

Green Economy and Green Financing

Ruzibaeva Nargiza Khakimovna

Lecturer of Samarkand Institute of Economics and Service

Khotamkulova Madin Sanjar kizi

Student of Samarkand Institute of Economics and Service

Abstract: this scientific article is devoted to analyze the role of green economy in global level, as well as, the importance of green financing to promote sustainable economy. Additionally, several recommendations have been made based on the conducted studies and research for further improvements in this sector.

Keywords: green economy, sustainability, green finance, banking, ecology.

Literature Review. In recent times, the consensus for environmental protection, actions on climate change and the achievement of United Nations Sustainable Development Goals (SDGs) by 2030 have drawn attention to green finance. ‘Sustainable finance’ or ‘environmental finance’ or ‘climate finance’ and ‘green investment’ are variously used to refer to green finance [1]. Green finance reached a crescendo of importance during the eleventh meeting of the G-20 nations in Hangzhou, China in 2016 where it was widely publicized and discussed. Different conceptions of green finance reflect the aspect of the concept that is of importance to the researcher, making diversities in the understandings and interest in green finance. IFC (2009) defined green finance in the confines of investment products that preserve the environment, ensure social justice and promote economic prosperity [2].

Various financial institutions, international initiatives, standard setters, and regulatory bodies have developed their own approaches to green finance. As everyone has its own way to define and implement green economy, it created certain types of challenges. O. Bogocheva and O. Smorodinov [3] researched these challenges and followings are found:

1. absence of common definition of green finance and lack of international standards;
2. insufficient correlation of targets of sustainable growth with priorities of national investment policy;
3. absence of regulatory and legal framework directly related to green finance;
4. ecological externalities;
5. maturity mismatch;
6. poor green project selection and management;

7. information asymmetry at the capital markets;
8. Lack of analytical tools and expertise in identification and assessment of green projects' risks.

Results of the Research. While there is huge potential for scaling up green finance, there are also several challenges for financiers, ranging from difficulties in accounting for environmental externalities in financial decision making, to maturity mismatches for long-term projects as many investors seek short-term returns, and information asymmetries caused by a lack of consistency in market terms and standards. Information asymmetries in particular lead to inadequate analysis as a result of inaccuracies in measuring current green finance flows and their impact.

Having studied these kinds of studies, International Financial Corporation [4] suggested following recommendations to overcome those challenges:

- ✓ Provide strategic policy signals and frameworks
- ✓ Promote voluntary principles for green finance
- ✓ Expand learning networks for capacity building
- ✓ Support the development of local green bond markets
- ✓ Promote international collaboration to facilitate cross-border investment in green bonds
- ✓ Develop a forum to facilitate knowledge sharing on environmental and financial risk
- ✓ Improve the definitions for measuring green finance activities and their impact.

On top of that, this group also studied and they are followings:

Figure 1 Main branches of green economy in the current practice [5]



The next research has been conducted to reveal the role of banks to promote green economy across the world and followings have been concluded:

Achieving the goals of sustainable development and the transition to a green economy requires significant financial resources. Banks are active participants in the financing of projects and industries with a positive environmental and social impact. Banks can provide capital to finance the investment in renewable, climate adaptation technologies and the transition to a circular economy, which is one that promotes the continual use of resources. By ensuring that finance is tied to sustainable outcomes, for example, banks can help businesses advance responsibly. Banks are also well-positioned to channel economic flows towards the sustainable development of the region. By being disciplined in the allocation of funding and in seeking returns, alongside a balanced scorecard that includes both profitability and sustainability indicators at the business level, banks can help to support customers and communities over the long term, ensuring sustainability[5].

Moreover, according to Bloomberg, the world's annual sustainable debt issuances, including green and sustainability bonds, more than doubled from about \$310 billion in 2018 to more than \$730 billion in 2020. Around 60% of the investors in UOB's \$1.5 billion sustainability bond offering – the first ever in Singapore – in April 2021 were sustainability-focused investors [6].

Sustainable banking plays a triple role in promoting sustainable business thinking by providing financial resources to economic agents, in some cases financial advice for new projects or initiatives, aimed at supporting non-governmental organizations and government development programs a new sustainable model of the national economy, improves the reputation and image of the banking sector, demonstrating interest in the development of a green economy; characterized by the transparency of environmental information and communication. In fact, sustainable banking is a broader concept that includes green banking: the activities of a green bank are aimed at minimizing the negative impact on the environment, while the activities of a sustainable bank contribute to the achievement of a sustainable development goal not only in the environment but also socially-wise. A responsible bank is a more formalized concept based on outlined principles than sustainable and green in relation to commercial banks. Responsible banking can be characterized as the perfect form of sustainable banking, which has received official international recognition and implemented certain principles.

In fact, there are green financial instruments for financing sustainable projects. V.V. Arkhipova stated that [7] green financial instruments can be defined as financial assets and financial liabilities used by economic agents to achieve sustainable development goals. The green financial instruments for which the bank acts as counterparty include green loans, green bonds, green deposits, green leasing, green insurance. The use of certain green financial instruments by different banks varies. Development banks have historically been green bond issuers, lending directly to environmental projects, and sustainable, responsible commercial banks, their green business units, are adapting their classic financial assets and liabilities to achieve sustainable development goals.

