



Green Bonds - Sustainable Solution for Financing the Environmental Projects in Romania

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This article presents an analysis of the solution that the states of the world have found to combat pollution and global warming, namely the financing of projects related to the environment by issuing green bonds and the particularities of their use in Romania. The environmental concern of states, corporations and financial institutions in recent years has become a priority because the consequences of global warming are being felt more and more, since 2010 and until now being registered the warmest 6 years. The need and why not the obligation to pay attention to climate change, to reduce the effects of global warming, but also to improve the living conditions of the population, makes in recent years a global concern to find solutions to existing problems, but also innovations to anticipate future effects. Starting from the examples of good practice such as Sweden and China, we consider that the solution of issuing green bonds for the environment can be a feasible opportunity for Romania as well. Following the study, we consider that in Romania, with the obtaining of the status of Emerging Secondary Market, in September 2020, the financing of investments from the bond issue can become an attractive solution for both investors and issuers, being able to channel investment funds that may aim the transition to climate neutrality.

Keywords: green bonds, global warming, environment, sustainable development, environmental projects, renewable energy, pollution.

1. Introduction

We feel the increase in the global average temperature in the form of heat waves, loss of ice, the rising of the sea levels, acidification of the oceans, changing animal habitats and even changing natural ecosystems. In this context, global warming and the effects of climate change are the main topics of interest addressed in various summits, conferences, global meetings, demonstrating a growing involvement, but also an urgency to find solutions.

Climate monitoring and the awareness that globally there is an increase in temperature, which generates climate change, with devastating effects on the planet, humans and animals, makes that in 1992, 154 states meet in an International Treaty on climate change and its effects. The United Nations Framework Convention on Climate Change is the starting point for finding solutions to limit the effects of global warming, global warming and coping with these changes and the impact that has hitherto been inevitable.

The Paris Agreement was signed in 2015, and the signatory countries (197 states) are committed to finding solutions and taking action on climate change, noting that “climate change is a common concern of mankind”^[33].

At European level, the European Union's ambitions for neutrality, set as a deadline of 2050, led to the conclusion of the European Green Pact (Green Deal)^[1] in Brussels on 11 December 2019. This pact emphasizes the need to use the funds and capital raised to reduce



pollution for a clean economy and restore biodiversity. This supports research and innovation, as an alternative solution for the successful implementation of environmental projects, as well as an alignment of procedures in key areas, such as industrial and energetic policy.

Therefore, all these treaties, agreements, pacts, concluded since 1992 and until now, address the problem of sustainable financing, of investments in the successful application of solutions for the environment, always posing the problem of obtaining capital. Thus, the issuance of "green bonds" to finance global warming and climate change is one of the most important financial innovations in the field of sustainable finance, as a sustainable solution for environmental projects and their implementation.

"Green" bonds are securities issued by a company, corporation, municipality, government, bank, to be used in climate and environmental projects. They are structured in the same way as conventional bonds, except that green bonds have as a clause the "way of income use" which provides for the accumulation of capital to be used for green investments. This means that unlike traditional bonds that finance the issuer's working capital in general, green bonds should be used to finance only environmental projects : clean energy, low carbon transport, water management, waste management and sustainable land use, forestry (afforestation, responsible exploitation), protection of aquatic and terrestrial ecosystems and promotion of ecological technologies.

The World Bank defines green bonds as liquid financial instruments with fixed incomes used to attract capital for projects with a positive impact on the environment or on those aimed at mitigating the effects of climate change. The International Capital Markets Association defines them as "any type of bond whose proceeds will be used exclusively for the financing or refinancing, in whole or in part, of eligible, new or existing ecological projects".

2. Materials and Method

The objective of the research is the analysis of innovative solutions, respectively the issuance of green bonds, as a means of financing climate and social projects, in the context of sustainable development, global warming and climate change. To achieve this, we will focus specifically on the evolution of EU policies, standardization, external evaluation and regular reporting.

The first part of our research, based on fundamental research, lies in a review of the literature on the evolution of the market for green financial instruments. This helped us to structure the main unanimously accepted ideas on this subject, but especially to establish how green bonds have evolved over time. Our research methodology is based on the complementarity between quantitative and qualitative methods, and the process is designed as having two stages : first, focusing on good practice models Sweden and China and second, focusing on the potential, evolution and particularities of the evaluation and trading of the green certificates in Romania.

