

The reality of trading green sukuk in the international financial environment, a study of the experience of some Arab and Islamic countries

LAABANE Zineb ^{*1}, RADJERADJ Ahmed ²

¹ Laboratory of Globalization and Economic Policies, University of Algiers 3, PHD student,
laabanezineb93@gmail.com

² Laboratory of Globalization and Economic Policies, University of Algiers 3, Professor,
redfane@yahoo.fr

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Abstract:

This research paper aims to identify the green sukuk and study the reality of its trading in the financial markets, and we touched on the most important experiences of the leading Arab and Islamic countries in this field. We have identified the most important points that can be applied in Algeria in order to use this type of financing. This study relied on a descriptive and analytical approach, where we collected data and information related to green sukuk. This study concluded that the Malaysian experience has been successful in green Islamic sukuk.

Key Words : Green Sukuk, green projects, green markets, green finance.

JEL Classification: G32, G24, Q56

* - Corresponding author: laabane zineb laabanezineb93@gmail.com

1. Introduction

Green sukuk is a new financing tool that is concerned with investing in environmentally friendly projects in an effort to achieve sustainable development and is associated with environmentally friendly investments, and is issued to mobilize funds to support projects related to climate and other matters related to the environment and is one of the forms of financial instruments recently developed to finance sustainable projects and has received widespread popularity.

Problematic: The great interest in green sukuk makes us ask the following question: What is the reality of trading green sukuk in the international financial market? What are the most prominent experiences of Islamic and Arab countries in this field?

Methodology used: The descriptive and analytical approach was adopted in addition to the history of green sukuk.

2. Concept of Green Sukuk:

2.1 Definition of Green Sukuk:

Green Sukuk is an innovative type of Sukuk that is usually tax-free to encourage the financing of investment in projects that are concerned with preserving the environment and reducing pollution levels, and their issuance has witnessed a great demand, which helped provide the necessary funding for clean energy projects in a number of emerging economies, as is the case in China and India. These Sukuk are characterized by fixed income and being financial instruments that are easy to liquidate, and the funds they generate are limited to projects to mitigate and adapt to the effects of climate change. (sahnoun & lamraoui, 2015) These sukuk are called green because they are associated with environmentally friendly investments and are debt instruments issued to obtain funds to finance projects. The specific use of the funds obtained for climate or environmental support to finance specific projects is what distinguishes green sukuk from traditional bonds. (bourouba, safi, & tafali, 2020) Green Sukuk is like any other instrument that offers a fixed return and a promise to use this funding to finance or refinance partially or completely new or existing sustainable projects, so that this instrument may be issued by a financial or governmental institution or even a company to raise funds for a specific period, the issuer (holder) must guarantee that the proceeds will be invested in green projects, and is considered a win-win for both its issuer and its investor in terms of contributing to a sustainable future on the one hand and identifying itself as an organization, institution or responsible individual on the other hand. (hamdi & salka, 2020) Sean Kidney defines green bonds as investment securities that finance projects that meet the eligibility set by the International Climate Bond Standards System. (mansour & qadi, 2016) Green Sukuk is an innovative fixed-income debt instrument dedicated to financing projects related to sustainable development and climate, and is thus a new financing option available to the public and private sector. Green Sukuk is a type of innovative debt financing instrument, usually tax-free, to encourage the financing of investment in green projects. (bekdi & khabazi, 2020) The characteristics of green sukuk can be summarized as follows:

- Helping investors fill the income generation gap related to environmental activities.
- The ability to minimize the gap between the conventional and Islamic financial market.
- Providing a high degree of confidence in investors' funds in that their money will be used for clear purposes and known assets.

•Green Sukuk are attractive to environmentally conscious investors because they meet the criteria and provide financing for sustainable development projects. They are also attractive to conventional investors if they generate reasonable conventional returns, are risk-adjusted, and are properly marketed. (matbouche & boujnane, 2019)

2.2 The Origins and Development of Green Sukuk:

The first Green Sukuk was issued in 2007-2008 for an amount of SEK 3.35 billion, equivalent to USD 440 million. There were three motivations for the bank's first green sukuk issuance: Responding to a specific request from Scandinavian pension funds seeking to support climate-focused projects through a simple fixed-income product.

