

Green Banking: Performance of Three Pakistani Islamic Banks in Environmental Projects

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Abstract: Globally, there is currently a trend towards responsible use of non-renewable resources and the creation of a world fit for the future. Countries worldwide decided upon a set of Sustainable Development Goals (SDGs) to accomplish these aspirational goals. This is mostly dependent on economic expansion. This paper aims to explore the main viewpoints on how Islamic Financial Institutions (IFIs) contribute significantly to the attainment of sustainable development objectives. Additionally, how Islamic financial instruments support environmental projects. For this purpose, the researcher has selected 3 Pioneer Islamic banks in Pakistan analyzed their green performance, and conducted a content analysis of their financial reports and thematic analysis of interview transcripts to highlight how they have contributed to sustainable practices.

Keywords: Sustainable Development Goals, Islamic Finance, Tools, Environmentally Projects.

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1. Introduction

Islamic finance tools are financial products and services that are designed to comply with Shariah (Islamic Law) principles, which highlight moral and socially conscious behavior. The instruments of Islamic financing are MUDARABAH (a deal in which an investor and an entrepreneur split the profits, in which The entrepreneur runs the company while the investor supplies funding) and MUSHARIKA (a partnership-based financing tool in which A commercial venture involves two or more parties contributing funds, and the partners split the profits and losses). MURABAHA: A commercial venture involves two or more parties contributing funds, and the partners split the profits and losses. IJARAH is a particular kind of leased-based financing when a bank purchases an item and rents it to a customer for a fixed period. SALAM (a forward purchase agreement whereby the buyer prepays for the supply of a particular good or service at a later time.) ISTISNA (A contract-based financing tool whereby the bank commits to producing or building a particular asset to the customer's

requirements and delivering it at a later time.) Shariah-compliant bonds known as SUKUKs, provide profits given to investors on the performance of the underlying assets.

Islamic banking tools aim to provide financial services and goods that adhere to the tenets of Islamic legislation, which emphasizes transparency, fairness, and social responsibility. These tools are used as fundamental building pieces for creating a broad range of more intricate financial products, indicating that Islamic finance markets have a lot of room to grow and innovate in the financial sector.

Initiatives that are both environmentally and socioeconomically sound are essential to ensuring sustainable development. Most nations, particularly those that are still developing, have prioritized economic expansion over environmental protection in the past few decades. They have to face issues including soil erosion, air pollution, deforestation, air pollution, species extinction, global warming, and agricultural loss. But Pakistan, like a lot of other nations, is struggling with the environmental repercussions of climate change. They have developed several strategies, like the application of "Green Finance," to lessen these risks and encourage sustainable growth. Financial institutions are crucial in this sense because they provide funding for a variety of environmentally friendly and socially conscious projects, including waste management, renewable energy development, clean energy, alternative energy, and energy efficiency. There are many different interpretations of "green finance," which is often referred to as "green investments" in academic circles, literature, and research. Irfan, Razzaq, Sharif, [2]. "Green Finance" is a novel idea (GF) a financial tool that incorporates environmental preservation and economic gain, according to. The ultimate objective of green finance is to synchronize the monetary and non-financial resources as well as actions necessary to achieve sustainable growth using the fewest possible negative impacts on the environment and habitat.

Islamic finance tools have emerged as a unique and socially responsible way of investing that aligns with the principles of Shariah Law. These tools provide investors with a selection of financial services and goods that promote ethical and sustainable business practices, including investing in green and environmentally friendly projects. Islamic banking tools can play an important role in sustainable and environmental projects and help to reduce the carbon footprints of businesses and industries. All the Islamic finance tools can be used to invest in green projects. These tools provide financing options that are based on financing options on profit-sharing and risk-sharing principles, which can help to reduce the overall risk of investing in green projects.

The use of Islamic finance tools for investing in green projects represents an important and innovative approach to addressing the challenges of climate change and promoting sustainable development. By aligning financial practices with ethical and sustainable principles, Islamic finance can help to support the transition to a more environmentally friendly and socially responsible economy.

1.1 Research Objectives

The purpose of this document is:

- To look into how Islamic financing instruments might support ecologically sustainable development and green investments.
- To analyze the various Islamic finance tools that can be used for investing in green projects, including Musharika, Mudarabah, Ijarah, Salam, Istisna, and Sukuk.
- To identify the challenges and opportunities associated with investing in green projects through Islamic finance tools, including risk management, profitability, and scalability.
- To assess the effects of Islamic banking tools on the overall sustainability and social responsibility of investment practices, including their contributions to reducing carbon footprint and promoting ethical investment.

These research objectives can help to provide a comprehensive understanding of how Sustainable development and green investments can be aided by the application of Islamic financing instruments.

1.2 Contribution of This Research to Society

You can work with people more effectively when you are aware of your own and their duties. It's not just kind of you to work together on this project. For the initiative to ultimately succeed, it is essential. The successful project could lead you to the triumphant implications for society. Regarding, our project, as we have not conducted our research based on large size it helps us understand the mechanism of how Islamic finance tools are used and their contribution towards environmental projects. These tools help society in many ways such as ethical and socially responsible investments, financial inclusion, risk sharing and stability, collaboration and partnership, education and awareness, environmental sustainability and contributing towards sustainable development, making a positive impact on society.

