses on managing liquidity in the Islamic money market to facilitate real economic transactions and maintain price stability.

1. Warjiyo, Perry. (2016). Central Bank Policy Mix: Key Concepts and Indonesia's Experience. BI Institute Central Banking Series No.25

Macroprudential policy concerns regulation and supervision of financial services and focuses on systemic risks to maintain financial system stability. Its objective is to mitigate the pro-cyclicality of the financial system (time-dimension), resulting from systemic risks associated with interconnectivity among financial institutions, markets infrastructures, and payment systems (cross-section dimension).

The macroprudential policy encourages intermediation of banking sector and promotes financial inclusion for financial stability. In this context, integrating commercial and social finance in Islamic finance will further support financial inclusion. Therefore, with Islamic social finance, the Bank Indonesia policy mix can be further strengthened. There are three ways that Islamic social finance can strengthen the Bank Indonesia Policy Mix:

1. The flow of social funds to the needy is the flow of funds towards something productive, which increases the circulation of money in the economy.
2. Islamic social finance broadens the alternative sources of inclusive financing that could fetch investment for working capital and return on it.
3. It increases the purchasing power of the poor and bolsters economic growth and stability through sustained investment.

In corollary, Islamic social finance may bring economic prosperity and enhance social welfare through financial and economic stability. Furthermore, Islamic social finance can be a catalyst for real sector growth. From the implementation perspective, Indonesia has unique experience in employing Islamic social finance within its policy framework, thus providing holistic – from social to financial to growth – opportunities to attain inclusive, sustainable, and balanced growth and prosperity.

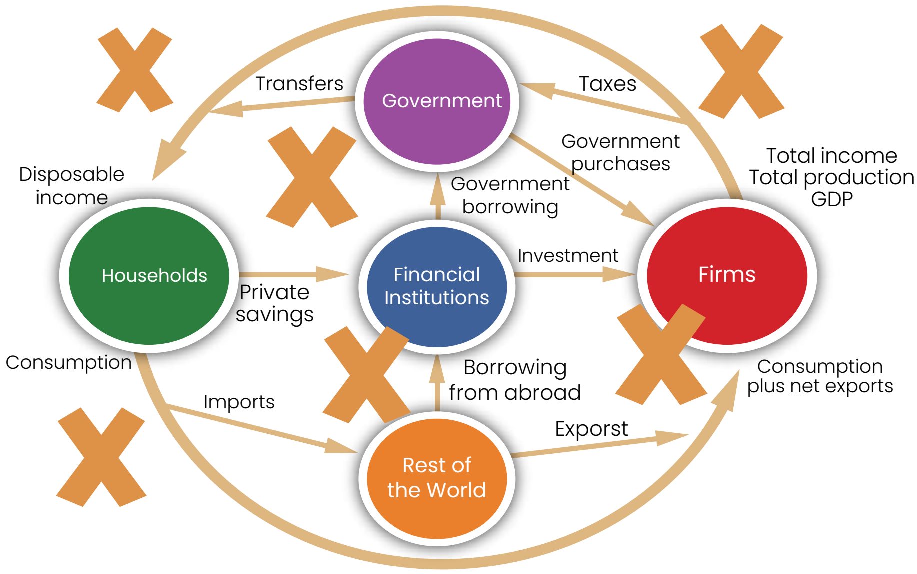
CHAPTER 11

Role of Risk Sharing Islamic Finance in A Post-COVID World

Introduction

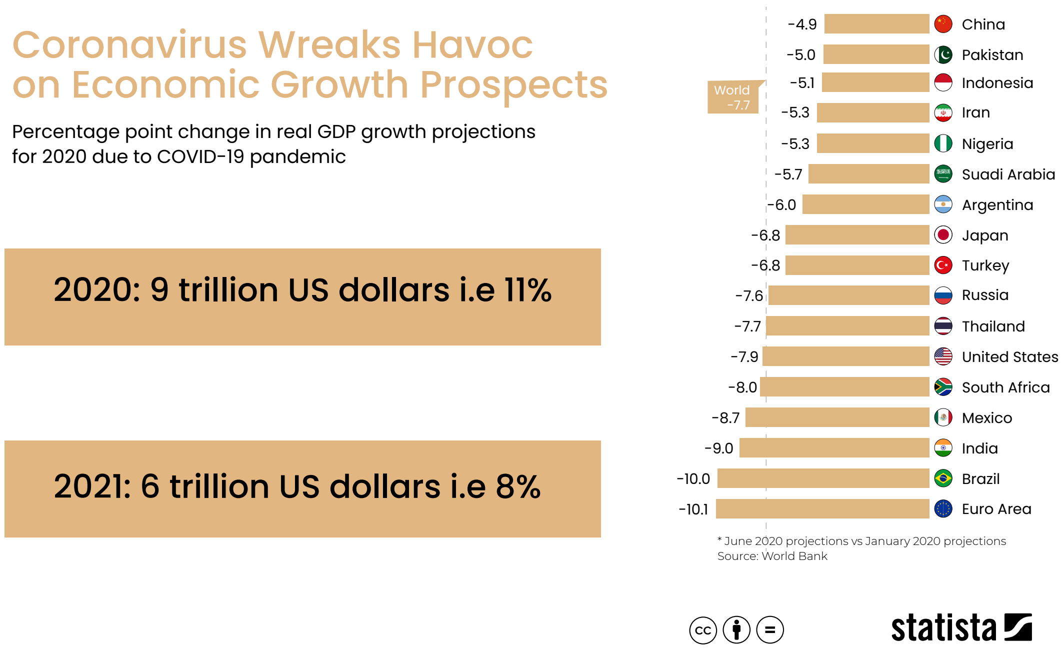
When the world is facing twin hazards: health and exacerbated economic uncertainties, desperation is surging to either come out or adjust to the new normal of COVID-19. The occurrence of Black Swans accompanied by Green Swan' events in times of SDGs, technological disruptions in an intensely globalized multipolar world has turned uncertainties with ambiguities. Moreover, the interest-bearing financial system appears to have proven fragile again, with economies and businesses collapsing in new kinds of ways, exacerbating and repeating systemic and idiosyncratic risks. Figures 11.1 - 11.3 show the intensity of the economic upheavals amidst the pandemic.