In Romania, the green bond market is relatively new and generates uncertainties for green bond issuers and investors in this type of securities. The lack of standardization and a widely accepted definition of what "green" means creates a high risk of the phenomenon known as "greenwashing". However, further measures are needed to strengthen confidence in the green bond market. We also presented the risks to which investments in bonds are subjected, but we demonstrated that the urgency of financing the environment, as well as the large amounts to be collected, makes green bonds, at this time the main solution to be adopted in Romania, to assume our obligations as part of the 2015 Paris Pact and as a member of the European Union.

A green bond is a financial instrument with a fixed income and represents a loan granted by the investor to the issuer. At the maturity of the loan, after the agreed period, the issuer repays the borrowed capital (principal) and the accrued interest (coupon). Green bond issuers undertake to use the proceeds of the bond issue to re-finance or finance, in whole or in part, green projects (OECD 2016). The manner in which investment funds are placed in bonds allows future revenues to be obtained, and their size depends on the life of the financial instrument and the level of the interest rate.

Climate bonds are divided into three main categories:

1. *Bonds guaranteed by the entity*, being also called “bonds with general obligations”, in which the organization guarantees the bond from various assets and sources of income. This category of guaranteed bonds includes issuers such as : national governments and corporations. This type of bond can also be convertible, giving investors the possibility and the guarantee to convert their bonds held within a corporation into shares.
2. *Bonds secured by assets*, in which the assets on the balance sheet become guarantees for investors and in which the creditworthiness and the coupon are closely related to the cash flows from the assets mentioned as collateral (e.g. solar projects, wind energy farms, etc.).
3. *Hybrid or secured bonds*, being a variation of the guaranteed assets, in which the guarantee to the investor is given by both the specified assets and by the company as a whole.

A green bond differs from a regular bond by the commitment to use the funds raised for green projects, investments in green assets or other types of environmental protection activities. To these are added the price, maturity and quality of the issuer's credit. For potential investors, the purpose of issuing bonds should be assessed, needing information on the projects selected for financing, information that includes data on the allocation of revenues, monitoring and reporting. Independent third-party insurance usually covers the actual management of receipts and / or environmental impact over the life of the bonds. This is carried out by insurance providers in accordance with national and / or international professional standards such as the revised International Standard on Assurance Missions (ISAE) 3000.

For green bonds, insurance can be obtained in respect of:

- meeting the green criteria
- project selection and evaluation
- internal processes for monitoring receipts
- non-financial data on environmental effects
- processes for preparing progress reports

It can also be used retroactively over the life of the bonds to obtain assurance on their performance as the proceeds are distributed.

The valuation of green bonds depends largely on their value, which is assessed according to two aspects :

1. In order to evaluate the bonds at different times, throughout the life, the technical elements are determined, namely :
 - The nominal value, usually specified in the issue prospectus;
 - The issue price, which may be equal to or less than the nominal value, calculated according to the relation :

$$P_e = \sum_{t=1}^n \frac{A_t}{(1+i)^t}$$

where, P_e - the issue price

A_t - annuity in the year t , includes interest plus repayment

i - the term interest rate

n - the life of the bond

The issue price may be influenced by the method of repaying the loan, a special case being zero-coupon bonds, for which interest is not paid periodically, but is capitalized and paid in full at maturity when the loan is repaid, the calculation relationship being :

$$P_e = \frac{A_t}{(1+i)^T} \text{ where } A_t = \text{final maturity}$$

There may also be variants of the zero-coupon bond issue, in which the issue takes place at a value lower than their nominal value, without paying the related interest for the entire life of the bond, but at maturity the holder receives the nominal value and practically the investor's income is represented by the difference between the nominal value of the bond and the price at which it was initially bought.

- The reimbursement price may be different or equal to the nominal value, and if the reimbursement takes place depending on the market of financial instruments, it is most often influenced by the demand and supply existing at a given time for that type of bond;

There may also be variants of the zero-coupon bond issue, being a single flow, in which the issue takes place at a value lower than their nominal value, without paying the related interest for the entire life of the bond, but at maturity the holder receives the nominal value and practically the investor's income is represented by the difference between the nominal value of the bond and the price at which it was initially bought.

- The current price of the bond, influenced by the market price at the time of its trading.