2. Literature Review

The fundamental tenets of sustainable finance and Islamic finance are comparable: wealth distribution and poverty reduction, environmental protection, and financial stability and economic growth. As a result, Islamic finance has been able to make use of these parallels and naturally spread the concepts of green finance. (-Tan Sri Dato' Sri Ranjit Ajit Singh, Chairman, Securities Commission Malaysia). Islamic banking is widely recognized for forbidding specific financial practices, like charging interest or allowing businesses to be owned by the faith. The goal of these bans is to improve society's overall welfare and justice system. The tenets of green finance, which aim to direct investments towards initiatives that improve the environment, are intrinsically consistent with the principles of Islamic financing. Ahmed, [2]. In particular, the wasatiyyah principle calls for preserving the equilibrium of mizan, or the world as it naturally exists, which means abstaining from waste, excess, and corruption. Islamic doctrines forbid the propagation of chaos (fasad), as well as unethical deals and transactions including interest (riba), ambiguity or false agreements (gharar), and chances (may). This framework states that companies should provide for people's needs while staying within the bounds of an effective and sustainable economic system. Financial operations that cause chaos, such as depleting the environment, are forbidden. In light of environmental deterioration brought on by climate change and the ensuing humanitarian crises. Islamic scholars contend that Islamic finance must support environmental preservation and climate action due to the conflicts between Sharia and environmental sustainability. To achieve social justice, wealth creation and distribution in the economy need to be just and representative of actual productivity, with lenders and borrowers fairly splitting profits and losses. The principles of Islamic finance emphasize the promotion of social welfare and environmental sustainability, making it a suitable framework for financing green projects.

The Mudarabah principle, on which the profit-sharing principle is based, states that while Profits are divided between the working partner and the fund owner, He alone is responsible for any loss. In other words, the entrepreneur and the capital owner split the earnings by the terms of the contract, while losses would normally be recorded on capital. It is commonly used in Islamic Finance to finance small and medium Enterprises (SMEs), including green SMEs. In Pakistan Small and Medium Enterprise Development Authority (SMEDA) has partnered with Islamic Banks to provide financing for green SMEs using mudaraba Alam, Shahzad & Hussain, [3].

Musharika is widely used in Islamic finance projects, including green projects. In Pakistan, the National Bank of Pakistan has partnered with the Alternative Energy Development Board to Finance renewable energy projects using Musharaka. Similarly, the Bank of Punjab has partnered with the Punjab Energy Efficiency and Conservation Agency to finance energy-efficient projects using Musharka. One kind of sale is murabaha in which the Seller reveals an asset's price and adds a profit margin. It is widely used in Islamic finance for trade financing, including financing for green projects. In Pakistan Bank of Khyber has used Murabaha to finance renewable energy projects, such as solar and wind power projects. Shaik, [4]. Ijarah is a form of lease financing in which An asset is bought by the lessor and leased to the lessee for a defined amount of time. In Islamic finance, it is frequently used to finance assets like real estate, cars, and equipment, including green assets. In Pakistan, the Pak Kuwait Investment Company has used ijarah to provide funding for energy-saving initiatives, such as the installation of solar panels in buildings. Salam is a kind of transaction in which the buyer pays the seller upfront for the product's delivery of a specific asset at a future date. It is commonly used in Islamic finance for Agricultural financing, but it can also be used to finance green projects. In Pakistan, Salam has been utilized to fund initiatives using renewable energy, such as the purchase of solar panels and wind turbines. Istisna is a kind of agreement whereby the seller accepts an order from the customer for a certain good to be produced or built, and the seller promises to deliver the good later. In Pakistan, the Water and Power Development Authority (WAPDA) has used istisna to finance hydropower projects. One kind of Islamic bond is sukuk. That represents ownership in a specific asset or project. It has gained significant attention in recent years for its potential to finance green projects. In Pakistan, Sukuk has been utilized to provide funding for renewable energy initiatives, including the development of a wind farm at Jhimpur Shaikh, [4].

It emphasized Islamic banks' function in promoting long-term growth and aligning with the principles of Islamic finance. Islamic banks are actively engaged in financing green projects, including renewable energy initiatives, energy-efficient buildings, and sustainable infrastructure development. Islamic bank plays a proactive role in green finance and sustainable development. Through their green banking initiatives, Islamic banks contribute to environmental conservation, resource efficiency, and the achievement of global sustainability goals.

3. Method

The work researcher performed during the action is that they conducted 5 interviews comprised of various open-ended questionnaires which are as follows:

- What part, in your opinion, does Islamic banking play in advancing climate change and environmental initiatives?
- What variety of Islamic finance instruments are employed in financing? How much money do you invest in environmental projects each year?
- In your opinion, what actions should the Islamic financial sector take to assist and advance green financing and sustainable development goals?
- Which tool, in your opinion, has the most impact on promoting sustainable development goals and lowering carbon emissions?
- In your experience, are there any extra expenses or advantages related to funding green projects with Islamic finance?

According to our fieldwork, we identified that Islamic finance tools contribute more than half of their earnings towards environmental projects. The tool that helps banks in earning more profit is Musharika. Through Musharika they finance car, and solar financing, in renewable energy projects.

They are playing the role of providing interest-free investments, promoting environmental projects, maintaining customer relations, and collaborating and partnership with other companies to gain more loyalty, and risk sharing.

Lastly as mentioned by the Bank they are providing car financing but it emits carbon emissions so the response was Pakistan is still in a developing stage we are still manufacturing Euro 2 and the developed nations have introduced electronic cars so according to the economy it varies.

3.1 Findings

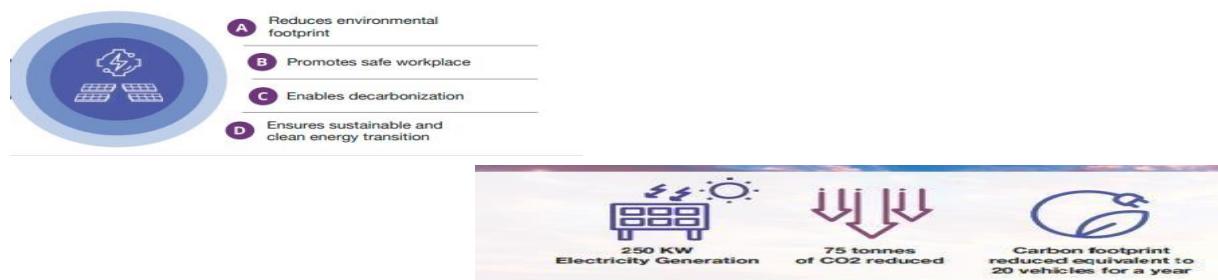
3.1.1 Meezan Bank

Financing Modes	2022 % in total portfolio	2021 % in total portfolio	Increase/ (Decrease) % in total portfolio
Diminishing Musharakah	27.4	28.4	(1.0)
Musharakah & Running Musharakah	27.5	21.0	6.5
Istisna	9.0	8.6	0.4
Ijarah	7.8	12.9	(5.1)
Murabaha	6.8	6.2	0.6
Musawamah	5.5	7.8	(2.3)
Salam - Bills	1.3	0.8	0.5
Wakalah Tul Istithmar	4.5	7.0	(2.5)
Tijarah	1.6	1.7	(0.1)
Salam - Commodity	1.9	1.5	0.4
Other	8.0	4.9	3.1