Figure 11.1
The Global Sudden Stop



Source: Saylor Academy (2012)[1]

Figure 11.2
Global GDP Losses

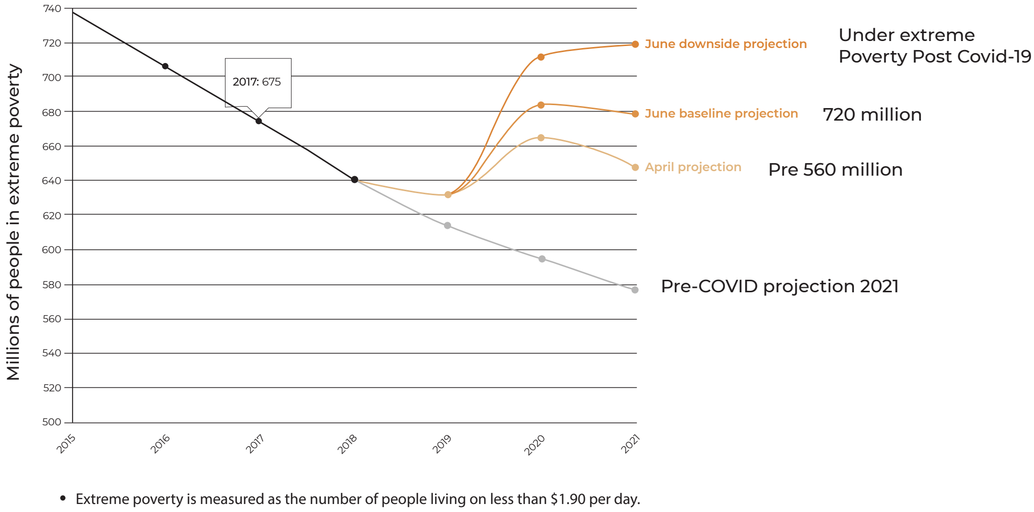


Source: Statista (2021)[2]

1. Available at https://saylordotorg.g ithub.io/text_economics-theory-through- applications/s35-27- the-circular-flow-of-income.html

2. See https://www.statista.com/

Figure 11.3
The Impact of COVID-19 on Global Extreme Poverty: Extreme Poverty and Poverty Projections



Source: World Bank Blogs (2021)[3]

Optimistically speaking, the pandemic-induced ambiguities have given way to another new normal: an opportunity to unify to work as one nation. The magic lies in collectively facing and making a new kind of financial risk-taking and management model. For this new undertaking, the Islamic economic paradigm of trade and risk sharing, as provided in Quran 2:275, could be a suitable framework. However, what seems apparent is that the current Islamic banking and finance practice have for 40 years missed the opportunity to brand and assert itself as a risk-sharing entity. The only lens that had been used to view Islamic banking and finance has been religiosity and Petro-dollars driven paradigm. But the current dynamics present the opportunity for Islamic banking to fine-tune and reframe its practices according to its true spirit of risk sharing. Instead of replicating risk transfer and risk shifting, the recommended Version 2.0 of Islamic finance, awash in technology, has more to offer to fulfill its Maqasid al-Shari'a mandate in a new normal world, in what may be called as a halal tayyab way. The said paradigm shifts can be termed a 'Quad-faced Paradigm Shift' or 'Quad-Paradigm," with the following to offer:

i. The multipolar economic world;
ii. Technological Disruption a.k.a. FinTech;
iii. SDGs orientations; and
iv. The ESG, Climate Change impacts/risks on top of the pandemic catastrophe.

