

SUSTAINABLE DEVELOPMENT AND GREEN SUKUK: THE CASE OF TÜRKİYE

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Abstract

In this study, it has been tried to emphasize the increase in events such as global warming, environmental pollution, Covid-19 pandemic in recent years and the impact of all these important environmental effects on the sustainability of life. At the beginning of the study, a literature search is conducted. In the following, the concepts of sustainability and sustainable development are explained. In the fourth chapter, sustainable and climate change finance, sustainable development finance, climate finance, green finance and green finance applications in the world and in Türkiye are explained. In the fifth chapter, green sukuk is explained in detail. In the sixth chapter, examples of green sukuk in the world and in Türkiye are given. In the seventh chapter, what has been done about green sukuk in Türkiye, its problems, solution suggestions and the future of green sukuk are given.

Keywords

Sustainability, climate finance, green finance, green sukuk

Introduction

With the global warming that has occurred on the globe in recent years, it is important to make environmental investments and to support sustainable projects in terms of financing.

With the global warming, environmental pollution is spreading and the issue of ensuring the sustainability of life increases its importance. In this context, as a result of the 21st United Nations (UN) Conference of the Parties on Climate Change (COP 21), the global temperature increase was targeted as 1.5-2C within the framework of the Paris Agreement, which was approved by 196 countries.

The financing of these investments, which are aimed at realizing a sustainable life on earth, are called sustainable finance and green finance. Turkish banks are expected to ensure that the green part of their existing loan portfolios or new green projects comply with international criteria in order to carry out similar transactions.

Literature Research

In this section, a literature review is made on sustainability and green sukuk in Türkiye and in the world. In addition, summary information of some of the studies in the literature on sustainability, green sukuk and green bonds is shared.

Morea and Poggi conducted a case study in Italy. As a result of their studies, they emphasized that the green sukuk product should be considered as an alternative tool to limit the degree of leverage related to financing (Morea and Poggi, 2017).

In their studies, Kandır and Yakar focused on the necessary measures to develop green bond markets in Türkiye. They suggested the importance of the work to be done in the Capital Markets Board (SPK) and Borsa Istanbul (BIST) institutions and that legal regulations should be made for the development of green sukuk (Kandır, Yılmaz Serkan; Yakar, 2017). In her study, Ela argues that although the history of the use of sukuk in Türkiye has been over ten years, there are still deficiencies in legal regulations, and that regulations on sukuk should be made first and legal regulations on green sukuk should be created later. He also argues that Türkiye, which has a significant potential for domestic and foreign investors should come to the forefront by providing tax advantages for the developing green sukuk, so that it can take a significant share from environmental investments that have become the sustainable investment of the future (Ela, 2019).

Barua and Chiesa investigated the effect of green bond supply and financing size with an 8-year data set between 2010-2017. They discussed market characteristics, issuer characteristics and their effects on green bond issue size. As a result, they developed forecasts on a yearly basis (Barua and Chiesa, 2019). Turguttopbaş stated in his study that the first green bond issuance in Türkiye was made by the Türkiye Industrial Development Bank and it is an important example for other banks that want to issue green bonds. She also emphasizes the robustness of the asset structure of banks providing sustainable development finance. Türkiye Industrial Development Bank, which is among the institutions that support investments in our country, also takes into account whether the loans are for financing green projects, in addition to the credibility of the company, during the stages of evaluating the credibility of the investor (Turguttopbaş, 2020).

Azhgaliyeva et al. investigated green bond issuance methods and policies in the Association of South Asian Nations (ASEAN) countries. The green bond markets of Malaysia, Indonesia, and Singapore, the far eastern countries that made the first green bond issuance in ASEAN, were examined. In the study, it was observed that the majority of the total green bonds issued in ASEAN were issued by the Indonesian government. It was concluded that most of the issued bonds were used to finance the construction of green buildings (Azhgaliyeva et al., 2020).

Leitao et al. investigated the non-linear effects of green bonds, conventional bonds and energy commodities on the European Union carbon market. As a result of the studies, it has been concluded that green bonds have a positive and significant effect on carbon price movements in both low volatility and high volatility regimes (Leitao et al., 2021).

In her study, Keskin emphasized that many companies around the world have started to produce green projects that are environmentally friendly and sensitive to global warming. On the contrary companies that insist on not making sustainability and green investments fail and lose their market share. While the preferences of global market players and important financial institutions have turned to green finance in our country to support investments, investing in projects that support global warming is no longer an issue to be taken into consideration (Keskin, 2022). Şimşek and others emphasized that if green financing tools are directed towards the right and sustainable energy and infrastructure projects, it will be easier to reach the goals of climate finance. In addition, they argue that transferring the funds to be generated by sustainable development projects to efficient and correct resources will both bring green projects to the forefront and reduce the effects of global warming (Şimşek and Tunalı, 2022). In their study, Abdullah and Keshminder state that green projects and indirectly green sukuk are promoted by the UNFCCC and also contribute to the realization of sustainability. They state that Islamic finance

which has been on the rise in recent years and a financing tool to finance green projects, is relatively small and insufficient compared to demand (Abdullah and Keshminder, 2022a). Dell et al. also investigated the government green bond market of 10 European Union (EU) countries for the period 2016-2021. In the study, the effect of stock and credit default swap (CDS) market on green bond issuance is empirically examined. It has been concluded that EU countries issuing green bonds are seen as a reflection of value increasing and risk reducing (Dell'Atti et al., 2022).