The bank invested Sukuk of Rs. 713 billion, which is roughly 1.8 times greater than the Rs. 398 billion it made in Sukuk the previous year. The Bank's dependence on Bai Muajjal transactions has diminished due to the rise in Sukuk issuance; as of the end of 2022, the outstanding amount had dropped significantly to Rs. 60 million.

3.2 Projects

- To provide funding for Indus Hospital's solar panel system and Health Network (HHN) and to partially finance the 1.2 MW solar power project being erected on the hospital's rooftop, Meezan Bank would provide Rs. 35 million in 2022. The bank-financed system produces almost 250 KW of electricity and reduces annual carbon emissions by around 75 tonnes, which is the same as removing over 20 automobiles with gasoline engines removed from service for a year.



3.3 Climate Change

Meezan Bank is dedicated to promoting the expansion of green banking activities, and as such, it is always looking for ways to assist and fund environmentally friendly enterprises.

- Amount of money paid out for solar loans: Rs. 1.68 billion
- Amount granted to SMEs in green financing: Rs.1.7 billion
- 43 finance initiatives for renewable energy.

3.4 Islamic Finance for Renewable Energy (Ifre)

- Meezan Bank is one of the banks that supports the State Bank of Pakistan's Islamic Finance Facility for Renewable Energy (IFRE) program the most actively.
- The Bank's Board of Directors has duly adopted a complete "Green Banking Policy" that aligns with the State Bank of Pakistan's criteria.
- The Board of Directors has also put in place a policy framework that lays out more specific directives for the Management to follow to guarantee that sufficient controls are upheld and risk is controlled within reasonable bounds. Meezan Bank obtained

and closed the highest number of mandates for renewable energy, totaling USD 272 million, out of all the local banks. The end user will benefit from lower tariffs as a result of these regulations' reduction in project finance costs.



3.5 Wind and Solar Projects

Highlights of Wind and Solar Projects		Rs 4,601 million
NASDA Green Energy Limited Mandated Lead Advisor & Arranger, Intercreditor Agent, Project Monitoring Bank, Shariah Structuring Bank, Onshore Trustee and Accounts Bank		
Gul Ahmed Electric Limited Mandated Lead Advisor & Arranger, Musharakah Agent	►	Rs 4,500 million
Din Energy Limited Mandated Lead Advisor & Arranger, Project Monitoring Bank, Musharakah Agent, Shariah Structuring Advisor and Accounts Bank	►	Rs 2,250 million
Artistic Wind Power Private Limited Mandated Lead Advisor & Arranger, Project Monitoring Bank, Musharakah Agent and Shariah Structuring Advisor	►	Rs 2,250 million
Cherat Cement Company Limited Mandated Lead Advisor & Arranger, Investment Agent	►	Rs 1,400 million
Burj Solar Energy Private Limited Mandated Lead Advisor & Arranger, Investment Agent	►	Rs 203 million
Cherat Packaging Mandated Lead Advisor & Arranger, Investment Agent	►	Rs 120 million
Total		Rs 15,324 million

3.6 Collaboration

Meezan Bank and other stakeholders have collaborated with the USAID Development Credit Authority (DCA) Guarantee Programme to provide targeted finance for the renewable energy value chain through these institutions. Smaller renewable energy projects and businesses along the value chain for clean energy are supported in Pakistan under the DCA program. Since clean energy projects are the focus of the DCA Guarantee, they promote environmentally friendly and long-lasting green initiatives that will aid in bridging the nation's current energy deficit. The USD 5,000,000 guarantee limit set forth by Meezan Bank under this program may cover anywhere between 25% and 50% of any financing exposure for sustainable energy through the DCA initiative.

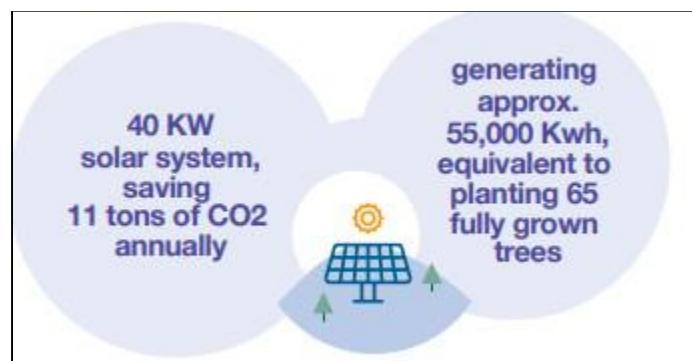
3.7 Green Energy Initiatives

The primary sources of energy used by the Bank are solar power, gasoline, and electricity. To lessen reliance on fossil fuels, the Bank is progressively Changing direction in a few of its solar energy branches. The Bank has created a Green Sustainability Drive by SBP Green Banking Guidelines.