An investor can analyze the possibility to resell the bond before maturity, but only with the price to achieve a return on his investment, the estimation of the market price being based on the relationship :

$$P_p = \frac{\frac{c}{t}}{(1+\frac{R}{t})^1} + \frac{\frac{c}{t}}{(1+\frac{R}{t})^2} + \dots + \frac{VN + \frac{c}{t}}{(1+\frac{R}{t})^n}$$

where,

P_p = market price of the bond;

VN = face value;

C = coupon;

R = average annual rate of return;

t = number of coupons per year;

n = number of coupons remaining to maturity

2. The decision to invest in green bonds raises the issue of estimating the value of the security as close to reality as possible. The classical calculation model in the valuation of bonds takes into account the estimation of future cash flows, as the current value of the successive receipts that the holder hopes to collect, as follows:

$$V_a = \sum_{t=1}^n C_t \times \frac{1}{(1+i)^t}$$

where, V_a = present value of the bond;

C_t = income produced by the bond, including interest and loan repayment;

i = average rate of return.

The maturity of the bonds implies that the discount rate becomes the interest rate in the issue prospectus.

The return on investments in bonds - is one of the objectives pursued by investors, the types of return being :

a. Nominal return or the coupon rate, $c = \frac{C}{VN} \times 100$

means the percentage gain obtained by the investor by purchasing a green bond, depending on the face value and the interest coupon. The calculation relationship is as follows :

b. The current return $\eta_c = \frac{C}{P} \times 100$, where, P = the price of the green bond

represents the investor's gain, relating to the market value of the green bond, as a percentage of its price, excluding future income or capital losses.

c. The return at maturity = : $y_{approximat} = \frac{C + \frac{VN-P}{n}}{\frac{VN+P}{2}}$

where: n represents the number of years remaining until maturity

it involves maintaining the green bond until maturity, being a measure of average profitability, and represents the discount rate that equals the present value of the amount of cash flows with the current market price of the bond. Both income or interest and increases or decreases in the price of green bonds over their entire life are taken into account.

For investors, a lower risk, but also a better return may incline the decision to invest in green bonds, while for issuers the access to capital may also reduce the risk of availability, but at the same time the production activity, accordingly with sustainability and sustainable development.

Risks that may arise in bond investments

The risks and the return on investments in green bonds vary depending on certain factors related to the type of investment, the state of the economy at a given time, the cycle of capital markets, as well as the issuing entity. Although the bonds are considered less risky, there are certain risks to which they are subject (Figure 1.7), and investors take this into account.

Bond risks

- ✧ Interest rate risk - the interest rate inversely influences the prices of green bonds. If the market rate increases at the date of buying the bond, consequently its price will decrease, and vice versa. The influence between the price of a green bond and market interest rates is explained by the supply and demand for a green bond in a fluctuating interest rate environment.
- ✧ Reinvestment risk - may be generated when future cash flows will need to be reinvested in a lower return security.
- ✧ Risk of non-payment or default - may occur when the issuing entity is unable to pay the interest or even the loan, for a certain period of time or even permanently.

- ✧ Inflation risk - influenced by the rate of price growth in the economy, negatively affecting the returns associated with bonds. It largely influences fixed bonds, which have set interest rates from the beginning.
- ✧ Market risk - is generated by the capital market in particular, the bond market, which can decline as a whole, thus reducing the value of individual securities, without taking into account their essential characteristics.

3. Results and discussion

3.1. The evolution of the market of ecological financial instruments

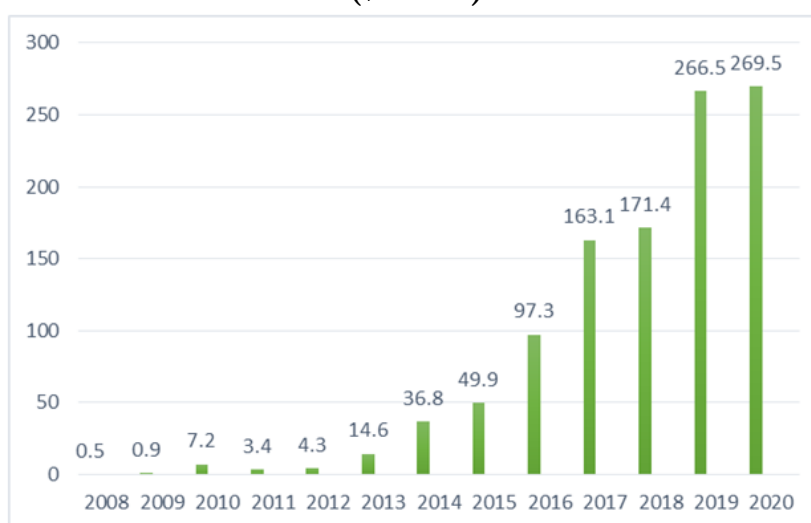
Green bonds have emerged as a growing need for financing, to attract external capital in order to implement projects related to the environment, sustainable and social development.