The Multipolar Global Economy

It is being anticipated that from 2025 onwards China and a few other countries will emerge as a new economic block. The prerequisite for the inclusion in this block would be the size, dynamism, dominance, and forwarding and backward linkages in trade and investment of a country. The primary rationale for this fast-developing consensus is the present unipolar regime that the US dominates. It is under ever-increasing debt stress exacerbated by the pandemic, and now doubts linger on its sustainability. This has led to a shift in global growth from developed to emerging market economies. Consequently, there would be a new global economic order with new drivers and sources of global trade and investment flow. Likewise, there would be a move from the international reserve currency structure from a unitary to a multicurrency regime. The trend

3. Available at: https://blogs.worldbank.org/opendata/updated-estimates-impact-covid-19-global-poverty-looking-back-2020-and-outlook-2021

towards this shift has started emerging already. Hong Kong, Pakistan, and other similar countries are leading the global growth, notably post-pandemic. The recent move by China and Pakistan to use local currencies for mutual trade is another piece of evidence. Moreover, these economies have been a significant source of cross-border mergers and acquisitions. As a result, over the years, the value of the emerging market corporations has increased from US$123 billion to over US$500 billion by the end of 2020. Moreover, at the same time, their borrowing costs have been reduced. Hence, it will be the first time the emerging markets could shift roles from borrowers to creditors[4].

Obstacles to the emergence of multiple growth poles

The emergence of multiple growth poles in the global economy has potential benefits,the most important of which is greater resilience of emerging and developing countries to survive shocks similar to what was triggered by the 2007/2008 crisis. Additionally, more significant trade and investment opportunities, out of the box solutions by the emerging markets of the South and low-income developing countries, the game-changing dynamics of the China-Pakistan Economic Corridor (CPEC) under the One belt One Road (OBOR) initiative can be enormously helpful and effective in accelerating growth, development and poverty reduction in the post-pandemic world. There are, however, significant obstacles to overcome. These include, among other things, the architecture and governance of global finance. As is further evidenced by the pandemic-ridden economic situation, the former is woefully inadequate in providing the infrastructure for financial inclusion, progression, risk management, supervision, and regulation to a balanced growth of global finance. Moreover, the existing structures are non-representative and suffer from a high democratic deficit. They make policies, impose standards, codes of conduct, and international best practices on the rest of the world without adequately representing them.

Finally, one of the obstacles in the way of global economic recovery and the emergence of multiple growth poles is the critical structure of global finance, which is overwhelmingly dominated by debt-creating flows. As the 2008/09 financial crisis and fallouts of pandemic suggested, this structure is putting a great deal of burden and stress on the recovery and growth of the global economy. Perhaps, the stresses and financial shocks of recent months in global economies and post-pandemic breakdowns are signs of regime uncertainty, driven by a regime of interest rate-based finance. The question arises whether there is such an alternative to the present dominant global financial system that could sit well the prospects of 'Economic Multipolarity.' Perhaps a more practical alternative would be to step back from targeting the interest rate mechanism and focus on the incentive structure that has rendered the interest rate-based debt financing such a destabilizing force in the global system. This can be accomplished by reorienting the system from relying on risk transfer to shifting it to risk sharing – the essence of Islamic finance.

Risk-sharing Finance Regime as an Alternative

Risk sharing – the essence of Islamic finance – has several desirable characteristics that endorse it as an ideal method of financing. Classical Arabic lexicons of the Quran define contracts of exchange (al-bay') as contracts involving exchange of property rights in which there are expectations of gains and probability of losses[5]. These sources define al-bay' as "mubadalati al-maali bi al-maal." In English, this can be rendered as "the exchange of one set of property rights claim for another."

4. Sheng (200)

5. For example, Al Tahquiq Fi Kalamat al-Quran al-Karim, Lisan al-Arab, Mufradat Alfaz al-Quran, Arabic Lexicon, among others.

By entering exchange contracts, parties improve their welfare by exchanging the risks of economic undertakings, thus allowing division of labour and specialization[6]. Since in the verse 2:275, the contract of exchange (al-bay) appears first and the prohibition of riba after that, it can be argued that requiring contracts to be based on exchange constitutes a necessary condition and “no-riba” the sufficient condition of existence of an Islamic financial system. Together, these conditions constitute the organizing principle of that system. Therefore, the necessary condition (al-bay’) and sufficient condition (no riba) must be met for a contract to be considered Islamic. A careful consideration of all the permissible contracts that have reached us reveals them to be risk sharing contracts. Therefore, the instruments designed to empower them financially must also be risk-sharing in nature.

Research has demonstrated sizeable potential welfare benefits of risk-sharing[7]. However, analyses of the pre-crisis data show a fast-growing, debt-creating process in the global financial system with increasingly tenuous links with the growth of the real economy. Although equity portfolio and foreign direct investment flows were growing faster than debt-creating flows before the global crisis, their magnitudes were not significant enough to make a dent in the low level of risk sharing coefficients in the empirical studies. For example, one study[8] showed that even in the fast-growing East Asia-10 countries, the coefficient of risk sharing was minimal, and some were negative (Indonesia and Malaysia). Increased debt-creating flows, a characteristic of financial globalization in the run-up of the 2007/2008 crises, do not improve risk sharing, as they either transfer or shift risk. More importantly, risk shifting or risk transfer financial transactions led global finance toward decoupling from actual sector activities with the growth of the former outpacing that of the latter by double-digit multiples, intensifying the risk of “sudden stops”[9]. Thus, even the emergence of a multipolar global economy may not improve risk sharing across the globe. Perhaps the most important reason for this situation is the reliance on global finance on debt-creating flows.