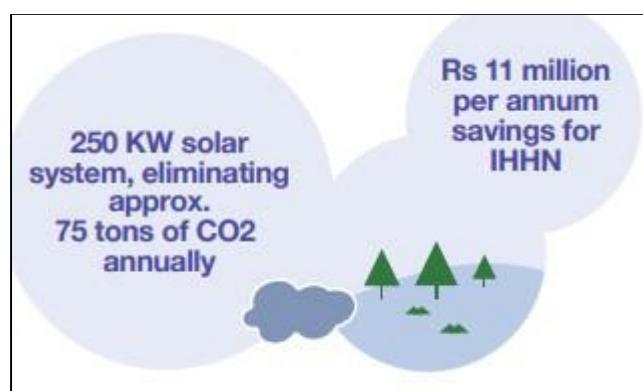


3.8 Donation of Solar Power System

40 KW Solar Power Systems Donated to Citizens-Police Liaison Committee (CPLC)



250 Solar Systems Donated to Indus Hospital & Health Network (IHHN)



3.9 Water Conservation

The nation's capital city is presently building the new Meezan Tower, thus the Bank has utilized harvesting tanks to collect rainwater and supplement fresh water supplies.

- a special 30,000-gallon tank for collecting rainwater
- 15,000 gallons of water are set aside at OHWT and 45,000 gallons at UGWT to meet water demands during fire incidents.

- Conserved 85,000 gallons of water
- Chlorine is added to water to make it suitable for use as gray water.

3.10 E-Waste

To lessen its impact on the environment, the Bank is selling outdated IT equipment for reuse and sustainably recycling/disposing of it. Desktop computers, laptops, and displays make up a large portion of the Bank's electronic trash. The Bank has provided a buyback choice regarding staff members to continue using their laptops for personal usage in addition to the extended life plan.



3.11 Paper Recycling

To protect the privacy and information security of both its operations and the information of its customers, the Bank has implemented a strict policy regarding the recycling and disposal of paper.



3.12 Projects

Financing Modes	2021 % in total portfolio	2020 % in total portfolio	Increase/(Decrease)% in total portfolio
Diminishing Musharakah	24.4	27.6	(3.2)
Musharakah & Running Musharakah	29.6	26.0	3.6
Istisna	11.8	12.8	(1.0)
Ijarah	8.1	9.4	(1.3)
Murabaha	1.6	2.6	(1.0)
Musawamah	8.0	7.1	0.9
Salam - Bills	1.3	0.8	0.5
Wakalah Tul Istithmar	4.4	7.5	(3.1)
Tijarah	1.9	2.0	(0.1)
Salam - Commodity	1.8	1.8	-
Other	7.1	2.4	4.7

3.13 Climate Action through Lending to Renewable Energy

Meezan the Bank is dedicated to promoting the expansion of green banking activities, and as such, it is constantly looking for ways to fund and promote environmentally beneficial

projects. Additionally, the bank has a thorough "Green Banking Policy" that complies with State Bank of Pakistan criteria and was duly authorized at the bank's board meeting. Additionally, the Board of Directors has put in place a policy framework that outlines more general directives to the Management to guarantee that sufficient controls are upheld and risk is controlled within reasonable bounds. Meezan Bank is among the most active institutions in supporting the Islamic Finance Facility for Renewable Energy of the State.



3.14 Reducing Carbon Footprint through Renewable Energy Generation

The primary energy sources used by the Bank are solar power, gasoline, and electricity. To lessen reliance on fossil fuels, the Bank is progressively shifting a few of its solar energy branches. Following SBP Green Banking Guidelines, the Bank has developed a Green Sustainability Drive focused on four key areas:



In addition, the Bank has put up 100 KW of solar panels to lessen its need for fossil fuels. By reducing Given that the Bank only uses diesel generators, the arrangement will help combat noise and air pollution. Additionally, the Bank is guaranteeing appropriate waste management by setting up a distinct solid waste collection system that permits recycling. The Bank's new headquarters is an environmentally friendly structure with unique superior glass that reduces heat absorption to maintain internal temperature and reduce operating energy costs. The sun path has also been taken into consideration in the construction of the facility to maximize

daylight.



<https://www.meezanbank.com/wp-content/themes/mbl/downloads/SAR2020E.pdf>

Financing Modes	2020 % in total portfolio	2019 % in total portfolio	(Decline) % in total portfolio
Diminishing Musharakah	27.6	22.6	5.0
Musharakah & Running Musharakah	26.0	30.5	(4.5)
Istisna	12.8	11.5	1.3
Ijarah	9.4	10.9	(1.5)
Murabaha	2.6	3.3	(0.7)
Musawamah	7.1	5.4	1.7
Salam - Bills	0.8	1.5	(0.7)
Wakalah Tul Istithmar	7.5	8.1	(0.6)
Tijarah	2.0	2.6	(0.6)
Salam - Commodity	1.8	2.1	(0.3)
Other	2.4	1.5	0.9

3.15 Projects

<https://www.meezanbank.com/wp-content/themes/mbl/downloads/annualreport20.pdf>

3.16 Climate Action through Lending To Renewable Energy

Meezan Bank is committed to encouraging the growth of green banking initiatives, and as such, it is always searching for fresh approaches to fund and promote ecologically beneficial businesses. The 200 MW of wind power projects that Meezan Bank managed to finance in 2020 was the greatest amount of projects that anyone local financial institution had ever managed. Among them are:



In addition to the above wind energy projects, Meezan Bank has also led the financing of two solar power projects with a total capacity of 13MW as follows:



➤ Reducing Carbon Footprint through Renewable Energy Generation

Financing Modes	2019 % in total portfolio	2018 % in total portfolio	Growth / (Decline)% in total portfolio
Diminishing Musharakah	22.58	18.75	3.83
Musharakah & Running Musharakah	30.48	30.50	(0.02)
Istisna	11.52	14.06	(2.54)
Ijarah	10.91	10.57	0.34
Murabaha	3.27	3.82	(0.55)
Musawamah	5.42	7.63	(2.21)
Salam - Bills	1.47	1.10	0.37
Wakalah Tul Istithmar	8.06	7.82	0.24
Tijarah	2.57	2.57	0.00
Salam - Commodity	2.07	1.82	0.25
Other	1.65	1.36	0.29

3.17 Projects

In 2019, Meezan Bank and Pak Elektron Limited (PEL) entered into a musharakah partnership to develop a solar power plant with a capacity of 1.1 MW. It generates electricity for PEL's operations.