The end of 2007, the beginning of 2008, was the starting point for green bonds and the attraction of external funds for the environment, at the initiative of the Swedish Bank - Skandinaviska Enskilda Banken (SEB), with the help of the World Bank. In less than a year, the first green bond called "ecological" was issued, worth about \$ 440 million, which created a new way to connect investor financing to climate projects. The green bond proved to be an important event that fundamentally changed the way investors, policy makers, development experts and scientists work together, creating today's green bond market model.

The period 2008 - 2013 was dominated by small transactions, but it saw the development of green bond funds, increasing the ability of investors to participate in these initiatives, and public sector issuers used the time to develop reporting frameworks on the use of green bonds in ecological investments, but also to sensitize the potential investors.

Since 2012, government institutions and municipalities have joined the market for green financial instruments with the first issue in France (Île-de-France), followed by Sweden (Gothenburg) which in 2013 issued the first green bond Green City. Also, the U.S. and Canada in cities such as Massachusetts, California, Ontario in 2013 successfully issued green bonds for environmental projects. In this way, the green bond market tripled in size to \$ 14 billion in 2013^[28].

Figure 1. The evolution of the issuance of green bonds, period 2008 - 2020, globally (\$ billion)



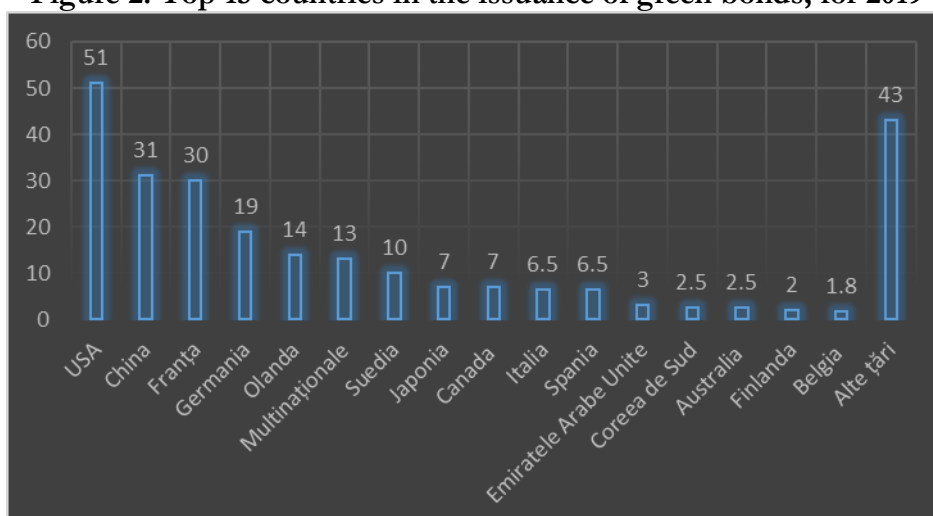
Source: Processed after Climate Bond Initiative Annual Reports www.climatebonds.net

The first successfully issued corporate green bonds debuted in 2013, with the first issuer being EDF Energy^[3], followed by Vasakronan and Bank of America^[25]. European countries have been issuing green bonds since 2016, with Poland^[14] earning \$ 750 million in capital, followed by France in 2017 with € 7 billion over 22 years, financing renewable energy projects and other expenses for the protection of the environment^[6]. In 2018, Belgium, with the help of the French Bank, Crédit Agricole - CIB, obtained funds for investments from green bond issues with the worth of 4.5 billion euros over a period of 15 years, followed by Ireland, which also in 2018 issued the first green bond with the help of the Treasury Management Agency and the Bank of Ireland - which also supports the principles and objectives of the Paris Agreement and the U.N.^[23]

The period of 2020, starting with the second quarter, recorded a record of the issuance of green bonds, so that at the end of 2020 there were issues of 269.5 billion USD^[27], exceeding the funds obtained in the same way in 2018 and 2019. The COVID - 19 pandemic context has not influenced in any way the evolution of environmentally beneficial projects and their capacity to be achieved, moreover we can discuss the great ambitions of climate neutrality that the states of the world establish as medium and long term commitments. World leaders, such as Germany and other European countries, have set targets for a 95% reduction in carbon emissions by 2050^[18], and by 2038 to completely replace fossil fuels with renewable energy, all of which are in line with the European Green Pact and Europe's carbon neutrality targets by 2050.