Risk Sharing as ‘Value Preposition’ of Islamic Finance

It can be argued that the notion of risk sharing could be framed as the value proposition of Islamic finance. The system is predominantly equity-based, where actual savings are placed in the real sector, such as private or public projects. A key feature of the dynamics is that the Islamic financial system is protected from un-backed credit expansion since banks do not contract interest-bearing loans or create and destroy money[10]. It is thus assumed that, in an Islamic bank, there will be a maturity match between deposits and investment (with no need for asset and liability management). Short-term deposits may finance short-term trade operations, with banks purchasing merchandise or raw materials and selling to other companies; liquidity is replenished as proceeds from sales operations are generated. For longer-term investment, longer-term funds are used. Hence, there is greater interdependence, and a close relationship between investment and deposit yields since banks primarily accept investments based on profit loss sharing. The funds to the enterprise are also provided on the same basis.

The dynamics would also, in turn, translate into a coordinated asset/liability maturity structure, as well as value matching. In addition to the prospect of instantaneous equilibrium between the asset and liability sides of the financial/banking system, there would also be asset/ liability risk matching. While the individual financial institutions engaged in investment activities face the given risks, in and of themselves, these are not systemic and do not impact the overall stability of the financial system, as this system is immune to speculative mania, liquidity expansion,

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6. Mirakhor (2011)

7. Van Wincoop (1999), Kim, S. et al. (2005), Lee lmbs (2006), and Shin (2008)

8. Kim S. et al (200)

9. Mirakhor et al (2012)

10. There is no credit creation out of thin air in Islamic finance. Under conventional fractional reserve banking, deposits at one bank can be instantaneously loaned out or used to purchase a financial asset and become reserves and a basis for a new loan at a second bank. The credit multiplier is determined by the reserve requirement and could be high. In case of securitization and over-leverage, the credit multiplier is theoretically infinite, leading to violent asset and product price fluctuations.

and instability of returns. The latter is assured via the same coordinated asset/liability value or maturity structure of the institutions. If asset prices decline, so will the liabilities, unlike what happens in a system dominated by interest-based debt contracts[11].

Apart from providing the above ingredients of financial resilience and stability, the risk sharing based Islamic finance would better serve financial inclusion, poverty reduction, and shared economic prosperity via efficient resource allocation. The objective of efficient resource allocation is central to the growth and stability of any financial system, allowing financial resources to receive their actual opportunity cost. Unfortunately, in an interest-based debt system, the financial resources appear not to be receiving their opportunity cost. This has led to the misallocation of financial resources through financial repression, a term coined in the 1970s. Risk sharing (Islamic finance) corrects this inefficiency. Repression occurs when the prices of resources do not reflect their opportunity cost. It was thought, in the 1970s, that developing countries suffered from financial repression since the governments and directed lending administered interest rates. Consequently, the price of financial resources did not reflect the actual opportunity cost of financing. As a result, the mantra that developing countries needed to "get the prices right" became the cornerstone of the financial liberalization movement later enshrined in the Washington Consensus. Liberalization meant removing barriers on prices of all resources to achieve their opportunity cost, defined as the subsequent best alternative use of a resource.

However, the opportunity cost of financial resources was an exception since its opportunity cost was not the subsequent best use of funds in the productive sector of the economy but the market rate of interest. Hence a distortion in the use of financial resources was created because of what James Tobin termed "deviation between market valuation of capital and its replacement cost." Tobin further argued that this deviation is policy-induced since the monetary policy had a significant impact on the market rate of interest, meaning that, just as in developing countries, the market rate of interest in advanced economies was also administered, leading to financial repression.

The phenomenon of financial repression created a wedge between return to equity, reflecting the rate of return to productive activities and the rate of interest. Islamic finance avoids this inefficiency, given that the rate of return to finance would be the real sector-driven where financial resources are ultimately deployed. Immediately, the system renders a tight coupling between the financial and the real sectors, and the financial sector is found fulfilling its real aim, i.e., serving the real sector. It will hence be the returns to the real sector driving the economic outcomes. In this sense, Islamic finance is genuine financial liberalization. Data reveals that, globally, the average rate of return to the real sector is about 15% to 20%, a sizable multiple of the rate of interest ranging from negative to zero to 5-7 percent.

Given the importance of credit in the current financial and economic model, if credit supply is constrained by increasing its price, i.e., increasing interest rates, then a reverse of the above dynamics is achieved. High interest rates lower investments, which lowers consumption, leading to a build-up in inventories and lowering growth in national output. Fallout is an increase in unemployment. Suppose the decline in employment is more pronounced, consumption and

11. It is also to note that since interest rates are an economy-wide variable and therefore systematic, their risk does not get diversified away like other idiosyncratic risks of a stock would. This would also translate into a higher portfolio beta (Bacha and Mirakhor, 2012).