Keshminder et al. studied the green sukuk market in Malaysia. In their studies, they emphasized that green sukuk can be applied not only in the energy market but also in the construction sector. They stated that the green sukuk market did not reach a sufficient size in the financial system, and therefore, there was a lack of liquidity. As a solution proposal, they emphasized that states should make legal regulations regarding the issuance of green sukuk (Abdullah and Keshminder, 2022b).

Sustainability Concept

Gray and Milne (2002) stated that sustainability is a macro-level applicable concept and it would not be meaningful to limit it to only one region. Sustainability is not an efficient allocation of resources over time, but a fair distribution of resources, opportunities between present and future generations, and a scale of economic activity according to ecological life support systems (Gray and Milne, 2002).

Sustainability is defined as the ability to regulate the functioning of any structure or system and to sustain itself indefinitely in a system with low risk. Sustainability is a concept that covers the past, present and future periods. Sustainability is a discipline that will make a great contribution to the welfare and happiness of humanity and will bring solutions.

Sustainable Development / Concept

Along with the concept of sustainability, the concept of sustainable development has also come to the agenda. Sustainable development was first defined in the Brundtland Report published by the World Commission on Environment and Development in 1987 as “development that meets the needs of the present without compromising the capacity of future generations to meet their needs” (T.C. Dış İşleri Bakanlığı, 2022).

According to neoclassical economics, sustainable development is defined as an increase in welfare in the future (Harris, 2000).

Sustainable Development Goals

Sustainable development goals focus on the solution of social, cultural and ecological issues consisting of 17 main topics such as ending hunger and poverty all over the world, combating climate change, providing quality education, promoting responsible production and consumption by the member states of the United Nations, and plans to complete all these by the end of 2030. Our country has committed to contribute to the United Nations Sustainable Development Goals and is an important stakeholder on this. Our contributions to the Sustainable Development Goals are reported annually to the United Nations (Cumhurbaşkanlığı, 2022).

Sustainable Development Finance

Ecer et al, in their study, titled "European green agreement and harmonization policies of the Turkish economy", argue that the sectoral effects of the green agreement and the harmonization in the transition period should be done softly in order for Türkiye to make the transition to 'green production' sustainable without suffering economic losses (Ecer and Güner, n.d.).

Financial elements have been included in sustainable development since the early 1990s. Therefore, financial instruments have become important in terms of sustainable development. Banks, social security institutions, capital markets and other financial institutions, which are players in financial markets, have indirect or direct effects on sustainable development (Erdoğan, 2022).

In order to reach the targets, set in renewable energy investments, a strong incentive mechanism should be determined and purchase guarantees should be given. It is important to increase the efficiency of the operation of the Environmental Impact Assessment (EIA) system and to support the technological development of the host country (Yıldırım, 2016).

The more important the objective criteria in credit rating, the more important are the renewable energy policies of the host country, legislation and incentive mechanisms for investments, which we can count among the subjective criteria. All these factors play an important role both in the allocation of the limits of green financing loans and in the development of the renewable energy sector.

Some of the important objective and subjective criteria for allocating limits to renewable energy projects can be listed as follows (Varlık, 2015):

- The credit rating of the host country
- Borrowing capacity of the financing institution
- Investors' credibility
- Financial structure of the investment

- Other data of the investor that cannot be expressed in figures other than the financial structure
- Feasibility of the investment
- Country's policies in practice
- Country's incentive mechanism

Climate Finance

Sustainability bonds are used to finance not only green projects but also social projects. The Sustainability Bond Guidelines (SBG), which is updated in 2021, ensure the principles are applied to the bond market (Cumhurbaşkanlığı, 2022).

With the 2015 Paris Climate Agreement, a concrete target has emerged on global warming. The most recent IPCC report revealed that making progress on the net zero target by 2050 is essential to reaching the limit of 1.5 degrees average temperature rise.

After this stage, a new page was opened in the fight against the climate crisis in our country and the Paris Climate Agreement was unanimously approved in our Turkish Grand National Assembly. Thus, by becoming a party to the agreement in October 2021, Turkey has strategically integrated the Paris Agreement, which is the largest international agreement on limiting the global temperature rise to 1.5°C until 2100, into its domestic and foreign policy. In addition, our country has set a net zero emission target in 2053, and has put forward a carbon-free and environmentally friendly strategy.