Our Focus on Green Banking

Meezan Bank is committed to driving growth for green banking initiatives and is therefore continuously exploring opportunities to support and finance environment friendly projects as its contribution towards making our planet more sustainable.

Leading the highest number of wind power projects with a total capacity of 200MW

In 2019, Meezan Bank has led the financing of four wind power projects - the highest number of projects handled by any single local financial institution.

- A comprehensive 'Green Banking Policy' in line with the instructions and guidelines of the State Bank of Pakistan duly approved in the Board Meeting of the Bank is in place that outlines the compliance measures to be put in place to ensure smooth and transparent operations of the Bank.
- The Board of Directors has also implemented a Policy Framework that delineates broader guidelines to the management for ensuring that adequate controls are maintained and risk is managed within acceptable limits.



- Installing solar power systems in 10 branches and the head office.
- Converting 225 kW to renewable energy
- Solar power systems generate 360,000 units (Kwh) of electricity annually while saving 158,000 kg of carbon dioxide.
- Following the Issuing of the Islamic Financing Facility for Renewable Energy (IFRE) by the State Bank of Pakistan (SBP), the Bank is still dedicated to spearheading and advancing green energy projects. The Bank has provided facilities for working capital for Gul Ahmed Electric Limited, The largest number of wind power projects managed by Meezan Bank are Metro Wind Power Limited and Artistic Wind Power (Private

Limited). In addition, four wind power projects—NASDA Green Energy (Private Limited), Gul Ahmed Electric Limited, Metro Wind Power Limited, and Din Energy Limited—achieved financial close in 2019.

Financing Modes	2018 %	2017 %	Growth / (Decline) %
Diminishing Musharakah	18.75	19.72	(0.97)
Musharakah & Running Musharakah	30.50	34.16	(3.66)
Istisna	14.06	13.31	0.76
Ijarah	10.57	9.22	1.35
Murabaha	3.82	4.61	(0.78)
Musawamah	7.63	4.54	3.09
Salam - Bills	1.10	2.76	(1.66)
Wakalah Tul Istithmar	7.82	7.29	0.53
Tijarah	2.57	1.91	0.66
Salam - Commodity	1.82	0.96	0.86
Other	1.36	1.53	(0.17)

3.18 Projects

<https://www.meezanbank.com/wp-content/themes/mbl/downloads/annualreport2018.pdf>

3.19 Tree Plantation Drive

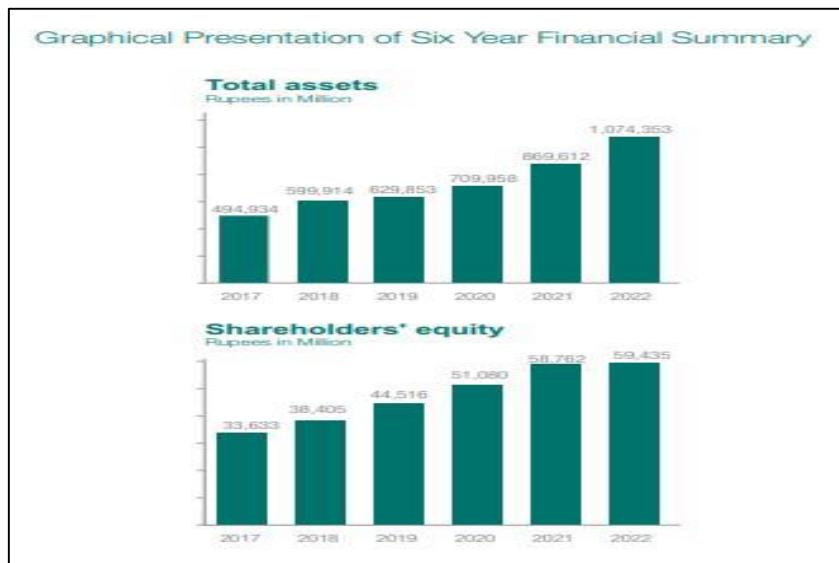
2018 saw the official debut of Meezan Bank's green project, a tree-planting effort aimed at mitigating the nation's twin environmental dangers of pollution and climate change. In the course of the Bank's nationwide tree-planting program, over 5,000 trees were planted as part of its Corporate Social Responsibility project.

3.20 Reducing Environmental Impact of Business Activities

Meezan Bank regularly implements strategies to cut down on emissions from daily activities, staff travel, and business operations to minimize greenhouse gas emissions and the overall environmental effect of its business operations. Here are some of our most notable projects, which include lowering both direct and indirect energy consumption:

- Energy-saving office building structure; Redesigned branch signage.
- Energy-saving office building structure
- Utilizing Shuttle Bus Service to Reduce Carbon Footprint
- Preserving Ecological Banking Practices

3.21 Faysal Bank



A thorough “green banking policy” has been developed by the bank. This policy aims to raise environmental consciousness among bank employees and customers.

To help Pakistanis live in a more eco-friendly and healthy environment, Faysal Bank has created the "Come Grow with Us" Green Initiative.

Together with the Karachi Relief Trust, they are collaborating on the newest project, which is a "Green Mosque" effort. To conserve water, this project entails installing fixed-volume taps at the mosque in addition to a recycling system that uses water for tree watering. Furthermore, 400 trees will be planted in the vicinity of these mosques. Solar solutions are being financed by Faysal Islamic through the Diminishing Musharaka framework.

In contrast to the Rs 8.3 billion it made the previous year, FBL recorded a profit of 11.4 billion. The bank's earnings per share (EPS) rose from RS. 5.50 to RS. 7.54 in comparison to the previous year.