12. Keynes (1932)

investment decline further, affecting the national output. If this decline continues for more than two consecutive quarters, then an economic recession is upon us. The dynamics help recall Keynes's criticism of capitalism. In the article published in Economic Journal Symposium in 1932 written by Keynes, he explicitly associated two "evils" to capitalism[12]. First is capitalism's inability to create full employment, and second is its ability to create highly skewed income and wealth distributions, both of which he attributed to the interest rate as "the villain of the piece."

It can be observed that the economic functioning will be in complete contrast if the same is driven by the rate of returns to the real sector. The one-to-one mapping of both the natural and financial sectors would increase investments, consumption, employment, and hence economic growth in direct proportion with the increase in the returns to the real sector. As a result, credit growth is tied closely to the expected growth rate of the real economy.[13] Equilibrium in an Islamic economy thus structured will be stable, and the rate of return to the financial sector will be fully aligned with the profit rate in the real sector of the economy.

Multiple influential scholars, in the past, proposed reforms that would abolish the current financial system and replace it with an equity-based investment system. Among the most celebrated proposals along these lines was the plan formulated in the University of Chicago[14] which called for 100% reserve money and an equity-based investment system. Irving Fisher claimed the following advantages for this plan: (i) Much better control of a significant source of business cycle fluctuations, sudden increases, and contractions of bank credit and the supply of bank-created money (ii) Complete elimination of bank runs. (iii) Dramatic reduction of the (net) public debt (iv) Dramatic reduction of private debt, as money creation no longer requires simultaneous debt creation[15].

A recent IMF paper titled "The Chicago Plan Revisited" studied the claims made by Fisher and others in favor of the Chicago Plan'. By embedding a comprehensive and carefully calibrated banking system model in a DSGE model of the US economy,[16] they found robust support for all of the claims made supporting the proposed plan. Moreover, others have also proposed similar lines suggesting "limited purpose banking," which would essentially transform all financial intermediaries with limited liability into mutual fund companies, with a single regulatory agency taking care of the regulatory and supervisory roles. Such banking would maintain a close link between the real and the financial sector, where the former will drive the latter.

It is often claimed that risk sharing, or Islamic finance, increases risks in the economy. However, there appears to be a conceptual confusion in cognition of the justification for finance. If finance is conceived as intermediating and facilitating the link between the demand for finance emanating from the real sector and the supply of finance, then there must be a close link between the fundamental and financial sectors of the economy. In this case, risks are taken in the real sector. The modality can be risk sharing, risk transfer, or risk shifting when it comes to financing. However, the overall risk of the activity seeking financing does not increase. The exception is

13. Shaukat and Al Habshi (2015)
14. Chicago Memorandum (1933)
15. Irving Fisher (1933)
16. (Benes and Kumhof (2012)

when finance is decoupled from actual sector activities during the run-up to the recent crisis. For several years during the 1990s, observers, including Hans Tietmier, the then President of Bundesbank, warned in international fora that "financial decoupling" was increasing the risks in global finance[17].

Continuation of a debt-based financing regime will not necessarily allow the benefits of emerging multipolarity to accrue to the world economy. However, the new system can be more effective with a new regime of financing. Indications are that almost all emerging countries in Asia are actively considering risk sharing via Islamic finance as a possible alternative. Quite a few are leveraging Malaysia's first-mover status in education, workforce training, and instrument innovation in Islamic finance to introduce their brand of the risk sharing method of financing. If these efforts succeed, the benefits of emerging multiple growth centers will be buttressed further with more excellent stability and resilience in supporting financial transactions through enhanced risk sharing. Even now, risk sharing could be an effective alternative to the debt-based ways and means of helping European countries facing sovereign debt crises. For example, Eurozone could issue long-term securities with payoffs based on the GDP performance in these countries. Similarly, China could buy Italian GDP-based securities rather than the consideration reportedly being given to purchasing Italian debt. This type of risk sharing instrument has been proposed by some analysts for some time now[18].

Another suggestion has been that central banks purchase equity shares to stabilize the equity markets[19]. While the modern time potent example is Silicon Valley, USA, come COVID-19, another fresh round of discussion is happening in Europe to resort to risk sharing based finance. The same in the form of a public private partnership (PPP) equity sukuk or a European pandemic equity fund (EPEF), all citizens would participate in the common risks and potential rewards of broad-based participation in Europe's industry post-crisis. This would be akin to a pan-European sovereign wealth fund of hopefully substantial proportions. Perhaps the present pandemic intensified regime uncertainty has created a valuable opportunity to seek alternatives to the debt-based finance regime, offering new normal solutions in new normal times and reaping the desired benefits of multipolarity. The same holds for the consideration of the second form of the overall Quad Paradigm Shift.

