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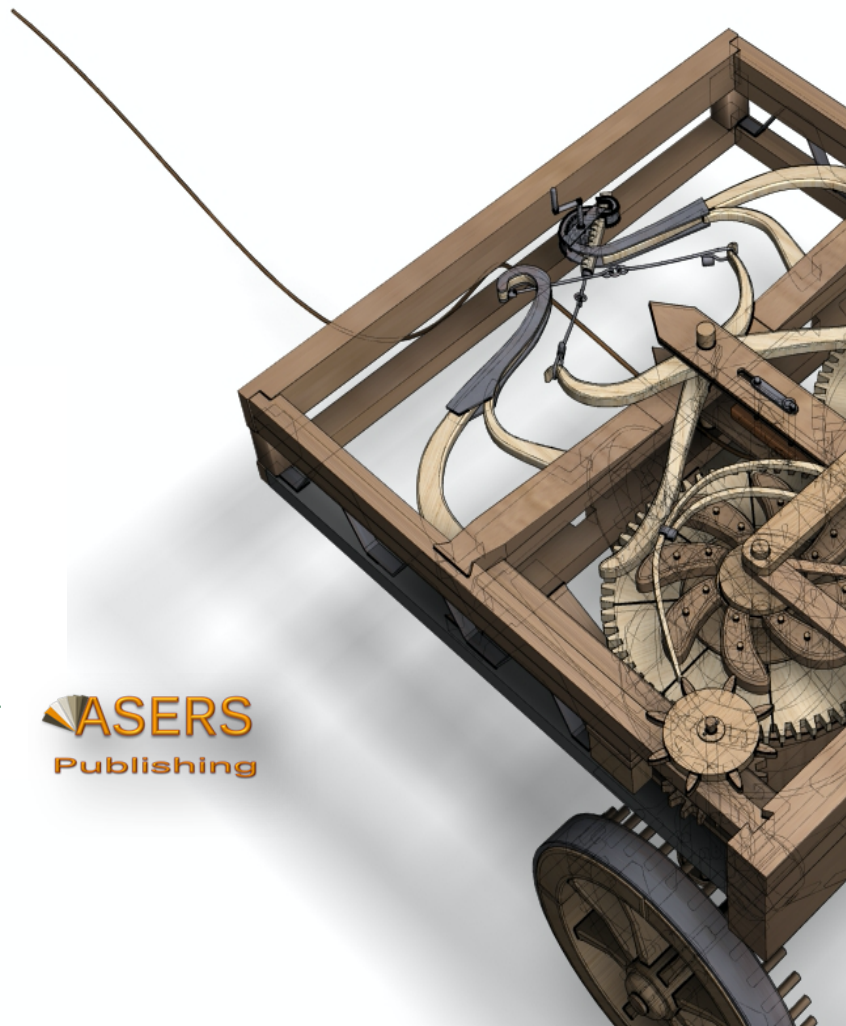
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How Sophisticated is Green Banking in Poland and Romania? A Case Study of Bank Offers

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Abstract:

The role of commercial banks in promoting sustainable development goals in Europe has gained ground recently. The momentum is also due to the Green Deal context. Their activity has shifted towards the achievement of such goals by getting involved in environmental projects or by raising awareness about sustainability. Their endeavors can also be directly reflected in the products and services they provide to the population and businesses. This is how commercial banks have taken up the role of educating the public towards sustainability and sustainable development goals. The aim of this paper is to investigate the green banking products and services of the largest five banks, by the number of clients, in Poland in Romania. A descriptive qualitative analysis is used to estimate the degree of sophistication of green banking products and services in the two countries.

Keywords: green banking; green finance; case study; Poland; Romania; commercial banks.

JEL Classification: G19; Q56; Q59.