One of the most important topics of the Paris Climate Agreement is Climate Finance, and it envisages the establishment of a financial mechanism that includes an annual \$100 billion resource allocated by developed countries and transferring it to developing countries.

Green Financing

Green bond principles give importance to the clarity and truthfulness of the information and reports to be announced by the issuers to the parties. These principles have criteria's such as project evaluation, project selection process, income items and reporting. (International Capital Market Association -ICMA, 2017).

It is important that the revenues obtained from green bonds are used in the financing of green projects. Green projects need to be environmentally friendly, without harming the environment. These projects should provide renewable energy, energy efficiency and prevent pollution. Unlike other project evaluations, in green projects, the control of the project open to transparent inspection and free reporting should be up-to-date and transparent according

to green bond principles (Yazıcıoğlu and Baştan Töre, 2022).

Green finance is defined as providing and using the funds needed for investments with environmental and social sensitivity and financing these investments. Investors obtain the financing they need for investments either from their own resources or from foreign sources. It is important to decide which source would be more appropriate to use (Yazıcıoğlu and Baştan Töre, 2022)

Financing needed for investment in renewable energy is provided by different public and private development banks. Some of the mentioned national and international financial institutions are: World Bank, Asian Development Bank, United Nations International Development Agency (Varlık Günüşen and Yılmaz, 2017).

Green Financing Practices in Türkiye and the World

The first green bond issuances made in the capital markets in 2007, some of them are given below (Kandır, Yılmaz Serkan; Yakar, 2017). Green bonds amounting \$2.4 billion were issued by the US Treasury in 2009. These bonds are called renewable green bonds. Green bonds amounting to 840 Million Euros issued by the European Investment Bank in 2009 are named as Climate Awareness Bonds. The first private sector green bond issuance was carried out in 2013. In November 2013, the French energy company Electricite de France (EDF) issued green bonds with a maturity of 2021 and amounting to 1.4 Billion Euros to finance renewable energy investments.

The green bond issuance with an amount of 900 million Euros by Germany's CRC Breeze Finance company was issued in the form of (Asset Backed Securities). Poland is the first country to issue green government bonds at the end of 2016. In some giant countries such as China and the USA, in order to support their investors, they also provide investors with tax exemption on the return of the bonds issued in order to avoid financing difficulties in renewable energy and energy efficiency activities. As recorded in the 2015 report of the Organization for Economic Co-operation and Development (OECD), if relevant governments increase green bonds to finance low-carbon emission projects. This will provide the opportunity to issue green bonds which will amount to \$700 Billion per year in the US, EU, Japan and China by 2030 (Özer, 2017).

The green bond issuance, which was \$163 billion in 2017, has grown by 68% compared to 2016. 44% of the bonds examined by rating agencies such as Fitch, Moody's and SandP are stated to be 90% investment grade and 10% have high yields (Zerbib et al., 2018). According to Moody, there was a slowdown in growth in 2018, and the figures did not increase much. It has progressed from 163 billion dollars in 2017 to 167 billion dollars in 2018, and

to 266.5 billion dollars in 2019 the following year. Later, it gained momentum by reaching 270 billion dollars in 2020. According to the Climate Bonds Initiative, green bonds totaled \$348 billion as of May 2021 (Yazıcıoğlu and Baştan Töre, 2022).

Some of the important pillars of sustainable finance are banks and financial institutions. Our country's financial institutions are now funding our country's development goals through syndicated loan agreements indexed to sustainability criteria. An example of this is a bank operating in the field of development banking in our country recently, with the participation of 14 banks from 11 different countries from Europe, America, Asia and the Middle East, 4 of which are new participants, with a total of 55 million USD and 116 million Euros. It is a syndicated loan provided in two separate tranches. The loan has a maturity of 367 days, an annual interest rate of 175 basis points, and a renewal rate of 130%.

Definition of Green Sukuk

Interest-free finance; compared to conventional finance, it enters the radar of both sectors in terms of sustainable development goals. Since the real sector is directly supported in Islamic finance products, it is also expressed as impact investment because it is measurable and directly reflected in production (GIFIIP, 2022).

Development of Green Sukuk

The need for investment and financing in accordance with Islamic finance principles emerged in the 1970s. With the expansion of the green financing and green bond market, studies on green sukuk took action within the framework of the sustainable development goals of Malaysia's Sustainable and Responsible Investment (SRI) initiatives in 2014. Bank Negara Malaysia (Central Bank) and Securities Commission Malaysia (Capital Markets Board) in Malaysia, within the framework of investors' search for both environmentally friendly and Islamic finance investment instruments, in 2016, incentives and tax advantages in order to increase the functionality of SRI Sukuk in the market in Malaysia. They have started work for the issuance of green sukuk that are environmentally friendly and in compliance with Islamic rules. Subsequently, after tax incentives brought to SRI funds in 2017, Tadau Energy in Malaysia made the first green sukuk issuance for a total of MYR 250 million in 2-16 years to finance a new 50 megawatt solar power plant. Subsequently, SRI green sukuk worth MYR 1 billion were issued by Quantum Solar Park for the construction of three large photovoltaic power plants in Malaysia (COMCEC, 2018).