The Significance of Financial Technology for a New Age FinTech Islamic/ Halal Finance

In recent times, the impact of globalization and financial innovation has swept through the world in magnitude unprecedented, altering the very fabric of financial and economic behavior. Automation and mechanization have already disrupted the traditional financial means to meet ends. The same carries roots to societies' overall mental, behavioral, and social fabric shifts, as supported by Figure 11.4. It is not easy to imagine a world without the Internet or mobile devices that are now central to daily routines. Consequently, the digital disruption/revolution has brought a paradigm shift, transforming how customers access financial products and services. This has

17. Menkoff, L. and Tolksorf (2001.
18. Shiller (2003)
19. Farmer, R. (2010)

not only created user flexibility but also with it reduced transaction costs. The flexibilities that have consequently called time on the traditional 'business as usual approaches' result from the intersection and constant penetration of technology-driven finance. This could be termed as the 'new age innovative//automated financial order'– it is called FinTech. World Bank (2016) predicts that automation is threatening jobs by, for example, by 69%, 77%, and 85% in India, China, and Ethiopia, respectively.

Figure 11.4

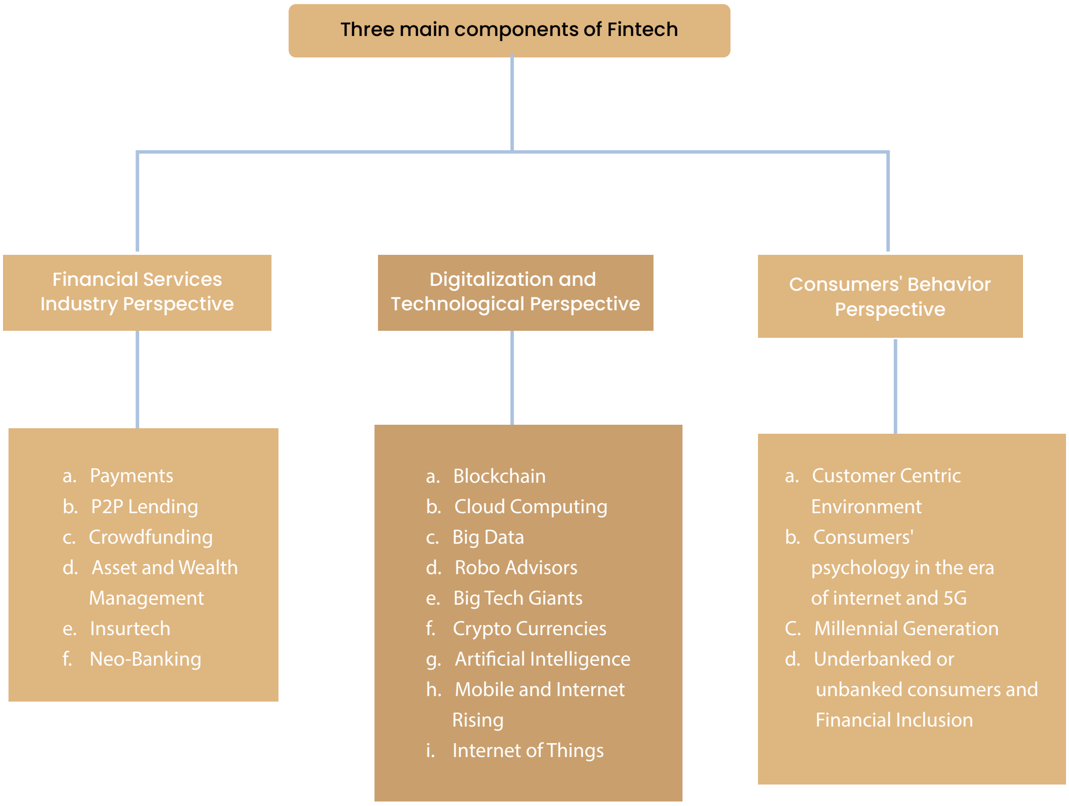
As such, FinTech and Islamic FinTech are gaining significant momentum and disrupting the traditional value chain. Funding of Islamic FinTech start-ups more than doubled in 2018/19, reaching over $12b[20]. If technology-driven financial innovation is set to lead the fundamental transformations in economic behavior/growth, not only resorting to novel and adaptive marketplaces but understanding and implementing the same as an ecosystem is crucial. Figure 11.5 below highlights the main ecosystem components of the FinTech financial sector.

> If technology-driven financial innovation is set to lead the fundamental transformations in economic behavior/ growth, not only resorting to novel and adaptive marketplaces but understanding and implementing the same as an ecosystem is crucial