Supporting the World Bank's strategy of introducing innovative products into climate finance. This type of sukuk helps raise awareness among investors and the financial community. (rezieq & althouhami, 2019)

2.3 Reasons for the emergence and interest in green sukuk:

Green Sukuk has the potential to bridge the gap between the conventional and Islamic capital market, is attractive to traditional investors, and provides financing for an environmentally sustainable project. They are particularly attractive to investors who care about the environment so that:

- Green Sukuk provides investors with the confidence that their money is being used for a specific purpose that is characterized by Sharia principles.
- Since most environmentally sustainable investors want to know exactly how their money will be used, bonds that represent the general obligations of the issuer have limited appeal, unless all of the issuer's activities meet the investor's environmental criteria. Sukuk, which often resemble traditional fixed income securities, can help fill the gap of providing fixed income to investors in environmental activities to the extent that the proceeds of the sukuk are earmarked for a specific purpose that benefits the environment. (haffai & shakhoun, 2018, p. 344)

Green Sukuk has emerged as a financing option targeting development and infrastructure projects, as well as a tool to bridge the gap between Islamic finance and the international capital market. Investors in the field of sustainable development and sukuk are willing to invest in specific projects that are in line with the set of values and ideals they hold, as these sukuk are designed to achieve the goals of large development projects while taking into account the environmental impacts of these projects. (ismail & ismail, 2020)It also emerged as a result of the natural development and maturity of development and financing thought in particular, and the development of the bond market in general. (bekdi & khabazi, 2020, p. 309)

The most important drivers of the trend towards green sukuk can be summarized in:

- The increasing number of investors interested in environmentally sustainable investments.
- The significant growth witnessed by the global financial markets.
- The reluctance of banks to finance infrastructure projects due to stringent capital requirements.
- The economic results of environmental protection conferences and their focus on strengthening the principles and foundations of the green economy and promoting sustainable development. (matbouche & boujnane, 2019, p. 6)

3. Principles and steps for issuing green sukuk:

3.1 Green Sukuk Principles:

The Green Sukuk Principles are a set of guidelines outlining the framework for issuing bonds published in March 2015 that encourage transparency and disclosure in the development of the Green Sukuk market. The Principles propose practical steps for the design, disclosure, management and reporting of Sukuk, and aim to provide issuers with guidance on the key components of a Green Sukuk, including providing information to help investors assess the environmental impacts of their investments in Green Sukuk, and international capital markets act as a secretariat and facilitate the work of its members, including issuers, investors and banks that act as underwriters of Green Sukuk.

Eligible projects include the following:

- Renewable energies.
- Energy efficiency, including efficient buildings.
- Sustainable waste management.
- Sustainable land use.
- Biodiversity conservation.
- Clean transportation.
- Sustainable water management such as clean water or clean drinking water.
- Adaptation to climate change.
- Identifying environmental projects in green instruments. (bakari, 2020, pp. 143-144)

3.2 The most important projects that are financed by green sukuk:

Some of the most important projects that are financed through the issuance of Green Sukuk include the following:

- Renewable energy and energy efficiency projects: Building solar power plants or other environmental assets such as solar gardens, biogas plants, and wind power projects.
- Clean transportation projects: that reduce carbon emissions and renewable infrastructure.
- Sustainable waste management.
- Sustainable land use.
- Sustainable water management.
- Projects that reduce carbon emissions.
- Climate change adaptation and new cities. (bourouba, safi, & tafali, 2020, pp. 227-228)and (hamdi & salka, 2020, p. 580)

3.3 Importance of Green Sukuk:

The importance of Green Sukuk is characterized by the fact that they:

- They represent investor support for activities that maintain the balance of the ecosystem.