In 2018, the Indonesian Ministry of Finance issued the first state green sukuk with a maturity of 5 years, amounting \$1.25 billion, within the framework

of sustainable development goals. The issuance of green sukuk addresses not only Islamic funds but also conventional funds. Therefore, the issuance of green sukuk attracted the attention of a much wider investor group and received more demand than expected. Importance was given to the use of issued green sukuk in environmentally friendly areas and the establishment of a control mechanism was ensured (Haneef, 2018a).

Features of Green Sukuk

Green sukuk emerges as an investment instrument that focuses on natural life protection, energy efficiency, carbon emission reduction and recycling, and supports it in accordance with Islamic financial principles. Green lease certificates are Islamic debt instruments issued to finance environmental projects. Countries such as Indonesia and Malaysia have a significant share among green sukuk issuing countries. The Global Islamic Finance and Impact Investment Platform (GIFIIP) was launched in 2016 by the Islamic Development Bank and the United Nations Development Program Istanbul Private Sector Development Center (IICPSD), which facilitates access to energy investment financing with green sukuk, supports projects that do not harm the environment and provides financial solutions to these projects. (GIFIIP, 2022)

Structure and Stages of Green Sukuk

Green sukuk is a product that has the potential to attract more demand from a traditional sukuk and green bond investor due to its environmental impact and interest-free nature. Green sukuk has some differences compared to non-green sukuk. These differences are summarized in the table below. Combining the investor base of green bonds, non-green bonds and all types of sukuk, green sukuk is suitable for both sukuk investors and traditional eco-focused investors (Ela, 2019).

	Green	Non- Green
Bond	Traditional investor+ Traditional green investor	Traditional investor
Sukuk	All investors	Traditional investor + Islamic investor

Table 1. Green and Non-Green Sukuk Demands.

Source: Worldbank, 2022

The first green sukuk issuance in the world was made by Malaysia, where Islamic finance is heavily applied. Malaysian companies are issuing new green sukuk products as a sustainability product. Among the banks that issue green sukuk, Islamic Development Bank is the first multilateral development bank to issue green sukuk. The first green sukuk issued by the bank was in Euro (Topçu, 2022).

The content of green sukuk has to be based on Islamic funds and types of Islamic financing. To explain in more detail, different Islamic funding methods are used in the issuance of sukuk. Sukuk takes the name of the method of financing it is based on (such as istisna sukuk, ijara sukuk). Similarly, Green sukuk can also be used in Islamic financing types such as musharaka, ijara, or in hybrid form; It is done with a combination of several types of financing. Different financing methods of green sukuk are explained below (Pwc, 2016).

Musharaka

In the Musharaka fund-raising model, each of the parties insert a certain amount of capital. This is a model in which partners put both labor and capital together. If the sukuk is issued with the musharaka model, investors with high risk-return profile prefer the musharaka sukuk. As with other green projects, green musharaka sukuk basically consists of projects that are compatible with global warming and changing climate conditions. The principle of labor - capital partnership is valid at the basis of Musharaka Sukuk.

Ijara

Ijara sukuk is a type of sukuk used for an existing entity. In this respect, Ijara sukuk is used for completed infrastructure and renewable energy projects. This makes ijara available for renewable energy infrastructures in the operational phase after construction is complete. Investors purchase the green assets and then lease the purchased assets back to the issuer for a certain rental fee. There is a consensus on the compatibility of the Ijara method with Sharia.

Istisna

The same model is used in the issuance of green sukuk, as the istisna model is an Islamic fund-raising model. Istisna model is applied for goods and assets that are planned to be produced that do not exist yet. In Istisna, the producer party undertakes to produce an asset with the features and conditions desired by the customer at the price specified in the contract and in the specified term. The asset subject to production can be any commodity, as well as movable or real estate. For example, factory buildings, roads, bridges and ships, trains and planes can be the subject of green sukuk.

Developments in Green Sukuk

The transition to a sustainable and green economy also creates significant advantages for the financial sector. First among these advantages is the high amount of additional financing required by the investments needed for the transition to a sustainable economy. According to OECD data; In order to

achieve sustainable development goals other than climate only, an average of annual USD 6.3 trillion needs to be invested in energy, transportation, water and telecommunications infrastructure until 2030. In addition, the annual investment gap is expected to reach 6.9 trillion US dollars, when the investment needs to prevent climate change, such as renewable energy, is added. The increase in global infrastructure investments, which is around 3-4 trillion US dollars, to 6.9 trillion US dollars reveals the need for additional financing. This increase is an important increase in demand for the financial sector. (BDDK, 2021: 6-7) In addition, it has been calculated that developing countries such as Turkey need at least \$2.5 trillion in financing each year in order to achieve sustainable development goals.