The year-on-year upward trend in green bonds has shown growing interest in both environmentally friendly investors and investors who are aware of the need to place their investments in sustainability and sustainable development. The analysis of the last years, established an important increase, the year 2019 generating emissions with an increase of 55% compared to 2018, respectively 266.5 billion dollars^[9]. The top ranked countries (USA, China and France) brought a global emission contribution of 44%, American issuers with 51.3 billion dollars, Chinese and French counterparts with 31.3 billion dollars, respectively 30.1 billions of dollars. (Figure 2).

Figure 2. Top 15 countries in the issuance of green bonds, for 2019

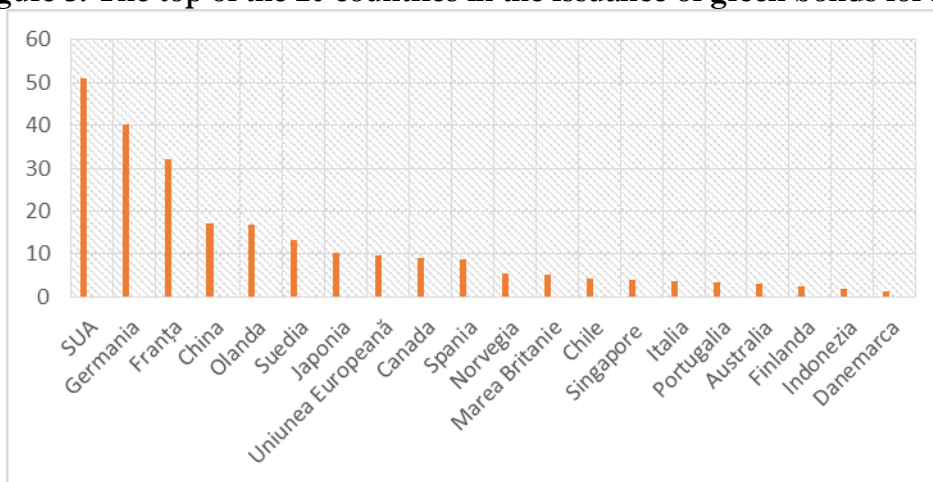


Source: https://www.climatebonds.net/files/reports/2019_annual_highlights-final.pdf/

The debuting countries and new entrants to the green bond market in 2019 were Barbados, Russia, Kenya, Panama, Greece, Ukraine, Ecuador and Saudi Arabia, thus positively diversifying the geographical regions, while reflecting a major interest and an opportunity for the environment. It should be noted that the total environmental bond market in 2016 - 2019 accounted for just over 1% of the total bond market (Chasan, 2019), to currently represent up to 3.7% (Vasilca, 2021).

The year 2020 brought a slight change in the ranking of countries, with Germany ranking second, with funds raised by approx. \$ 40 billion in green bonds, while China came in fourth^[10] with issues of approx. \$ 17.5 billion, the world leaders thus managing to issue green bonds in a percentage of 40% of the total global emissions.

Figure 3. The top of the 20 countries in the issuance of green bonds for 2020



Source: <https://www.climatebonds.net/2021/01/record-2695bn-green-issuance-2020-late-surge-sees-pandemic-year-pip-2019-total-3bn>

In 2020, the interest of corporations and large companies in the environment increased, which generated an increase in bond issues. Thus, the car manufacturer Volkswagen issued on the capital market, in the 3rd quarter of 2020, green bonds for a project of electric vehicles in the amount of 1.25 billion Euros, with a maturity of 8 years and an interest rate of 0.875% on year^[34]. The car company Daimler started with the issuance of green bonds for ecological projects of 1 billion Euros. Société du Grand Paris (SGP) has invested the funds thus obtained in the metro and rail commuter network, the bonds issued having a maturity of 10 years. Also in this category of large companies, Coca-Cola FEMSA, based in Mexico, issued green bonds worth \$ 705 million, financing projects in energy efficiency, reducing the carbon footprint, hydrological safety and the creation of recycling units for its PET packaging (Vasilca, 2021).