- Green Sukuk can be considered as a source of financing that can provide long-term liquidity in the Sukuk market while providing stable returns to institutional and small investors in the long term.
- Infrastructure projects can be financed through the issuance of green sukuk. Governments can issue Ijara sukuk to finance public benefit projects such as sustainable infrastructure that the government wants to build for the public interest rather than for profit.
- Green Sukuk is a successful financing option in attracting a large percentage of environmental projects and constitutes an important expansion of the financial market and draws a strong impression of its ability to provide the alternatives needed by the financial market.
- Green Sukuk also helps raise awareness of issuers' environmental programs. Green Sukuk has been shown to be an effective tool in raising awareness and opening a broader dialogue with investors about projects that help address climate change and other environmental challenges.
- Green Sukuk are not only used to produce projects that benefit the environment, but they also help reduce energy costs by creating alternative projects that solve their problems and contribute to stimulating economic activity. (ismail & ismail, 2020, pp. 227-230)
- Green Sukuk represents one of the most important modern financial instruments designed primarily to finance environmentally and climate-friendly projects. (nasrawi, 2020, p. 43)
- Green Sukuk is an interaction between the two most important elements of production: capital and labor.
- Green Sukuk provides stable financing that avoids the occurrence of financial crises by attracting the category of investors, whether Sukuk holders or owners of investment projects.
- Green Sukuk is a pioneering experience in terms of projects and restricting the entrepreneur to invest in ethical and socially responsible projects. The issuance of these Sukuk, whether by the state, banks or investment companies, is subject to pre-agreed conditions.
- Green Sukuk are characterized by the right to choose the project or activity in which the funds are used, such as infrastructure projects. (sahnoun & lamraoui, 2015, p. 238)
- Green Sukuk has several advantages over other sources of financing, including the fact that it is a tradable instrument and the urgent need to mobilize financial resources for renewable energy and climate change adaptation projects in both the Middle East and other developing countries. (mansour & qadi, 2016, pp. 139-140)
- Green Sukuk is one of the financing options available to private sector companies and public sector entities wishing to support climate and environmental investments. The most important projects for which green Sukuk can be issued are renewable energy,

energy efficiency, sustainable waste management, clean transportation, sustainable water management, climate change adaptation, and new cities. (bakari, 2020, pp. 152-153)

4. The reality of green sukuk trading in financial markets:

4.1 Key Players in the Green Sukuk Market:

Civil society, stakeholder groups, and policymakers that support transparency and information disclosure also play an important role in the development of green sukuk. As the market grows, sukuk are accepted as green provided they receive approval from an external financial authority. More than 140 of the world's largest banks and asset managers have signed the principles governing the issuance of green sukuk, and the Center for International Climate and Environmental Research in Oslo is one of the largest providers of external review for green sukuk issuances, followed by the Climate Bonds Initiative (CBI), which is the largest provider of external review for green sukuk issuances. (nasrawi, 2020, pp. 40-41)

4.2 The reality of green sukuk in the global financial markets:

Over the past decade, green capital markets have recorded tremendous growth in the trend towards a low-emission, environmentally friendly economy, with the World Bank Group and the International Finance Corporation (IFC) pioneering the development of the green sukuk market. (nasrawi, 2020, p. 41)

Since 2008, the World Bank Group has issued a type of sukuk called the “World Bank Green Sukuk”. Instead of financing all of the World Bank's activities, the proceeds of the green sukuk issued by the group go only to support specific projects that meet predetermined criteria for low-carbon development. These sukuk have been well received by environmentally sustainable investors and this structure has become a model for other national issuers, issuing companies or sovereign issuers. According to a report published by the World Bank on its website on green sukuk, a number of development banks have issued green sukuk to finance environmentally friendly projects, most notably the African Development Bank, the European Investment Bank and the International Bank for Reconstruction and Development (IBRD). (allab, jalit, & tissi, 2018, p. 55)

The green sukuk market has grown exponentially in the past few years, largely driven by climate change, tripling to about US\$38 billion from 2008 to 2014 and reaching about US\$161 billion by 2017. 2016 was marked as the “year of sovereignty” in the green sukuk market with inaugural issuances from Poland and France setting a precedent in late 2016 and early 2017, and Fiji and Nigeria became the first issuers among developing economies. (united nation environment program, 2018, pp. 10-11)

The U.S., China and France are among the top issuers. A, China and France are among the leading issuers of green sukuk, which accounted for 56% of total exports in 2017, according to the Climate Sukuk Initiative. 10 new members joined the Green Sukuk market in 2019: Argentina, Chile, Fiji, Lithuania, Malaysia, Nigeria, Singapore, Slovenia, Switzerland, and the United Arab Emirates (ismail & ismail, 2020, p. 230)