There is a need for the Green Bond and Green Sukuk Guide to be prepared and shared with the relevant parties in order to select projects suitable for green financing, to use, manage and report the revenues to be obtained, and to regulate all these flows. (Türkiye Cumhuriyeti Ticaret Bakanlığı, 2021)

Benefits of Green Sukuk

Green sukuk offers advantages to sukuk issuers and investors with its environmental friendliness and being an Islamic fund. It is possible to list the advantages of green sukuk as follows (Pwc, 2016).

- Although there is no difference between green sukuk and sukuk in terms of implementation, both Islamic projects and sustainability are important in green sukuk. In terms of risk, since the rating of the issuing institution is important in both types of sukuk, it is important that the issuer's rating is high. Therefore, whichever type of sukuk is issued, it carries the same risk.
- Green sukuk is not only suitable for interest-sensitive investors, but also for investors who are not interest-sensitive. For this reason, the range of investors is wider. Therefore, the return of traditional sukuk is higher than green sukuk. However, green sukuk is more supported because it consists of projects that provide solutions to the environment and climate changes.
- Since green sukuk, unlike traditional sukuk, includes the obligation to use the returns in green projects, it is required to present green trust documents to investors. Therefore, green trust certificates originate from the funded asset, not from the sukuk issuing institution or organization. It states that the issuer wishing to issue sukuk can issue sukuk without having a green trust certificate.
- Islam gives importance to cleanliness and the protection of nature. Therefore, according to Islam, the protection of natural resources and respect for all living things on earth are important principles. Since

green sukuk is compatible with Islamic principles, it does not exhibit a situation that will adversely affect the protection of the environment and global warming.

- Since green sukuk is an instrument that can be traded in capital markets, its transfer and sales potential is possible. Another benefit of green sukuk is that green trust certificates can be marketed to investors and stakeholders.

Examples of Green Sukuk in the World and Türkiye

In this section, the sukuk issuance models applied in the world and in Türkiye will be explained.

Example Issuances of Green Sukuk in the World

Climate change is expected to hit developing countries the hardest. Its potential effects on temperatures, precipitation patterns, sea levels and the frequency of weather-related disasters pose risks to agriculture, food and water resources. Issues at this point are the gains in tackling poverty, hunger and disease, and the lives and livelihoods of people in developing countries. The World Bank seeks to raise awareness among investors and the financial community on how developing countries can take action on climate change. In 2016, the World Bank Group Global Information and Research Center joined a Technical Working Group with Bank Negara Malaysia and the Securities Commission, which supports the Malaysian Green Finance Program. The program aimed to encourage investment in green or sustainable projects through the development of green Islamic finance markets initially in Malaysia and later in the ASEAN region. With the support of this program, Malaysia issued the world's first green sukuk on June 27, 2017 (Bank, 2022).

The Green SRI Sukuk Grant Scheme, published in 2018, was expanded to include bond issuances in January 2021. It is aimed to support eligible issuers by covering independent audit costs. Thus, it is aimed to ensure the continuity of sukuk and bond issuances by reducing the issuance costs, and to provide an important step towards making Malaysia a sustainable financial center.

The issuance of Green Sukuk in Malaysia is divided into several categories in the table below. There is a comparison between Indonesia and Malaysia's eligible green sectors in Table 2 (Rozman and Azmi, 2022).

Table 2. Malaysia and Indonesia Eligible Green Sectors.

Malaysia	Indonesia
<ul style="list-style-type: none"> • Renewable Energy • Energy efficiency • Pollution and Prevention Control • Environmentally Sustainable Management • Aquatic Biodiversity Conservation • Clean Transportation • Sustainable water and wastewater management • Climate change adaptation • Eco-efficient production technologies • Green building 	<ul style="list-style-type: none"> • Renewable Energy • Resilience to Climate for Disaster Risk Area • Energy and Waste Management • Sustainable Agriculture • Sustainable Transportation • Green Tourism • Sustainable Natural Resources Management • Use of clean Technology for Power Generation • Green building

Source: Abubakar and Handayani (2020) and Worldbank (2020)

Below is an example of a wakala sukuk issuance in Indonesia. CIMB acted as a Active Joint Bookrunner, Active Joint Lead Manager and Dealer for the RoI's Republic of Indonesia issuance of Trust Certificates ("Wakala Sukuk") from its recently upsized Program of USD25.0 billion.

The Sukuk issuance, comprising a 5-year Green tranche and a 10-year tranche, is the 9th USD Sukuk issuance by the RoI. The transaction is in line with the Republic's ongoing objectives to strengthen the global Islamic financial market and commit to environmentally sustainable green funding.

The Sukuk are structured based on the Shariah principle of Wakala. The Sukuk assets under this Wakala Sukuk issuance consist of (i) state-owned assets including land and buildings (51%) and (ii) project assets which are under construction or to be constructed (49%).

The transaction was supported by a quality global orderbook, including the introduction of green investors who reinforced the robust demand for the Sukuk allowing RoI to price significantly tighter from initial price guidance (Haneef, 2018b).