3.22 Dubai Islamic Bank

Agriculture Finance Products		
AGRI. FINANCE PRODUCTS	ISLAMIC MODE OF FINANCE	TENOR
Crop Production Financing (Production Purpose - Short /Medium Term)	Murabahah, Musawamah, Salam	Short-term (1 year), Medium term (Between 1-3 years)
Live Stock/Dairy Value Chain Financing (Working Capital purpose - Short/Medium Term)	Murabahah, Musawamah	Short term (1 year), Medium term (Between 1-3 years)
Grower / Value Chain financing (Traders / Mills - Short/Medium Term)	Murabahah, Musawamah	Short-term (1 year), Medium term (Between 1-3 years)
Crop Production Financing (Production Purpose - Long Term)	Shirkat-UI-Melk cum Ijarah-SLB	Long-term (Above 03-10 years)
Tractor and Machinery / Renewable Energy Financing (Development Purpose - Long Term)	Ijarah, Diminishing Musharakah(DM)	Long-term (Above 03-10 years)
Land Development Financing (Development Purpose - Long Term)	Shirkat-UI-Melk cum Ijarah-SLB	Long-term (Above 03-10 years)
Live Stock/Dairy Value Chain Financing (Development Purpose - Long Term)	Shirkat-UI-Melk cum Ijarah-SLB Diminishing Musharakah(DM)	Long-term (Above 03-10 years)
Godown /Cold Storage Construction Financing (Development Purpose - Long Term)	Shirkat-UI-Melk cum Ijarah-SLB Diminishing Musharakah(DM)	Long-term (Above 03-10 years)

3.23 Bank Alfalah- 2022

<https://www.bankalfalah.com/financial-reports/annual-report-2022/>

3.24 Sme Lending/Agricultural Financing/Trade

SMEs' teams contributed significantly to the SME ASSAN Finance and Youth Loans schemes during the year, with their substantial portfolios exceeding Rs. 4.5 billion; nonetheless, the schemes were terminated in less than six months. Nonetheless, the Bank gained national attention by establishing new standards inside the nation's banking industry.

Agriculture and SME Agriculture round out the offering, contributing an additional Rs. 4.0 billion to the development of the lending book. The creative use of technology in agricultural loans is a crucial component. One of the top-tier initiatives that were completed this year was climate-smart agriculture, which will open the door for tech-based innovation and likely future expansion.

3.25 Green Business Facilitation

Comprises financing companies (new or current clients) that want to invest in operations and technology to increase resource efficiency and environmental risk management.

Through the implementation of eco-friendly programs, they urge their clients to enhance their operations and technology. They have unveiled "**Alfalah Green Energy**," a green financing product that offers term financing to clients who are prepared to install solar energy equipment.

Production of electricity via net metering, with capacities between 4 KW and 1,000 KW. Up to five years of repayment are permitted, with a three-month grace period.



In addition, Bank Alfalah has taken part in several green projects, some of which are listed below:

S. No.	Name of Project	Source/Type	Capacity (in MW)
1	Fatima Energy Limited	Bagasse	118
2	Chiniot Power Limited	Bagasse	62
3	Hunza Steel (Pvt.) Ltd.	Bagasse	20
4	Gul Ahmed Wind Power Limited	Wind	49
5	Metro Power Company (Pvt.) Limited	Wind	49
6	Master Green Energy Limited	Wind	50
7	Din Energy Limited	Wind	50
8	Gharo Solar (Pvt.) Limited	Solar	50
9	Nizam Power (Pvt.) Ltd	Solar	9
10	Neelum Jhelum Hydropower Company (Pvt) Ltd	Hydro	969

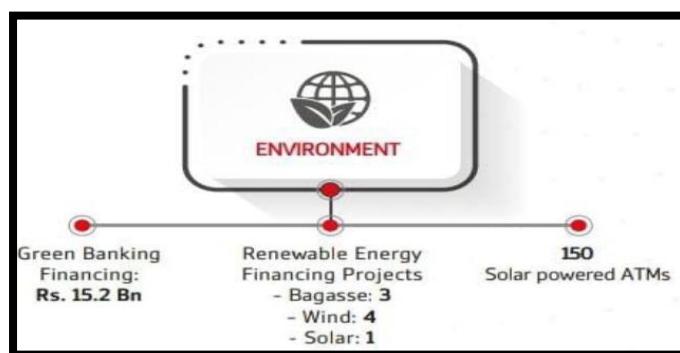
3.26 Bank Alfalah-2021

<https://www.bankalfalah.com/financial-reports/annual-report-2021/>

3.27 Green Financial Products and Services

As a corporate entity, Bank Alfalah aspires to maintain social responsibility and protect the natural world. The products in this portfolio are compatible with SBP's refinancing scheme for renewable energy. The SME Division is proud to have unveiled an environmentally friendly product. "Alfalah Green Energy."

They are ready to leave our imprint in this area as the world switches to more economical and ecologically friendly energy, and it's becoming apparent that green financing products could be a beneficial contribution. The SBP named the Renewable Energy sector the year's winner and acknowledged our efforts across all platforms as the industry leader and pioneers in implementing this plan.



1 Protecting Natural Capital

The environment has a significant impact on people's well-being. Thus, maintaining the environment is essential to existence as well as our bodily and emotional well-being.

Their skilled and knowledgeable Business Resilience Teams and HSE (Health, Safety, and Environment) departments put forth great effort to create a culture that ensures that our

services are safely rendered to clients, even in the event of emergencies or unanticipated events.

We distinguish ourselves as an industry standard setter with our frameworks, emergency procedures, training, exercise schedules, alerts and warnings, site inspections, and plans for mitigating hazards.

4. Renewable Energy

To foster a sustainable environment, the Bank has implemented several measures that save expenses and lessen our carbon footprint. 150 ATMs around the nation are powered by solar panels that the Bank installed. Rather than using generators, long-backup UPS systems are employed to help reduce our carbon footprint even more.

5. Paperless Operations

The advantages of paperless transactions for enterprises include better customer experiences, more productivity, more efficient operations, and a smaller carbon footprint. The implementation of various projects, such as the digitalization of branch reports and Cash/Cheque Deposit Machines (CDMs), aims to reduce or eliminate the use of paper. We are simultaneously promoting customer facilitation, environmentally mindful employee behavior, and process improvement.