Although more than 10 years have passed since the issuance of the first green sukuk, the green sukuk markets have witnessed a strong momentum, rising from about 800 million dollars in 2007 to reach more than 200 billion dollars by the end of 2019. Therefore, green sukuk, by providing the necessary financial resources, can play a prominent role in facing, mitigating and adapting to climate challenges (nasrawi, 2020)

4.3 Challenges facing the trading of green sukuk in financial markets:

According to studies issued by the Organization for Economic Cooperation and Development (OECD), the most important challenges facing green sukuk lie in the small number of local investors and the weak credit rating system. In addition to the lack of benchmarks for measuring returns, lack of risk hedging tools and insufficient liquidity in the market. The lack of green sukuk offered in some markets is considered one of the main obstacles despite the availability of investors, and this reflects the lack of green projects that can be financed or refinanced through green sukuk in some markets:

- Lack of awareness of the benefits of green sukuk and the relevant international guidelines and standards: Lack of knowledge of existing international standards and lack of understanding of the potential benefits of a green sukuk market among policymakers, regulators, bond issuers and investors is a significant obstacle in a number of countries.
- Lack of localized guidelines: Environmental challenges can vary from country to country, so incentive policy can be used to support the local green sukuk market, and some of these markets may require additional definitions and disclosure beyond the green sukuk principles.
- Costs of Green Sukuk requirements: In some markets, the cost of obtaining a second opinion or third-party assurance, such as accounting firms and specialized research agencies, is costly and therefore a barrier for some smaller issuers, in addition to the high costs of managing disclosure requirements.
- Lack of availability of green sukuk ratings, indices and lists: Green credit ratings, which include environmental information on Sukuk ratings, help assess the consistency of green Sukuk with international guidelines and standards and can also help investors understand the impact of environmental factors on an issuer's overall risk.
- Lack of green sukuk offerings: The lack of green sukuk offered in some markets is one of the main barriers despite the availability of investors. This reflects the lack of bankable green projects in some markets that can be financed or refinanced through green sukuk, emphasizing the importance of recognizing how to assess whether a sukuk is green or not.
- Difficult access to local markets for international investors: International investors find it difficult to access some local markets, among the difficulties they face are the definitions of green sukuk and disclosure requirements that differ from one market to another, these differences increase transaction costs as green sukuk recognized in one market need to be renamed or re-certified in another market, in addition to the lack of any risk protection.
- Lack of local investors: Green Sukuk in some markets are predominantly purchased by local investors either due to capital controls or tariff barriers, so having investors interested in green Sukuk is essential to ensure sufficient demand. (union of arab securities authorities, 2017)
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5. Islamic and Arab countries' pioneering experiences in green sukuk:

5.1 Malaysia's experience in green sukuk:

In July 2017, the Green Sukuk was issued by Tado Energy and is the result of cooperation between the Securities Commission, Bank Negara Malaysia and the World Bank Group, which is an attempt to develop an ecosystem to facilitate the growth of Green Sukuk and introduce innovative financial instruments to finance global green infrastructure needs. Thus, the launch of Malaysia's first green Sukuk is a milestone in product innovation as it strengthens its position as a leading financing market in the world. (benchouk & abdous, 2020) Malaysian companies also issued four green sukuk, followed by some other issues. In October 2018, Quantum Solar Park (Semenanjung) issued one of the largest green sukuk in the world, amounting to RM1 billion to finance the construction of three large-scale solar photovoltaic plants in Kedah, Melaka and Terenggan, which is the largest solar energy project of its kind in Southeast Asia and will generate about 282,000 MW of electricity. (ismail & ismail, 2020, p. 235)

Malaysia has the capacity to green finance 130 potential projects including 111 renewable energy projects and 19 energy efficiency projects worth about RM9.1 billion and RM248 million respectively. (zahl & charif, 2018) Malaysia, US\$924 million is mostly for solar energy projects and the financing required by 2040 is expected to be around US\$7.2 trillion with a projected shortfall of US\$1.6 trillion in 13 countries of the Organization of Islamic Cooperation (OIC). (matbouche & boujnane, 2019, p. 8)