Table 3. Example Issuance of Green Sukuk in Indonesia

World's Debut Sovereign Green Sukuk Issuance	
Republic of Indonesia	
USD1.25 billion Green Trust Certificates due 2023 and USD1.75 billion Trust Certificates due 2028	
Deal Summary	
Issuer	Perusahaan Penerbit SBSN Indonesia III ("PPSI-III")
CIMB's Role	Dealer, Lead Manager, Bookrunner
Rating	Baa3 by Moody's, BBB- by SandP and BBB by Fitch
Facility	USD25.0 billion Trust Certificate Issuance Program ("Program")
Issue Size	USD3.0 billion Wakala Sukuk:
	Tranche 1: USD1,250 million (Green)
	Tranche 2: USD1,750 million
Tenor	Tranche 1: 5 years (Green)
	Tranche 2: 10 years
Profit Rate	Tranche 1: 3.75% p.a.
	Tranche 2: 4.40% p.a.
Issue Date	1 March 2018
Islamic Structure	Wakala

Source: Haneef Rafe Responsible Finance and Investment Summit

Example Issuances of Green Sukuk in Türkiye

The first institution issuing Green Sukuk in Turkey is Emlak Participation Bank, a public institution that operates in interest-free banking. This bank has issued Türkiye's first partnership-based green sukuk with a maturity of 371 days and amounting to 51.8 million ₺, which was issued through the Special Fund Pool on November 10, 2021.

Distinct features of Issuance

Türkiye's green sukuk issuance; as one of the concrete works of our bank within the scope of sustainability activities, it was Türkiye's first green lease certificate issuance. It is a special sukuk issuance based on partnership and risk sharing through a Private Fund Pool. With the financing of projects that are the subject of green sukuk and serve the Sustainable Development Goals of the United Nations, approximately 2 thousand tons of contribution has been made to the annual net carbon emission reduction (Karabulut, 2022).

Table 4. Example Issuance of Green Sukuk in Türkiye

Related Issue Ceiling Information	
Amount	15.000.000.000
Currency unit	TRY
Issue Ceiling Value Type	Rental Certificate
Sales Type	Sale to Assigned-Qualified Investor
Domestic / International	Domestic
Lease Certificate Information to be Issued	
Source Organization	Türkiye Emlak Participation Bank Inc.
Planned Maximum Nominal Amount	51.800.000
The Issue Will Take Place / Country of Occurrence	Turkey
Type	Lease Certificate Based on Management Agreement
Maturity	16.11.2022
Maturity (Number of Days)	371
Dividend/Return Type	Variable
Kinds of selling	Sale to Qualified Investor
ISIN Code	TRDEVKSK2228
Investment with Brokerage Service Founding	Türkiye Emlak Participation Bank Inc.
Sales Start Date	8.11.2021
Sale Completion Date	9.11.2021
Maturity Start Date	10.11.2021
Nominal Sold Amount	51.800.000
Number of Coupons	11

Source: PDP Public Disclosure Platform Central Registry Agency

Green Sukuk in Türkiye

Green sukuk, which has started to be issued in Türkiye in recent years, is not an instrument that has reached a certain potential yet. However, with the global warming, it is seen that there has been some activity in the issuance of sukuk from international organizations, governments and the private sector in recent years. In addition to its various advantages, green sukuk emerges as an alternative in the financing of renewable energy investments. However, in order to increase the use of a product, it is necessary to increase the awareness as well as to facilitate the legal procedures. Legal and tax regulations regarding sukuk are not sufficient in Türkiye. However, the Green Reconciliation Action Plan was published by the Ministry of Commerce in 2021 and significant changes were made. However, the main problem is that; the issuance of green lease certificates is more costly than normal sukuk, and there is no rate advantage between them and normal sukuk in the market (Ela, 2019).

Climate crisis, Covid-19 pandemic and European Green Consensus developments have increased the importance of innovative financial instruments such as sustainable finance approach and green bonds in the capital markets of the world and our country. “Green Debt Instrument, Sustainable Debt Instrument, Green Lease Certificate, Sustainable Lease Certificate Guide” was accepted and published on February 24, 2022 in order to encourage financing of investments that will contribute positively to sustainability within the framework of the 11th Development Plan, 2021 Economic Reform Package, Paris Climate Agreement priorities and actions. With this guide, it is aimed to carry out the issuance of green debt instruments, sustainable debt instruments and green lease certificates and sustainable lease certificates in accordance with the best practices and standards in international financial markets, and to increase transparency, integrity, consistency and comparability in the financing of sustainability projects and green projects.

The guide has been prepared on the basis of the “International Capital Markets Association (ICMA) Green Bond Principles, which is the most widely accepted guide in the financial markets in the field of green bonds. The Draft Guide, which was presented to the public on 03.11.2021, was reviewed within the framework of the opinions of market stakeholders. With the guide, the issues of “project selection”, “use of the funds obtained from the issue”, “management of the funds obtained from the issue” and “reporting” specific to green, sustainable debt instruments, reporting obligations and external evaluation service provision “are regulated by rules of the nature of obligation” and “recommendation”(Sermaye Piyasası Kurulu (SPK), n.d.)