Introduction

According to OECD (2015), the banking system needs to channel private investments to finance low-carbon initiatives and to build climate-resilient infrastructure. This may not always be possible solely through private initiative due to scarce resources and various interests, and governments may support the process through green investment banks. To this purpose, public, quasi-public and non-profit entities have been created in order to facilitate private investment (Green Bank Network, 2022). Besides concerted efforts of private and public institutions, several initiatives in this area rest on the shoulders of commercial banks, which include, but are not limited to, raising environmental awareness, educating the public and contributing to greening the economy through specific banking products and services. For instance, OECD (2015) acknowledges that commercial banks and other financial intermediaries are already financing commercial solar leases, large-scale utility renewable projects, which are all energy efficient commercial and industrial projects (OECD, 2015, p. 14). According to OECD (2017) there is a significant need for increasing financial flows in supporting climate and sustainability objectives. In upcoming years investors should take action to integrate climate change and broader sustainability concerns not only to their investment decisions but also to their portfolio framework (OECD, 2020).

The trend to green the economy via banking products and services is not only a European endeavor, but a worldwide one. For instance, the Green Bank Network (2022) is a group of initiatives from Australia, United States of America, Japan, Malaysia, New Zealand, India, Brazil, just to name a few major member countries. The North America Task Force (NAFT, 2007) drafted a report on Green Financial Products and Services earlier in

2007. It discusses the drivers and trends of green financial products and services, the simultaneous evolution of the demand for such products, the existing offer in the market, as well as the best practices and lessons learned from to-date experiences. Inspired by such initiatives and reports, the aim of this study is to provide a timely account of the banking offer of green products and services on the Polish and Romanian market and to discuss the degree of sophistication of this segment of products and services, by comparing the situation of the two countries.

The originality of this paper stands in the analysis of the two largest Central Easter European green finance banking markets, with the highest potential in the region.

1. Literature Review

Green finance can refer to: green products and services provided by financial institutions (*e.g.*, green bonds, green credits, green cards), identifying and managing environmental and climate risks, organizational strategies, investment sectors, industry initiatives and policy and regulatory instruments. The list will be developing within the time frame as the green finance sector expands and becomes more typical (Thompson 2021, 12).

According to European Banking Federation (2017) green finance can involve two aspects. The first one is about environmental issues such as pollution, greenhouse gas emissions, biodiversity), whereas the second one is about climate change concerns, such as energy efficiency, renewable energies, prevention and mitigation of climate changed-connected severe events (European Banking Federation, 2017).

Green finance is a vital tool which is focusing on environmental challenges such as climate change. For companies with low or high environmental risks, green finance obtains funds or constrains access to credits. When we take into consideration further development of effectiveness at the company level, the strengthening of allocation efficiency of green finance should play a critical role (Zhou and Zhang 2022). Financial instruments are crucial means for implementing green finance in real life. The global green bonds experienced recently a significant growth (Wang and Zhia, 2016). The highest number of green bonds between the years 2014- 2021 was issued in sectors such as: energy, buildings, transport and water (Statista 2022a, Statista 2022b).

Dikau and Volz conducted a study to analyze mandates and objectives of 135 central banks taking into consideration the International Monetary Fund's Central Legislation Database and reports and websites of the selected banks. The authors looked at how selected banks support sustainable growth, mainstream green finance and incorporate climate risk into central banks' policy frameworks. The authors found that only 48% of central banks have no explicit or implicit sustainability objectives, and that there are many banks which already started to engage in different green activities (Dikau, Volz 2021).

Fan, Peg and others analyzed how green credit regulation impacts on companies' loan condition and their economic and environmental performance. They presented a theoretical model in which a bank chooses to float a company's loan rate over the benchmark interest rate set by the central bank to absorb the companies' environmental risk. Regarding the impact on firms' environmental performance, although all of these firms reduced their total emissions, the reductions are realized in different ways. Large companies decreased their emission intensity by investing more in adopting abatement facilities, and hand small companies decided to produce less (Fan, *et al.* 2021).

Zhou and Zhang (2022) analyzed, over the years of 2011–2019, hard-to-abate and high-risk companies of China, and banks were used to measure the banking competition of those companies. The authors found that banking competition supported green finance to reduce company's financial performance.