5.2 The experience of some Arab countries:

A group of regulators of capital markets and stock exchanges in Arab and African countries, including Tunisia, Egypt and Morocco, signed the so-called Marrakesh Declaration on encouraging the transition towards green capital markets within the framework of the activities of the United Nations Conference 22 on Climate Change. Several countries have also started to create the appropriate legislative and regulatory environment to encourage the issuance of green securities, and several financial markets have also issued indexes for green securities. A number of Arab stock exchanges, such as the Abu Dhabi Securities Exchange, have also started to study the possibility of issuing such indices. (union of arab securities authorities, 2017, p. 10)

The Dubai government, represented by the Department of Civil Aviation, signed an agreement with six Islamic banks under the management of Dubai Islamic Bank, under which a green sukuk worth one billion US dollars was issued, which was fully covered to finance the expansion of Dubai airport infrastructure. (allab, jalit, & tissi, 2018, p. 56)

The UAE also achieved leadership in issuing Islamic green sukuk and surpassed Malaysia during the years 2007-2008. The aim of these investments was to finance the establishment and development of mega projects in the field of infrastructure and development projects such as airports, main roads, gas exploration operations, petrochemical industry, and real estate. (siachen & rabahi, 2019, pp. 56-59)

The UAE's interest has extended to Islamic green sukuk, as UAE Islamic banks have been studying the possibility of issuing Islamic green sukuk to finance clean energy projects. In May 2019, Majid Al Futtaim, the leading shopping malls and integrated communities company and a leader in the retail and leisure sector in the Middle East, Africa and Asia, announced the opening of the market on Nasdaq Dubai, which led to the listing of the first institutional green sukuk

globally, and the first green sukuk to be issued in the region, with an estimated value of 600 million dollars and a maturity period of 10 years. (ismail & ismail, 2020, pp. 237-238)

Table 1.

year	country	Developments in Green Sukuk	Market Trends	Regulatory Changes	Challenges Faced
2014	Malaysia	Launch of first green sukuk	Growth in issuance	Initial framework for green bonds	Lack of standardization
2015	UAE	First green sukuk by Emaar	Increasing investor interest	New guidelines for green financing	Limited awareness among investors
2016	Indonesia	Government support for green projects	Rise in local issuance	Introduction of tax incentives	High competition from conventional bonds
2017	Saudi Arabia	Development of a national green sukuk strategy	Expansion into international markets	Regulatory framework for sustainable investments	Need for capacity building
2018	Bahrain	Issuance of sovereign green sukuk	Increased participation from institutional investors	Enhanced reporting standards	Market liquidity issues
2019	Egypt	Pilot green sukuk issuance	Diversification of funding sources	Support from international organizations	Economic instability
2020	Qatar	Launch of green bonds aligned with sukuk	Growing demand for sustainable assets	Collaboration with international bodies	Environmental project selection challenges
2021	Oman	First green sukuk for renewable energy	Adoption of ESG criteria	Framework development for green financing	Regulatory barriers
2022	Morocco	Green sukuk for sustainable infrastructure	Interest from foreign investors	New ESG guidelines for sukuk	Limited project pipelines

2023	Tunisia	Focus on sustainable agriculture projects	Increased issuance activity	National strategy for green financing	Economic constraints
2024	general	Continued growth and diversification	Expansion of market participants	Harmonization of standards across countries	Need for more awareness and education

Note:

- This table is a simplified overview based on hypothetical data and trends. Actual developments may vary.
- This table was created by PhD student laabane zineb.

6. Conclusion:

Green Sukuk has become one of the most important modern financial products and has received wide attention by some countries and international bodies, and green Sukuk markets have witnessed wide growth due to their importance and the characteristics that characterize them.

Results:

- Green Sukuk is an innovative and modern financing tool for environmental and clean energy projects.
- Green Sukuk has an important role in addressing climate challenges, mitigation and adaptation.
- Green Sukuk financing promotes sustainable development.
- Green Sukuk is gaining popularity as a result of increased awareness of its importance and support for the environment on the other hand.
- Green Sukuk has received special attention in recent years due to its potential to minimize environmental issues and mitigate their effects.
- Green instruments face challenges such as legal legislation and regulatory frameworks.

Recommendations:

From the previous findings, we make the following recommendations:

- Try to publicize green instruments and their importance to the economy and the environment.
- Providing legislation and laws that help in issuing green sukuk.
- Reviewing the experiences of leading countries in the field of trading green sukuk and trying to benefit from them and develop them.
- Developing the Algerian financial market.

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