Green bonds concern projects to increase energy efficiency and the use of renewable energy, the prevention of pollution by eliminating the waste and increasing the recycling of waste, the protection of water resources, the encouragement of the environmentally friendly technologies and innovations in this regard, the sustainable rainwater management, the encouragement of the production of materials and the provision of ecologically accepted services. The sectors in which the capital obtained from the issuance of environmental bonds is used represent key areas such as: energy, green buildings, clean transport, water, waste, land use, industry and technology. The year 2020 kept its ranking by sectors compared to 2019, the

energy industry, green buildings and clean transport being considered a priority, but also a main pollution factor.

The European Union's target and major projects are expected to raise 225 billion euros^[36] in funding, with the help of a new generation of green bonds, NGEU - New Generation EU, expected for the second quarter of 2021, related to environmental projects to be development in the period 2021-2023 (The Asset, 2020). This new generation of financial instruments increases the supranational share of green bonds worldwide and also has the role of supporting "the national recovery and resilience plans".

The growing market for ecological financial instruments, both at European level (emissions totaling both Asia-Pacific and North American) and global, demonstrates that green bonds are seen as a mean of diversifying the investor base, but also as a method of greening economic activity, in fulfilling climate commitments. We can discuss a strategy to communicate their role in sustainable development, but also in improving reputation, thus providing a good market position in the green space.

For the Paris Pact and keeping the planet's temperature below 2°C to be reasonable, there are studies (Sartzetakis, 2020) that estimate that investment in infrastructure needed between 2015 and 2030 would require spending about \$ 89 trillion worldwide. Their division would be made for energy efficiency and primary energy, approx. \$ 30 trillion (transportation, energy, water, waste), and \$ 59 trillion would be needed for emerging markets, so the need for the next 15 years would be huge and urgent.

3.2. Sweden and China - examples of success and perseverance in combating global warming

Sweden, through the Swedish Bank, in aid with the World Bank issued in 2008 the first green bond, so that in 2018, 10% of the bonds issued by Sweden to represent green bonds^[2], the Swedish government understanding the need to mobilize large amounts of foreign capital, to meet the U.N. climate commitments and the Paris Agreement.

Sweden has implemented a number of solutions through which finance can be a catalyst for promoting sustainability, including in monetary policy the concern of investors to understand the government's climate policy and climate impact risks (Bloomberg et al. 2017), but also a better understanding of the impact on environmental, social and governance (ESG) criteria, being clearly closely linked to the concept of responsible investment.

The Swedish municipalities are actively involved in obtaining financing through the issuance of green bonds. Thus, the Stockholm region is the largest regional and municipal green bond issuer in the Swedish bond market. About 60% of the region's debt portfolio is ecological financing^[24]. The analyzes carried out and reported by the Stockholm Region (Green Bond Impact Report) show that the financing of green bonds allowed to avoid in 2020 a quantity of emissions of 12,000 tons of carbon dioxide^[20] equivalents, and starting with 2017, from the start of reporting, green bond-funded projects avoided about 40,000 tons of carbon dioxide equivalents, with emissions corresponding to more than 100,000 airplane travels between Paris and Stockholm. The target of the projects is sustainable public transport and water management^[24]. The first issues of 2013 in the city of Gothenburg generated \$ 70 million, and the second issue of 2014, three times more, the period 2013-2015 attracting capital from the issue of green bonds in which 75% was used to finance projects aimed at reducing global warming, resistance to climate change and promoting the transition to a low-carbon economy^[7]. The city of Gothenburg owns the largest water treatment plant in



Scandinavia, which includes the largest "ultra filter", a plant that produces biogas for vehicles, but also investments in electric vehicles used in state-owned and service companies^[38].

Taking just a few examples, we can say that Sweden leads by example *en masse*, the country being ranked third in the world in low-carbon buildings after the US and France. Oslo Børs became the first stock exchange in the world in January 2015, with a separate list for green bonds, and in the same year Nasdaq Stockholm launched a segment of sustainable bonds^[7].

The Swedish green bond market has become a global benchmark for other countries and subnational markets.

Another example of good practice analyzed is China, where China Industrial Bank has become the world's second largest issuer of \$ 9.6 billion in green bonds, after Fannie Mae – USA^[13]. Since 2016, when the green bond market was actually established in China, it had issued 184 green bonds, with a total value of \$ 67.53 billion (RMB 479.91 billion) or almost 27% of the globally issued bonds^[26]. It is important to note that 167 bonds worth \$ 57.65 billion (RMB 407.91 billion) were on-shore and the rest offshore, mostly SAR Hong Kong^[26].