Mirza, Afzal and others (2023) investigated the impact of green lending in small and medium sized companies on banking performance. The authors noticed a positive relationship between green small and medium sized companies lending and net interest margin. For the future it is recommended for the banking sector to focus on expanding credits for small and medium sized companies as there are financial incentives for the banks to expand sustainable credit to small and medium sized companies. Furthermore, commercial banks can play a significant role in achieving sustainability goals by taking these opportunities (Mirza *et al.* 2023).

Kurowski and others conducted a study among 1000 Polish inhabitants to verify the significance of knowledge about climate change for both pro-climate consumer behavior and purchase. Green banking can be understood in many ways, such as increasing financing of environmentally friendly projects, decrease in the use of water or electricity consumption, and waste production in everyday banking operations, the creation of green branches. The authors evaluated whether eco-friendly banking actions are significant from the perspective of a bank's clients. It can be noticed from this study that that older respondent, as well as those with higher income take into consideration climate factors in their selection of grocery and banking services to a wider extent than younger generation and those with low-income (Kurowski *et al.* 2022).

Chen and others pointed out that financial institutions can play a vital role in supporting green recovery, particularly in emerging markets. Their paper evaluated the incentives of sustainable financing for banks in member states of the Gulf Cooperation Council in the years 2011 to 2021. The results show that the significance of green financing is more insightful for smaller banks because responsible lending provides those companies with new earning avenues while mitigating the risk (Chen, *et al.* 2022).

A recent study analyzed the preferred instruments for implementing the mechanism of green. The results show that creating green products and services in the financial market has two main advantages. Firstly, it strengthens the application of the green economy principles. Secondly, the development of a wide range of green products and services can be seen as a tool for implementing sustainable development goals supported by environmental financial policy in selected countries (Markhayeva, Bayanslu *et al.* 2023). Another study investigated green banking as a way of demonstrating ecologically responsible behavior. The results show that the higher the level of customers' environmental awareness is, the higher usage of green banking services and products will be. It is worth mentioning that green culture and green behavior are the key factors related to environmental sustainability (Afridi, *et al.* 2023).

2. Methodology

The paper aims to present, through a descriptive analysis, the current offer of commercial banks in Poland and Romania in terms of green products and services, and to discuss the sophistication degree of this segment of the market. To this end, we selected the five largest commercial banks in each of the two countries, as ordered by the number of clients, and analyzed their current offers of products and services posted on their official websites. The Romanian data was collected in the autumn of 2022 and the data on Polish banks was collected in the first two months of 2023. The choice of banks by the number of clients was made having in mind their impact on and reach of the population and their role in educating a large number of people in each country. The selected banks in Poland were: PKO BP, Bank Pekao, Santander Bank Polska, ING Bank Śląski, mBank, and the Romanian ones were: Banca Transilvania, BRD Groupe Societe Generale, ING Bank Romania, Raiffeisen Bank Romania and BCR.

The choice of countries is based on the economic and social similarities between Poland and Romania, and as a continuation of previous studies in this area (Siemionek-Ruskań *et al.* 2022).

3. Case Study

3.1. Polish Market Analysis

mBank was the first bank in Poland that signed the Principles for Responsible Banking. The principles serve as a support to obtain the sustainable development goals and the goals of the Paris Climate Agreement (mBank, 2021). The bank also plans on entering the UNEP FI Net-Zero Banking Alliance (mBank, 2022). In September 2021, mBank issued the first green bonds in the amount of 500 million PLN, which represent senior preferred notes. In addition, mBank provides three main types of green products and services: the green mortgage loan, eco-friendly cards and leasing photovoltaics. In 2022, mBank issued more than 500 000 eco-friendly cards, and set up a goal to issue only eco-friendly cards in 2023., initiated green mortgage loans in the amount of 300 million PLN and reduced paper usage by 700kg less (mBank, n.d.a.). So far, the bank has supported over 480 000 houses thanks to investing in renewable energy sources. In the first half of 2022, mBank financed the construction of photovoltaic and wind farms for the total sum of 700 000 PLN, which gives the bank a dominant position in that sector in Poland (mBank, n.d.b.).