Actions Regarding Green Sukuk

Necessary regulations have been started to be made in Türkiye within the scope of green development goals and strategy documents have been created in this regard. The studies focus on the issuance of high-volume green lease certificates, which will include all financial sector players, under the leadership of the public sector, and to support green development goals.

With the development of Islamic finance and green finance, international standards and frameworks such as ICMA, as well as domestic green finance standards and frameworks have emerged. Therefore, in Türkiye, standards for green finance have been established by taking into account participation finance practices.

Along with the green sukuk funds issued by IsDB, a fund of USD 32.6 million was allocated to the light rail system project in Antalya within the framework of “clean transportation”. In this context, it is observed that there is an important potential for green sukuk in financing projects within the scope of sustainability, such as the domestic automobile TOGG and other domestic electric vehicles, which are planned to operate with electricity (Cumhurbaşkanlığı, 2022).

Problems of Green Sukuk

Although green sukuk has been frequently seen in the market in recent years, there is still a long way to go. Therefore, in order for green sukuk to be more popular, its problems must be solved. These problems can be listed as follows (Al Natoon, 2017):

- The lack of certain standardization in Sukuk issuances and practices is an important problem,
- Lack of standardization in documents requested for operational transactions,
- Green sukuk has a high-risk profile,
- Difficulty in investing sukuk funds into projects that meet green standards,
- Secondary markets for green sukuk are not yet formed,
- Lack of financial literacy,

Suggestions for Solutions to the Problems of Green Sukuk

Suggestions for solutions of the problems of green sukuk are as follows (Pwc, 2016):

- Establishing standards for green sukuk,
- Creating introductory guides on the details of climate change and sustainable green sukuk,
- Application of the standards required for the issuance of green bonds to the issuance of green sukuk,
- Standardizing Shariah rules in green sukuk as well as in sukuk,
- The high credibility of the issuer will increase the demands of both foreign and domestic investors,
- Increasing the volume of green sukuk issuance by the public alongside the private sector,
- Establishment of the secondary market of green sukuk. Studies and regulations to increase the green lease certificates and the secondary market of green sukuk will increase the importance of these products,
- Literacy on sustainability, green finance and green sukuk is at low levels. Academic institutions have important duties in order to raise awareness and increase financial literacy in all these areas. In this context, green finance and green capital market issues should be included in the curriculum of universities. Research centers on these subjects should be established within universities. Green sukuk should be included more in academic studies at universities,
- Reducing the risk weight within the Banking Regulation and Supervision Agency (BRSA) for green/sustainable sukuk that fund management companies include in their portfolios for investment purposes,
- Initiating efforts to enter Private Sector Green Lease Certificates

into the asset class as applied in public lease certificates and VAT as applied in the Treasury's issuances,

- The weight of green/sustainable sukuk to be included in the portfolio in the funds should be higher,
- Increasing cooperation with Development and Investment Institutions that finance green and sustainable projects such as the European Bank for Reconstruction and Development (EBRD) and promoting green sukuk more comprehensively,
- They should develop cooperation with international organizations such as the World Bank and the EBRD, so that participation banks in Türkiye can play a more active role in green finance loans and capital market products. They should also make agreements with these institutions to operate together on green financing and green sukuk.
- The higher rate of sukuk in the portfolios of the public in the capital market. In addition, the issuance of green/sustainable sukuk in the financing of projects in areas such as public clean transportation, infrastructure and energy,
- Making necessary arrangements in order to carry out thematic sukuk issuances on a foreign currency basis based on projects with a maturity of 5 years or longer,
- It is necessary to increase the promotion of sukuk in the private sector as well as the public in terms of alternative finance sources. (Karabulut, 2022)
- Participation banks should create separate fund pools in green financing by expanding the fund pools they collect,
- Participation banks should establish different departments where sustainable products such as green finance and green sukuk can be marketed, credited and operated, and they should train personnel who will provide expertise in this field and increase the amount of practices,
- Institutions that can measure the targeted effects of the Istanbul Financial Center, propose regulations and bring new rules to the agenda, report and present all these, should be established in order to represent an important sukuk center in the world,
- Türkiye, as a country with a great potential in foreign and domestic investments due to its geographical location, should not miss green sukuk investments and issuances and should make regulations to facilitate investment. Public suspensions and tax incentives should be increased (Ela, 2019).
- Incentives may be introduced to deduct the amount up to a higher amount for costs such as regulatory agency or credit rating that the issuers will bear during the issuance process from corporate tax.