A peculiarity and a major interest in China is that financing through green bonds must also take into account the social environment. Thus, the first social impact bond in China was issued in December 2016 by Shandong Yi Nou Country - a region in eastern China, and aimed to reduce poverty^[8].

Another recent project is Beijing Infrastructure, which involves a \$ 736 million bond issue, to finance two subway projects in Beijing. It aims in addition to the environmental impact by reducing CO₂ and other pollutants, also the social impact by generating jobs and saving travelers time.

The Transport Sector benefited in 2018 from 1/3 of the total revenues from the green bond issue, the development being within the highways, subways, trains. The increase in carriers has led to an increase in the value financed from \$ 6.2 billion to \$ 10 billion^[5]. Wuhan subway, Chengdu Rail Transit, Tianjin Transit Rail, also receive funding to improve infrastructure. Nanjing subway has issued green bonds to finance the subway line and expansion into other cities^[8]. The second largest sector in China is solar and wind energy, being the two most common types of energy financed. Companies such as CECE P Wind-Power, Century Concord Wind Power Investment and CGN Wind Energy^[8] have issued green bonds to finance renewable energy. Funds allocated to sustainable water are another important sector in China's focus.

3.3. Romania: an environment conducive to green bond issues

Although Romania's neighbors, Hungary, the Czech Republic, Poland, are already listed on the capital market of green bonds^[145], totaling funds worth almost 5 million Euros, financing environmental projects in various fields, starting from sectors such as transport ("clean" transport) and up to real estate ("green" buildings), Romania started with the first issue of green bonds worth 500 million euros^[21], only in 2020. The green bonds issued in Romania by NEPI Rockcastle^[146], through ING Bank, have a fixed annual coupon of 3.375%, and a maturity of 7 years, the offer being overwritten twice, the overwriting register reaching 1.1

¹⁴⁵ Hungary has issued green bonds worth 1.5 billion euros since 2020, while Poland and the Czech Republic have already issued bonds worth 2.5 billion dollars and 832 million dollars, respectively

¹⁴⁶ NEPI Rockcastle – New Europe Property Investments – South African investment fund, the largest owner from the Central and Eastern European shopping centers, having its headquarters in the Isle of Man. It is the largest owner of malls in Romania, as well as of rentable buildings.



billion Euro^[21] for this bond. The purpose of this issue is energy efficiency projects, as well as an improvement of environmental performance, applied to the group's properties, respecting the International Standards (LMA Green Loan¹⁴⁷, ICMA -Green Bond Principles).

In November 2020, Alive Capital Company launched in Romania green bonds worth 10 million lei (Ionescu, 2020), the capital obtained being used in the production of electricity, exclusively from renewable sources. They were sold through a private placement, maturing until 2023, with an interest rate of 8% per year, payable half-yearly. The company requested the trading of such bonds on the Bucharest Stock Exchange.

In May of this year, 2021, Raiffeisen Bank Romania, issued the first preferential green bonds in Romania, with a value of just over 400 million lei, with an interest rate of 3.086% / year and a period of 5 years^[35]. The purpose of using these funds is to implement projects to ensure the evolution towards a lasting and sustainable economy. Investors' interest proved to be above expectations, the issue being overwritten 1.6 times, with a demand of almost 650 million lei.

The projections of 2021 bring intentions of the Romanian Government to issue green bonds in the coming years, this being mentioned in the "Report on the macroeconomic situation for 2021", but also in the projection for the next years 2022 - 2024, projections accompanying the Budget Law State for the current year^[15]. Romania is far behind, in terms of issuing "green" financial instruments, being among the only countries in the European Union, if not the only one, that has not issued such sovereign, governmental ecological bonds.

At the same time, Romania intends to create a "General framework for green issues at the sovereign level", and the state budget will identify "green" investment projects or expenditures, this approach being a boost in diversifying "green" financing instruments. This type of strategy for financing green projects is mainly supported by the European Commission through the "Structural Reform Service", including the participation of the European Bank for Reconstruction and Development. The working strategy for the first part of 2021 of the Ministry of Finance to start this process, but also to limit the refinancing risk, is to use operations specific to secondary markets, for example, exchange of government securities, post-financing, early redemptions, with the collaboration of the National Bank of Romania and the current legal framework. (Gongoroi, 2021)

Romania's rather slow steps concern small steps towards alignment with other European Union countries, in order to fulfill the obligations assumed under the Paris Agreement and at the same time, the European Climate Pact, this demonstrating acceptance as attracting capital for projects related to combating Global warming, but also to reduce climate effects, is an achievable and at the same time realized benefit due to the good examples of other countries. The year 2021 is a year of beginning and continuation of these approaches, the public-private partnership being an opportunity not to be neglected. At the same time, the emerging market status of the Romanian capital market may provide an opportunity for listed companies, as investors will have the opportunity to invest, which until the fall of 2020 was virtually impossible, due to restrictions in it as a Border Market^[19].