20. MDEC (2021)

21. Available at: https://www.pwc.co.uk/financial-services/FinTech/assets/FinTech-Global-Report2016.pdf

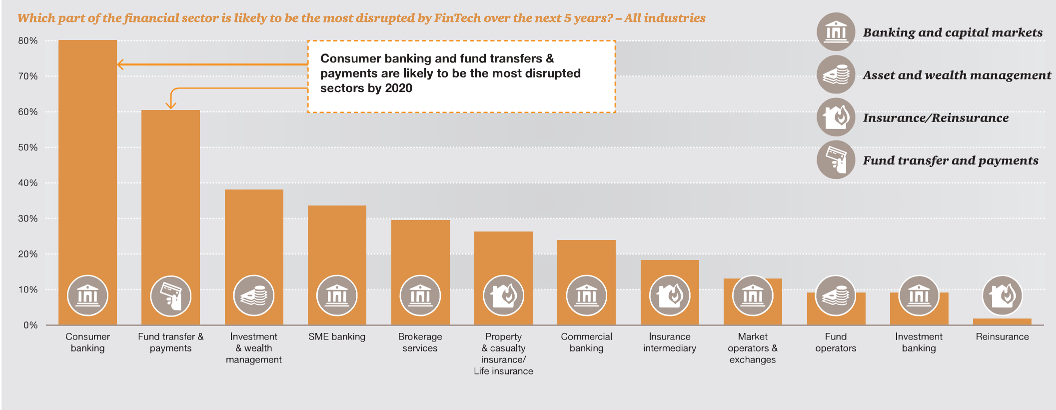
Figure 11.5



The raison d'être for enhanced and affordable financial flexibilities is the possibility of transacting without intermediation. This has helped neutralize the traditional business model frictions between the surplus and deficit units. Consequently, there is a clear orientation from a ‘financer-intermediator-entrepreneur’ towards a ‘financer-entrepreneur’ model (see Figure 11.6). P2P lending, crowdfunding, angel investing, mobile banking, Airbnb, On Deck, Funding Circle even e-bay are prime examples.

These not only have created better opportunities for financial inclusion but have tended to improve the overall social fabric via improved trusteeship and risk sharing. FinTech can play a more significant role in the Islamic finance industry specifically to improve products, processes efficiencies, cost-effectiveness, increase distribution, Shari’a and other compliances, catering better financial inclusion. Consequently, this builds the case for Islamic financial institutions to be more agile and receptive to adapting and adopting FinTech solutions. FinTech and digital technology could allow Islamic finance to reach out further and quicker (and possibly cheaper) without building a physical presence and distribution channels. Such are inferences for Islamic finance to adopt FinTech aggressively.

Figure 11.6



Source: PwC Global FinTech Survey 2016[21]

New Age FinTech Waqf Model for IsMF, Financial Inclusion and SDGs

Another key avenue where FinTech-driven Islamic finance version 2.0 could offer its out of the box efficacy is via the social financial modes. While Islamic finance offers an array of such scheme, the potency of waqf in a post pandemic environment could be a source of new Shari'a-compliant funds that can be dedicated solely for economic empowerment, entrepreneurial preferences, research and innovation enhancement. The same could be extended to assist cash strapped governments who are gasping to address additional and new kind of covid ridden unemployment with numbers comprising of a novel foreign returned work force going back to their home countries. FinTech-driven waqf funds could be used to extend financings and creating extra sources of employment.

The other dimension of a new age waqf will be "services waqf. With provision for Investment Risk Reserve (IRR) in case an investment suffers loss, the model can be operated via an online platform where surplus meets deficit as per suitability and best choices. The rest of business operations could be complemented/performed via AI and Robo advisory, Blockchain and smart Islamic contracts: support tools to configure a congenial eco-system. The envisaged FinTech waqf would not only essentially contribute but would also catalyze the attainment of UN SDGs' desired financial inclusion, and economic diversifications for many countries. There can be two alternate ways in which this FinTech waqf model can be set up or structured.

Waqf funds/services from the government: State and local governments can choose to allocate certain amount of funds to setting up microfinance operations in certain parts of their areas. While this option might provide a steady stream of resources if ever implemented, it is highly unlikely that the State will give patronage to microfinance institutions in this fashion.

Waqf funds/services directly from the populace: Microfinance institutions can set up cash boxes and other donations for people to contribute their institutions. While one cannot determine a definite amount that this activity can generate, it can be a source of income that an individual organization can utilize at its own discretion.

Poised for Achieving UN SDGs

Many opportunities lie ahead for of Islamic finance version 2.0. For instance, new age waqf model which, if properly utilized, can help in eradicating poverty via economic empowerment in post covid dynamics. It can initiate Islamic microfinance that currently makes for less than one percent of the microfinance borrowers across the world. New age waqf can give the impetus to Islamic microfinance industry, enabling it to expand operations, which are often undermined by lack of funds/innovation. It will afford a new and extra opportunity for modern Islamic finance to meet the needs of customers who require cash instead of assets financing. Consequently, the utilization of Islamic finance version 2.0 in such ways could create a valuable opportunity to help meet the UN SDGs, the third component of the Quad-Paradigm Shift (please refer to the image on page 191).

Navigating Climate Change and Green Swans

The Islamic finance version 2.0 oriented multipolar and UN SDGs focused world shaken by the pandemic, offers respite to the universal and unprecedented challenge of the last component of the Quad Paradigm Shift, i.e., impact of climate change, both in scope and scale. The effects, also referred to as green swans, come in the form of normal and abnormal physical and transition risks and the risk of climate refugees. Economic experts are already talking about what is termed as Climate Minsky Moment by Mark Carney, former Governor, Bank of England. Unlike pandemic, climate risk is an expected unexpected event. Climate risk can impose costs but measuring and predicting them requires probabilistic assumptions with significant tail risks. Climate risk is currently estimated to pose expenses in the tens of trillion dollars worldwide, although even this may underestimate the scope.