The ESG strategy of Santander Bank Polska Group focuses on two pillars: corporate culture and sustainable finance (Santander n.d.a). The first type of green cash credit can finance electric or hybrid cars or motors. The second type finances installing renewable energy sources, such as solar and photovoltaic panels, heat pumps, boilers, convectors, electrode furnaces, collectors and auxiliary equipment, thermal and electrical energy storage units produced from renewable sources. The third type of green cash credit enables financing of the equipment for thermomodernization of the basements, ceilings, roofs, materials such as: LED lighting, energy-saving controllers, electrode boilers, charging points for electric cars at home. The fourth type of green cash credits are designed for financing ecological technologies such as: home equipment, classified in energy efficiency class at least C or higher, like dishwashers, dryers, fridges (Santander, n.d.b.). In July 2021, the Santander Bank Polska Group launched its first eco-friendly card through which the carbon footprint is reduced. In 2017, Santander Bank Polska Group issued its first green bonds in the amount of 173 million RON. By the end of 2021, Santander Bank Polska issued green, social or sustainability bonds to finance or refinance Eligible

Assets or eligible social assets for the amount of 750 million PLN. It can be noticed that a significant growth in the amount of issued green, social or sustainability bonds (Santader n.d.c.).

PKO BP, a bank with domestic capital, has two types of green solutions: eco loans for individuals and eco investment credits for companies. The first type of eco loan can finance electric or hybrid cars, motorcycles, electric bicycles, scooters, electric scooters, electric mopeds or motor scooters, equipment using renewable energy (solar and photovoltaic panels, heat pumps, boilers, convectors, collectors and auxiliary equipment, thermal and electrical energy storage units produced from renewable sources) and equipment improving the energy efficiency of the home (PKO BP, n.d.a.) The second type is eco investment credits finances the purchase of photovoltaic panels, thermal modernization of the offices by buying and installing new windows or windows, electric or hybrid cars (PKO BP, n.d.b.). Corporate investors can use business guarantees from Bank Gospodarstwa Krajowego (BGK) to secure their eco-loan (PKO BP, n.d.c). In 2021 PKO BP used green bonds for the amount 500 million PLN (PKO BP, 2021).

It is worth mentioning that ING Group was on the first place in Europe in 2021 taking into consideration the value of green bond issuance by the largest banks with the amount of 4,602 million Euro (Statista 2022 c). In 2019, ING Bank Śląski, issued its first green covered bonds for the amount of 400 million PLN. ING Bank Śląski, provides two types of pf products for individuals: eco loans and eco mortgage loans. The eco loan can be used to purchase equipment using solar and photovoltaic panels, heat pumps, boilers, convectors, collectors and auxiliary equipment, thermal and electrical and equipment improving the energy efficiency of the home, electric car or a plug-in hybrid car. Eco mortgage loans can be used to purchase energy efficient houses (ING Bank Śląski, n.d.b). In 2021, ING Bank Śląski signed an "ecological declaration". One of the aims of this declaration is to provide financing for renewable energy resources and ecological projects for the amount of 5.3 mld PLN (ING Bank Śląski, n.d.c).

In 2021, Bank Pekao co-organized the first issuance of green bonds for the city of Łódź in Poland. The ESG strategy of Pekao highlights a significant growth in portfolio of the Bank of those projects that are focused on environmental protection issues and on increasing the quality of life for citizens (Bank Pekao n.d.a.). Bank Pekao provides two types of pf products for individuals: eco loans and eco credit for houses. Eco loans can finance electric or hybrid cars (plug-in with carbon emissions lower than 50g CO₂/km), green equipment for personal mobility (bicycles, electric bicycles, scooters, electric scooters, electric mopeds or motor scooters), equipment using renewable energy and equipment improving the energy efficiency of the home (Bank Pekao n.d.b). Eco credits are designed for purchasing or building houses with renewable energy resources, such as using solar and photovoltaic panels, heat pumps, boilers, convectors, collectors Bank Pekao (n.d.c). Since 2020, there is also a possibility of green financing for electric or hybrid vehicles for companies.