6. Environment Protection Measures

Their goal is to transform the Bank into an eco-friendly entity. As a result, a crucial component of our approach to motivate personnel to use energy responsibly and preserve the environment is the frequent broadcasts and awareness-raising efforts made to them through various media platforms.

7. Energy Conservation

To cut maintenance costs and improve efficiency, almost all conventional light was replaced by the Bank using a managed life cycle replacement strategy and wise investments.

8. Water Conservation and Sanitation

To successfully preserve water, in populated areas, we have sensor-based water taps installed. To encourage employees to put on reusable eyewear and fill their drinking bottles, water fountains are being put in bank cafeterias and lobby areas. One of the primary causes of plastic pollution in our oceans and a hazard to aquatic life is plastic bottles.

9. Waste Management and Responsible

Utilisation we shred unwanted or sensitive paper using shredder equipment. After being collected in huge quantities, the same papers are recycled and used again in the manufacturing sector by pulping. Every day, offices are tidied up, and trash is disposed of properly using government-owned waste management vans. Throughout the year, the bank collected 26 tonnes of dry paper trash for responsible recycling.

10. Services with Greener Impact

Through our services, We keep assisting our clients to lessen their surroundings impact, with an emphasis on improving operational effectiveness and lowering material and energy use. SMS alerts, WhatsApp Banking channels, and e-statements/mini-statements are some of our green services.

10.1 Donation to Ida Rieu

To improve Ida Rieu's infrastructure and operations, Bank Alfalah teamed up with Delta Power will put up solar energy systems at their sites.

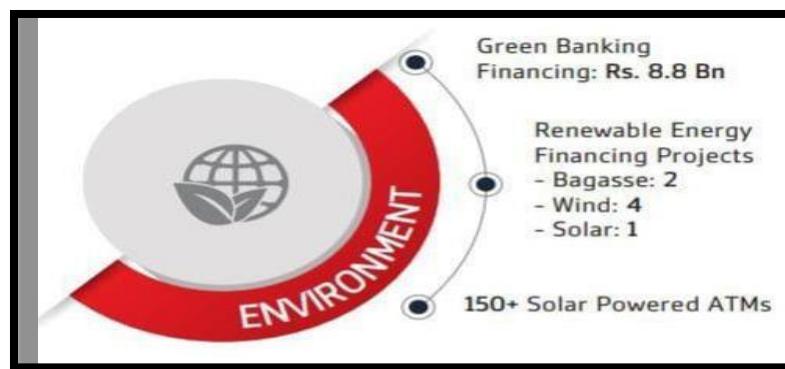


In addition, Bank Alfalah has taken part in several green projects, some of which are listed below:

S. No.	Name of Project	Source/Type	Capacity (in MW)
1	Fatima Energy Limited (to finance cogen power plant - Bagasse and Coal)	Bagasse	118
2	Chiniot Power Limited (construction of co-generation power project)	Bagasse	62
3	Hunza Steel (Pvt.) Ltd.	Bagasse	20
4	Gul Ahmed Wind Power Limited (to finance wind power plant)	Wind	49
5	Metro Power Company (Pvt.) Limited (to finance wind power plant)	Wind	49
6	Master Green Energy Limited	Wind	50
7	Din Energy Limited	Wind	50
8	Gharo Solar Pvt. Limited	Solar	50

10.2 Green Financial Products and Services

The products in this portfolio align with the goals of SBP's renewable energy financing scheme. The Division of SME is pleased to possess launched "Green Energy Alfalah," an eco-friendly item. They recognize that environmentally friendly funding options like these have the potential to benefit society as a whole, which is why they are ready to make their presence in this domain as the world moves towards a future of affordable and clean electricity.



10.3 Environment

They think that environmental conservation efforts can be extremely helpful in reducing the harm caused by climate change, and we are always eager to contribute to such efforts.

Owing to COVID-19, the bank concentrated on keeping its clients, staff, vendors, regulators, service providers, and additional parties involved who access the facilities of the bank in a clean, sanitary, and distant environment.

10.4 Green Banking Initiatives

As middlemen between those with excess and insufficient capital, banks have a special place within the economy for long-term growth. This middleman function is qualitative as well as quantitative. There's something to the claim that our financial actions have the most influence on society and the environment.

Green banking facilitates the incorporation of social, monetary, and environmental factors into decision-making, resulting in increased investment returns and long-term profitability. The introduction of green banking in Pakistan and the start of the process of integrating it into bank systems were signaled by The Green Banking Guidelines of the SBP. Green banking is

practiced by the bank. That has been approved to help execute the SBP Guidelines. Three categories make up the field of green banking:

10.4.1 Environmental Risk Management

- Demands banks to incorporate environmental law compliance by borrowers to their credit portfolio, implementing environmental risk management techniques, and credit approval processes.
- In early 2015, Bank Alfalah began the Environmental and Social Management System (ESMS) integration procedure into the credit of the bank approval procedure as a responsible corporate citizen in partnership with the IFC. In essence, the ESMS Framework mandates that every pertinent financing opportunity be examined and assessed by the
- The IFC blacklist
- Relevant national legislation about safety, health, and the environment.
- IFC benchmarks for performance: all relevant loan proposals must be cleared by the Environmental Risk Unit before being approved by the appropriate authority. This framework is a crucial component of the credit approval process. Environmental and Social Management Risk (ESRM) Projects viewpoint must be identified, vetted, and approved by the Environmental Risk Unit.

10.4.2 Green Business Facilitation

Involves lending money to companies (current and/or potential customers of the bank) that want to make investments in operations and technologies that will enhance resource efficiency and environmental risk management. Alfalah Green Energy is a brand-new green finance offering from them. Customers who are willing to install solar energy equipment with net metering to generate power between 4KW and 1000KW can apply for this term finance arrangement.