While the current pandemic was foreseeable, the unexpected systemic risk arising from the coronavirus economic collapse is a valuable baseline for comparison. Here, costs already top US$9 trillion globally and may exceed several tens of trillions of dollars—surpassing any earlier estimates of the economic fallout caused by a pandemic. Like a pandemic, climate change could cause a substantial external shock that acts on financial assets in a correlated manner. That is, driving losses simultaneously across a range of financial markets that usually do not behave the same way. And worse than a pandemic, climate change will likely cause successively greater external shocks and may result in irreversible damage to the planet and both natural and human productive capacity.

FinTech-led Islamic finance, inclusive of its social, financial modes, akin to the FinTech waqf, can naturally absorb the climate shocks' intensity. Quran and Prophet's – peace be upon him – traditions preempt, preserve and address climate change, signifying to preserve the environment, hence mitigating or avoiding climate change. Combine the Islamic prescriptions with the mitigation and adaptation approach, where mitigation tackles the causes of climate change, and adaptation tackles the phenomenon's effects. Adaptation is crucial to reducing vulnerability to climate change. A successful adaptation can reduce vulnerability by building on and strengthening existing coping strategies, in this case financial strategies based on a sound and best-suited financial architecture and modeling in a multipolar world. The famous 2015 Islamic Climate Change Declaration stated this aptly, consistent with the Paris Accord[22].

22. https://unfccc.int/news/islamic-declaration-on-climate-change

Conclusion

One of the strongest arguments in favor of globalization and ensuing multipolarity was improved risk sharing that would result from intensified human interaction across the world. On the theoretical ground, this would mean expecting a much greater degree of risk sharing between and among economies – resulting from greater freedom of movement of resources, and hence, providing a significant source of consumption smoothing in the world economy. These developments were expected to lead to progress toward market completion, which means increasing the number of marketable securities to meet a large number of contingencies – a condition of optimal risk sharing posited in conception[23]. Alternatively, at least, progress could have been expected toward the design and use of Arrow's idea of having securities with pay-offs contingent on the performance of the underlying asset, for example, equity-based securities with close links to the real sector of the economy[24]. Theoretical research and base models of Silicon Valley's sustainable success have demonstrated sizeable potentials, real and welfare benefits of risk sharing.

It appears that the contribution of the present configuration of the Islamic finance industry to the growth of the real sector has fallen well short of expectations so far. Perhaps the main reason has been that the practitioners and financial engineers of this new asset class – growing within the conventional financial system – had to design instruments that resembled those prevalent in the host system without violating the "no-riba" sufficient condition. This meant creating instruments with a tenuous relationship to the risk sharing essence. Consequently, the recommended FinTech-driven version 2.0 of Islamic finance offers to reframe Islamic finance practice as per its original submitted mandates that currently are in an automatic match to UN SDGs. Thus, the rising FinTechs, BigTechs, TechFins, and DeepTechs are nothing but a formal advent of what could be termed as digitization/atomization of civilizations. However, the question may appear plausible, and the potentials could soon glide towards disconcertion if and only if this innovative financial amplification is not understood, absorbed, and utilized via an ecosystem approach.

Currently, the pandemic-ridden global economy is already adjusting to navigate and adjust to a multipolar economic world that is grappling with mitigating black swans while bracing for green swans of climate change. Adopting technology orientations as mere fashion and not as a necessity/proactive need could virtually be the last nail in the coffin. Islamic finance losing a third time lucky, COVID-19 ridden opportunity to frame itself as a better, resilient, all-inclusive financial regime via its risk-sharing essence. The submission becomes more plausible via the assertion that the premier FinTech disruption models are nothing but a modern technology-oriented application of risk-sharing finance: the essence of Islamic Finance. Consequently, this strengthens the case for version 2.0 Islamic finance that is more agile and receptive to adapting and adopting FinTech solutions. With this as vision and 'innovation, not renovation' as mindset, a 2021 onward version 2.0 of innovative Islamic finance could be forecasted. The magic sauce for such an ecosystem would be to rely on innovative capacities of pure experts via structural support, unbundle to re-bundle a smart and automated version of Shair'a finance that is cost, user, and efficiency friendly. As submitted earlier, the adoption of, for example, Blockchain and mobile technology could help provide and promote Smart Islamic Banking Contracts (SIBCs) solution (adjustable to fine tune with specificities of regions) and also intelligent data supply for customer risk profiling that accommodates pricing, and mitigating climate risks are among few instant solutions to be pursued. Concluding a transparent contract to finance Shair'a based deposits/products could then be a mobile app work, with financial institutions smartly equipped to assess risks.

23. Arrow's (1971)

24. Shaukat et al (2014).

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