Romania's representation, as an emerging state, will contribute to attracting funds for listed companies and to the implicit development of the Romanian economy. The prospects

¹⁴⁷ LMA - Loan Market Association, is a working group that developed the principles of "green lending" (GLP), a group of representatives of major financial institutions active in the borrowed capital markets, useful principles in promoting and developing the green loan product.

of the Romanian capital market to obtain funds for the environment are more and more promising, a green bond market being closer and closer to being achievable.

As well as globally, in Romania an effective environmental protection generates a complex of actions to improve the environmental and health conditions of the population. This involves first and foremost assessing the realism of environmental issues, developing an appropriate community mindset, setting priorities and developing appropriate strategies to address them, and last but not least changing the behavior of the environment with an appropriate development attitude and civic responsibility, aiming to respect the three dimensions of sustainable development - economic, ecological and social (ESG). Municipalities, as we see globally, can also become a catalyst for sustainable development, motivating local public authorities to synchronize business agendas with environmental protection strategies and reducing the global warming.

Romania is part of the 2015 Paris Pact, committing itself that the solutions to reduce global warming will be applied through implemented projects, measures taken and obtaining positive effects on the environment. This makes the process of awareness and application of measures to be consistent with obtaining funds to support them, the green bonds being a viable and long-term solution (Bucharest city periodically issues municipal bonds - the last being in the spring of 2018 of about 2.2 billion lei with maturities between 5 and 10 years)^[37].

In Romania, the interest of companies for the development of environmental projects and attracting green funds has an upward trend, the financial loans obtained by issuing green bonds being as a proposal, an easy solution, but involving rules, projects, financing, implementation and reporting.

4. Conclusions

The commitments of the Paris Agreement - COP 21, through which the environmental objectives promoted to limit global warming to 1.5°C - 2°C, take into account that the signatory countries generate investment programs and projects and at the same time sources of ecological financing. The US withdrawal from the Agreement in June 2017 also created unrest and uncertainty over the country's commitment to climate change, but the adopted environmental policy, and continued leadership in the issuance of green bonds, makes the ESG (environmental, social and governance criteria) to further be a priority. Objectives related to the effects of global warming have an enormous cost, both for governments, municipalities and corporations, and they require large investments.

In the increasingly fierce struggle of governments, facing the challenges of global warming and its effects, as well as the debt burden meant to encourage the transition to a clean economy, promoting private investment and attracting private capital, it is becoming essential and of paramount importance.

The development of green bond reporting standards, as well as the promotion of financing through these financial instruments, can lead to the much needed growth.

It is expected that in the future their share in the total global debt market will be growing and at the same time also growing and the fixed income portfolio of investors.

The argument for using financial instruments to mitigate global warming is that the burden of financial investment is not entirely borne by the current generation, but part of it should be paid for by future generations, climate change being essentially an intergenerational problem. On the other hand, the benefits generated by costly climate change mitigation, which are taken by the current generation, will be a benefit that future generations will also enjoy. The transition to a low-carbon economy is equivalent to the large investments required in



various existing options, in critical sectors such as transport, energy, water and waste and telecommunications. Bank and corporate financing continues to be an important source, but it cannot meet the very high needs of the transition to a low-carbon economy, and the green bond market plays an important role in increasing financing and reducing the gap.

So, the desire of investors to help the environment through investments, the awareness of issuers that green projects financed with such issues, and this reporting process that unites the involvement of the two parties, have common beneficiaries : the environment and human health. They are the ones who will win from all this union.

The European Commission President, Ursula von der Leyen, in a roundtable discussion attended by several world leaders, said that if no action is taken and nothing is done about the harmful effects of greenhouse gas emissions, human health it is endangered (7 million premature deaths occur each year due to air pollution)^[1]. It remains from here, at the discretion of each state, the strategy of working further, because there are opportunities!

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