10.4.3 Own Impact Reduction

Involves lessening the carbon footprints that Bank Alfalah has. This entails using more solar power, which is going to reduce the bank's dependency on grid electricity and fossil fuels, cutting back on paper use, rationalizing water use, and other measures.

The Bank consistently improves resource efficiency and lowers costs by making the best use of all available resources.

A few of the projects include the conversion of 150 ATMs to solar power, a decrease in paper consumption, the substitution of UPSs for diesel-fueled generators as backup power sources, the substitute of standard LED energy saver lights that use less energy, and the conversion of conventional air conditioners into inverter air conditioners. The totality of the actions made thus far indicates that the bank has started to move in the direction of accomplishing the goals of green banking as outlined in the SBP Guidelines.

Additionally, some of the Green Projects in which Bank Alfalah has participated are as follows:			
S.No.	Name of Project	Source/Type	Capacity (in MW)
1	Fatima Energy Limited (to finance Cogen Power Plant - Bagasse and Coal for 118MW)	Bagasse	118
2	Chiniot Power Limited (Construction of 62.4MW Co-Generation Power Project)	Bagasse	62
3	Gul Ahmed Wind Power Limited (to finance Wind Power Plant for 49MW)	Wind	49
4	Metro Power Company (Pvt.) Limited (to finance Wind Power Plant for 49MW)	Wind	49
5	Master Green Energy Ltd.	Wind	50
6	Din Energy Limited	Wind	50

11. Comparison between Meezan Bank, Bank Al Falah, and Faysal Bank.

According to our fieldwork, we identified that Islamic finance tools contribute more than half of their earnings towards environmental projects. The tool that helps banks in earning more profit is Musharika. Through Musharika they finance car, and solar financing, in renewable energy projects. Moreover, according to environmental projects they mostly used solar financing by Musharika. On estimation, Islamic banks used these Musharika more as 60% while other tools 40%.

They are playing the role of providing interest-free investments, promoting environmental projects, maintaining customer relations, and collaborating and partnership with other companies to gain more loyalty, and risk sharing.

Although Musharika has been utilized for environmentally friendly projects, it is not specifically designed for environmental impact. However, it can be employed to finance ventures related to renewable energy, sustainable agriculture, or other eco-friendly initiatives. In such cases, the profits generated from the project would be shared among the partners based on their respective capital contributions.

As previously indicated, other Islamic finance instruments like Sukuk and Mudarabah are more frequently linked to ecologically benign investments. Sukuk structures provide greater flexibility in terms of raising funds from the capital market, attracting a wider range of investors, and facilitating the financing of specific environmentally focused projects.

Sukuk and Musharika are both the tools most prominently used to finance environmental projects.

Meezan Bank, Bank Alfalah, and Faysal Bank are prominent banks in Pakistan that offer Islamic banking services, including Musharakah-based products. Here's a brief comparison of their Musharakah offerings:

1. **Meezan Bank:** In Pakistan, Meezan Bank is the biggest Islamic bank and offers various Musharakah-based products to its customers. They have a dedicated department for corporate and investment banking, providing Sharia-compliant financing solutions. Meezan Bank has expertise in structuring Musharakah transactions for diverse sectors, including trade finance, real estate, and project financing. The bank approximately Rs. 713 billion in Sukuk, and Rs. 15 billion in wind and solar power projects in 2022. Most of the projects financed by Meezan Bank are done through Musharika as the increase in the portfolio of Musharika is 5.5% in 2022 as compared to 2021. They provide three types of facilities for financing trade which include Murabaha, salam, Cristina, and Musawah the other is rent on ijarah, Partnership on diminishing and running Musharika, diminishing for long-term projects, and running for working capital requirements.
2. **Bank Alfalah:** Bank Alfalah is another leading bank in Pakistan that offers Islamic banking services. They provide Musharakah-based financing options to facilitate businesses and individual customers. Bank Alfalah offers Musharakah in the form of joint venture financing, allowing customers to invest in diverse sectors while sharing in the profits and risks. Bank Alfalah approximately invest Rs. 6 billion in green banking finance projects and renewable energy projects. The majority of the tool mostly used is Musharika.
3. **Faysal Bank:** Faysal Bank is also an established Islamic bank in Pakistan, offering Sharia compliance financial solutions. Faysal Bank provides Musharakah financing for various purposes, such as working capital requirements, project financing, and trade-related needs. They structure Musharakah agreements to suit the specific needs of businesses and individuals, ensuring compliance with Islamic principles. They also invest after being the Muslim Bank the profit ratio has increased as compared to conventional. They also finance solar projects, Plantation Drive work in mosques.

Meezan Bank is widely regarded as Pakistan's most well-known and substantial Islamic bank, emphasizing financial options that adhere to Sharia law. As a result, Meezan Bank is often

recognized as having more extensive usage and expertise in offering Musharakah-based financing compared to Bank Alfalah and Faysal Bank.

Meezan Bank can plan and provide Musharakah transactions for a range of industries and purposes since it has a separate section for corporate and investment banking. They offer a large selection of Musharakah goods and services to meet the various financial requirements of both individuals and companies.

While Bank Alfalah and Faysal Bank also offer Musharakah-based financing, their usage and expertise in this area may be relatively less extensive compared to Meezan Bank. However, both banks have their respective Islamic banking divisions and provide Musharakah options to support customers' financing requirements.



12. Conclusion

Islamic finance tools contribute significantly to environmental projects, bringing about positive changes in society. By aligning financial practices with ethical and socially responsible principles, Islamic finance promotes sustainability, economic growth, and environmental conservation. The use of Islamic finance tools supports environmental initiatives showcases a commitment to social responsibility and fosters collaboration between finance institutions, environmental organizations, and government entities. The interest-free economy is the best part of it.

Some recommendations regarding Islamic Finance Tools contributing towards environmental projects are strengthening regulatory framework, collaboration, and knowledge sharing, developing innovative financial products, raising awareness and education, impact measurement and reporting, and engaging multilateral organizations.

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