3.2. Romanian Market Analysis

Banca Transilvania, a bank with domestic capital, has a BT Green Loans program through which it provides two types of green credits: the green real estate-mortgage loan, which can be used to buy an eco-friendly real estate and leasing for electric or hybrid vehicles, be them new or used (Banca Transilvania, n.d.a). Practic BT Verde is the cheapest personal needs loan provided by Banca Transilvania, and it encourages a healthy and sustainable lifestyle. This loan can be used to purchase appliances, urban mobility solutions, equipment or environmentally friendly materials or it can represent the advance payment of fully electric cars (Banca Transilvania, n.d.b). In July 2021, the bank launched its first eco-friendly card in Romania, through which the carbon footprint is reduced by 40%. The bank set a goal to issue only eco-friendly cards by the year 2022. In addition, the bank provides green payment solutions, such as BT Pay, NeoBT and BT Visual Help apps and access to virtual cards before actually receiving the physical cards. Last but not least, Banca Transilvania awards prizes and provides benefits to users who have a large number of steps recorded in apps such as Google Fit, Apple Health and Fitbit.

In October 2021, BCR, an Austrian-held bank, issued its first green bonds in the amount of 500 million RON, which represent senior preferred notes. According to the management of the bank, BCR already has a strategy that includes a journey in the direction of ESG, helping 'to build a sustainable economic development, encourage environmentally responsible behavior and reduce social inequities' (BCR, n.d.a). After this first issuance came a second one, in June 2022, in the amount of 702 million RON, in senior non-preferred format (BCR, n.d.b). On a slightly different note, more than 90% of the cards issued by BCR in the first half of the year 2022 are made of recycled material (BCR, n.d.c).

BRD Groupe Societe Generale, a French-owned bank based in Romania, provides two types of green loans: Espresso Verde for sustainable products and Habitat Verde for sustainable houses (BRD, n.d.a). The first type of loan can finance electric or hybrid cars (plug-in with carbon emissions lower than 50g CO₂/km), green

equipment for personal mobility (bicycles, electric bicycles, scooters, electric scooters, electric mopeds or motor scooters), equipment using renewable energy (solar and photovoltaic panels, heat pumps, boilers, convectors, collectors and auxiliary equipment, thermal and electrical energy storage units produced from renewable sources) and equipment improving the energy efficiency of the home (classified in energy efficiency class A or B: double glazed windows, heating plants, including auxiliary equipment and boilers, air conditioning equipment) (BRD, n.d.b). The second type of loan finances the purchase of a green house certified by the RoGBC (Romanian Green Building Council) (BRD, n.d.c) and is part of the Green Mortgage program. The benefits of such houses, as stated by the bank, are: energy efficiency, sustainable materials and improved air quality.

In August 2021, ING Bank Romania, a Dutch-held bank, launched its first green loan for individuals in order to encourage transition towards a sustainable lifestyle. This loan can be used to purchase a fully electric car or a plug-in hybrid car. In September 2022, ING Bank Romania started its transition towards a portfolio of cards made of recycled plastic, therefore reducing the carbon footprint of newly issued cards by 75% and the energy used to produce them by 54% (ING, n.d.a).

Raiffeisen Bank Romania, an Austrian-owned bank, has a green bond program. It first issued senior preferred green bonds in May 2021, in the amount of 400.575 million RON, and then in June 2021, in the amount of 1,207,500 million RON, senior non-preferred bond (Raiffeisen Bank, n.d.a). The main areas targeted by such bonds are green buildings (both residential and non-residential), clean transportation (passenger cars and electric locomotive) and sustainable agriculture (organic farming). In so doing, the bank addresses four Sustainable Development Goals: Zero Hunger, Affordable and Clean Energy, Sustainable Cities and Communities and Life on Land. In December 2021, Raiffeisen Bank Romania launched a green solution platform for small and medium-sized enterprises for a green transition (Raiffeisen Bank, n.d.b).