Green lending is any type of credit instrument that is provided exclusively for financing or refinancing, in whole or in part, new and/or existing available environmental projects. Green lending is the link between cleaner industries and financial institutions. Depending on the category of the borrower, there are two main types of green loans: loans to organizations in strategic sectors (performing strategic national goals) and loans to other organizations. Depending on the lending mechanism, direct green lending and green relending are distinguished. Direct green lending is carried out through the provision of funds by banks with state participation directly to green

companies with a large volume of requested funds. Commercial banks can also independently carry out direct lending, depending on the demand for bank financing of green projects of borrowers. With direct lending, banks organize the issuance of a loan; control its repayment, and the fulfillment of the terms of the loan agreement by the borrower. In green relending, public funds are channeled first to a financial company, such as the National Development Bank, and then to commercial banks that finance green companies.

Green loans are provided by banks in accordance with the developed and approved credit policy. A bank can offer green credit products with attractive terms for borrowers (including the type of loan, terms, interest rate, and amount), thereby stimulating the creation and development of environmentally friendly and energy saving industries and enterprises, influencing the change in the structure of social production, the ratio of dirty and green business, contributing to the green growth. At the same time, banks can “punish” enterprises that violate the norms and laws on environmental protection or energy conservation, stop lending, refuse to lend to projects without a positive impact on the environment, thus controlling the adoption of environmental risks by borrowers. Green credit policy can be developed and implemented not only by responsible banks but also by the state. The green credit policy of the state determines the strategic sectors, priority sectors (for example, energy conservation, renewable energy sources, clean technologies), for the implementation of projects in which green loans should be provided by both commercial banks and development banks [8].

When it comes to local level, our country has also been considering on green economy and financing. In recent years, our government has been supporting green projects and improving its legislation to support this sector. In fact, The Ministry of Economic Development and Poverty Reduction of Uzbekistan, the World Bank, and the Regional Environmental Center for Central Asia are hosting a series of 11 hybrid (virtual and in-person) roundtables on the topic of green growth and climate change in Uzbekistan. They will be held twice per month between August 2021 and January 2022. These policy dialogues create a space for public discussion on Uzbekistan’s progress in implementing its climate change commitments and accelerating the transition to green growth. They will bring together policymakers and government officials, leading economic development and environmental experts, representatives of civil society, international organizations and the media. The virtual round tables are held on a Zoom platform and are open to the public. The working languages are English, Russian and Uzbek with simultaneous translation.

Table1. Green projects of Uzbekistan [9].

| No | Company that is invested in | Hojiakbar-Besh LLC | Pipe Technologies LTD | Imkon Gaz Servis LLC | Muhammadiyev Musurmon Qulmurzaevich’ LLC |
|----|-----------------------------|----------------------|--|--|--|
| 1 | Investment | Excimer laser system | Extruding line for PE Pipes production | Natural Gas Compressor and Auxiliary Equipment | Natural Gas Refuelling Station equipment |
| 2 | Investment size | US\$ 236,518 | US\$ 171,000 | US\$ 237,486 | US\$ 235,000 |
| 3 | Financial results | Payback of 4.1 years | Payback of less than 3 years | Payback of 2 years | Payback of 2 years |
| 4 | Energy Savings | 12.1 GJ per year | 1,635.8 MWh per year | 2,265 MWh per year | 1,356 MWh per year |

| | | | | | |
|---|------------|--|---|---|--|
| 5 | CO2 saving | 0.5 tons per year | 243.7 tonnes per year | 337 tonnes per year | 202 tonnes per year |
| 6 | Impact | Superior treatment precision Increased service capacity Improved competitiveness | Increased production output, improved competitiveness | Contribution to local area development, creation of local jobs, improved competitiveness | Contribution to local area development, improved competitiveness, job creation |
| 7 | Donor | TaiwanBusiness – EBRD Technical Cooperation Fund EBRD SSF | TaiwanBusiness – EBRD Technical Cooperation Fund EBRD SSF | TaiwanBusiness – EBRD Technical Cooperation Fund EBRD SSF | TaiwanBusiness – EBRD Technical Cooperation Fund EBRD SSF |

Conclusion. Green Finance is important as it promotes and supports the flow of financial instruments and related services towards the development and implementation of sustainable business models, investments, trade, economic, environmental and social projects and policies. As the financial sector plays a key role through its intermediary functions and risk management in advancing sustainable economic development while directing investment to the real economy, the intertwining of these two is crucial. Green Finance represents the future of the financial sector through innovative financial mechanisms and by supporting the investments in projects with positive and sustainable externalities.

Based on the above discussed studies, followings can be suggested to further develop green economy across the world:

- Provide strategic policy signals and frameworks
- Promote voluntary principles for green finance
- Expand learning networks for capacity building
- Support the development of local green bond markets
- Promote international collaboration to facilitate cross-border investment in green bonds
- Develop a forum to facilitate knowledge sharing on environmental and financial risk
- Improve the definitions for measuring green finance activities and their impact.

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