- Investors investing in these products can deduct the tax they are obliged to pay with the coupon payment they will receive. Thus, the issuer will be exempt from paying the coupon,
- Income tax exemption may be granted to the investors, depending on the maturity of these debt instruments, if they invest in sustainable debt instruments,
- It can be ensured that the issuer can request a grant for the costs of debt instruments to be issued based on a subject or program in sustainable debt instruments,
- In order to make issuances in the sustainable field more attractive, it can be ensured that funds are directed to sustainable finance, especially with exemptions to be granted to funds such as pension funds,
- The support to be given to companies regarding the costs of external consultant review will reduce the cost gap between conventional debt instruments and sustainable finance and have an increasing effect on demand,
- It can be ensured that the issuances are extended by creating a set of legislation/standards in line with international legislation, covering topics such as reporting, periodic briefing, external consultancy/audit regarding sustainable/green issues,
- A market in which green debt instruments will be traded individually can be created within BIST, and an accreditation mechanism can be established to monitor the compliance of the issue with the relevant standards to be established at the country level,

The Future of Green Sukuk

Success rate of green sukuk in the future is determined by many factors including (Ela, 2019):

- Increases in the world population will increase the need for clean renewable energy and energy efficiency. Therefore, it is certain that the demand for water, energy, transportation, urban development and infrastructure will increase,
- With the increase in investments, extra resources will be needed for the financing of these new investments to be made,
- Global warming pushes new investments to seek new green financing methods to find solutions to climate change,
- As in almost every sector, government support, tax incentives, and the standard to be brought to green sukuk will play an important role at the level that green sukuk will reach in the future,
- Today, as in the past, Türkiye is a center for direct and indirect investors in green finance in a wide region, especially in the Gulf Countries (GCC) and our close geography, in terms of issues such as

its geographical location and the level of development of its financial system. In terms of all these features, Türkiye has significant advantages compared to other target countries where green lease certificates are developing,

Conclusion and Recommendations

As stated in the Brundtland report published in 1987, sustainable development was defined as a development model that could meet the needs of present generations without risking meeting the needs of future generations. For sustainable development, not only the economy, but also all the factors that concern the environment and society should be considered together. In addition, sustainable development increases its importance day by day as it is an approach that covers the climate change and its consequences due to global warming, the prevention of environmental pollution, strategic studies to increase the use of clean energy, zero waste approach and renewable energy production. Sustainable development also reveals the need for financing. This need in our country has started to show itself since the 1990s.

The effects of climate change are being experienced worldwide particularly by developing and less developed countries. These countries need new financing to decrease the negative effects of climate change and to support the green and sustainable development. New sources and innovative way of financing should be facilitated. Green Sukuk model can provide suitable finance for sustainable development. To facilitate the finance to countries in need, this model can play an important role to mobilize the international public and private sustainable development and green investments. MDB's (Multilateral Development Banks) can provide support to promote the use of Green Sukuks.

Although ensuring sustainable development is seen as a public responsibility, the efforts of the private sector in this regard cannot be ignored. Green projects are supporters of sustainable development. Green bonds are issued to minimize the negative effects of climate change, which is becoming more and more evident every day. Besides green bonds, green sukuk as an Islamic financial instrument, is a type of bond created to meet the needs of investors who are sensitive to interest.

In the last 3 years, the most important agenda of the whole world has been the Covid-19 pandemic. The link between the Covid-19 pandemic and climate change caused by human activities has been scientifically explained. The study, published in Carbon Brief in 2021, found that emissions from human activities double the likelihood of extreme weather events.

In order to increase the green financing figures, some applications should be put into effect. Among the items that are important and need to be prioritized,

it is necessary to extend and develop expertise in green finance among the stakeholders in the financial system. Banks and asset management companies, which are among the financial market players, should increase the number of those who have green finance experts in their organizations.

Green sukuk is used both in financing renewable energy investments and as a different financing source. Due to these important areas of use of green sukuk, it is a product open to development in many Islamic countries and Türkiye. However, Türkiye's tax and legal regulations regarding green sukuk should be implemented without delay. As a country suitable for investment and with an important potential, Türkiye should not miss the green sukuk opportunity, which is still in its infancy, and should take important steps to become a green sukuk center with the legal support it will provide to investors so that it can get a significant share of green projects that will support sustainable development. From the point of view of all domestic and foreign investors, it will also make a significant contribution to Istanbul Finance Center for becoming an international green finance and green lease certificate center.

In corporate rating models, not only the balance sheet and income statements, which are the numerical data of the companies, but also the data containing subjective data are made. In recent years, the importance of these subjective data has increased even more. The fact that companies are doing projects that are not suitable for the environment and climate increases the coefficients of their subjective data. It is important that Turkish banks increase the green part of their existing loan portfolios and ensure that their new green projects comply with international criterias.

Today, as in the past, Türkiye is a center for direct and indirect investors in green finance in a wide region, especially in the GCC and our close geography, in terms of issues such as its geographical location and the level of development of its financial system. In terms of all these features, Türkiye has significant advantages compared to other target countries where green lease certificates are developing.

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