Conclusion

The review of bank offers in the two countries under investigation, Poland and Romania, has revealed a quick advancement towards greening at all levels, starting from bank policies to the very products and services they provide. Adherence to principles or agreements represents the banks' commitment to contribute to the efforts towards sustainability, which is reflected in their updated corporate culture, while at the same time implementing sustainable development goals by helping customers to adopt environmentally friendly technologies. The analysis uncovers a rather equal development of green banking products, such as the creation of similar products at roughly the same time in both countries: green bonds, green loans of various types, green cards or online payment solutions, support for investment in renewable energies and eco-friendly vehicles and appliances, and financial support for more energy-efficient and greener buildings in general. Banks, too, have made the first steps towards reducing resource waste, such as cutting paper usage. The year 2021 represents the starting point of revolutionizing bank products, both under the influence of the Paris Agreement that regulates the reduction of carbon emissions starting from 2020 and once the pandemic pressure started to decrease.

To the best of our knowledge, the paper is one of the first endeavors to analyze the commercial banking market in Central and Eastern Europe in terms of greening and compliance with environmental regulations and targets. Nevertheless, this is just a first step in a larger spectrum of studies that can be conducted in the area of green finance and green banking. A look into other markets would give an idea of how advanced other countries are, what gaps need to be filled in countries with a less developed green banking sector and what contribution the banking sector can bring on the overall sustainability effort of the society and economy. In other words, quantitative studies will be necessary once the green policy of banks grows and generalize. Therefore, the subject matter is topical and will soon give rise to more research questions. The main limitation of the study consists in the choice of only two countries, as well as on the sample of banks analyzed.

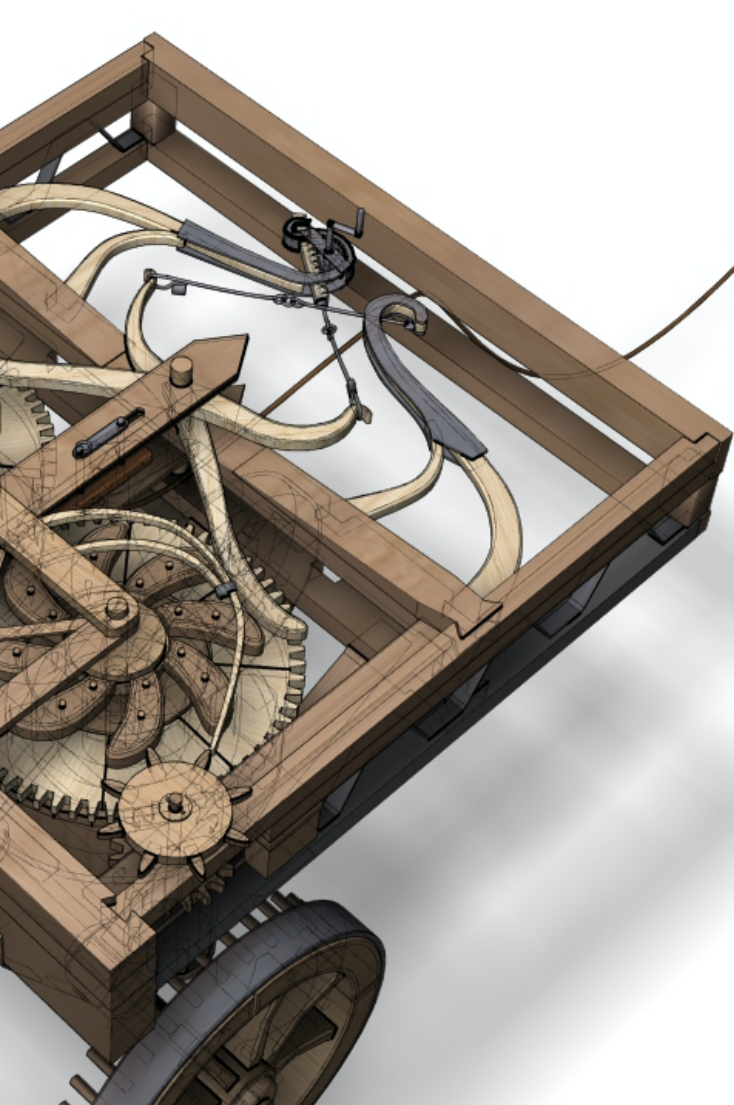
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