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Features of Stimulating the Issue of Green Bonds in the Modern Economy

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ABSTRACT

There are large number of companies that form investment portfolios of modern investors have a high level of CO₂ emissions. In particular, such sectors of the economy include the oil and gas sector, metallurgy, electricity. For the transition of these sectors of the economy to a carbon-neutral status, it is necessary to attract significant funding. One of the main instruments of such financing is green bonds. The purpose of the study is to develop a mechanism to encourage companies to implement green projects by issuing green bonds with coupon payments, which will be partially compensated. In the course of studying the problem posed, possible options for linking the carbon border adjustment mechanism and green bonds were also considered. The study was conducted on the basis of methods of comparison, modeling, analysis and deduction. The result of the work is the developed mechanism of tax incentives for the issuance of green bonds by companies, which can be applied in any country. The study was conducted taking into account the introduction of additional reducing coefficients to the mineral extraction tax, property tax and income tax. The study showed that in the case of partial compensation of coupon payments on bonds, the state does not need to introduce lowering coefficients to the tax rate, it is enough to use a tax deduction from income tax in the amount of the planned compensation of coupon payments.

Keywords: Green Economy, Carbon Dioxide, Investments, Green Bonds

JEL Classifications: O20, Q43, Q48

1. INTRODUCTION

At the moment, the attraction of “green” bonds and the implementation of a greening policy by companies is an integral part of Environmental, Social, Governance (ESG) processes. The implementation of the ESG policy has been a global trend in recent years, allowing companies to attract new investors, and as a result, attract additional external financing for green projects. The mechanism of action of green bonds practically does not differ from ordinary bonds: the company also assumes debt obligations to investors, pays coupons (interest on bonds), i.e. the rules of payment and repayment are applied. The only difference that makes green bonds special is the targeted use of attracted financing for the implementation of environmental projects aimed at improving the state of the environment. Examples of

green finance projects are projects related to alternative energy sources, wildlife recreation, land reclamation, carbon dioxide capture from the atmosphere, creation of recreational spaces, etc. Compliance with ESG principles is an integral part of the business processes of large companies (Huang, 2019; Edgeclif-Johnson, 2019). Environmental issues are acute and relevant, because life on earth will largely depend on ecology (Yusifbeyli and Nasibov, 2022; Tambunan et al., 2020; Dreidy et al., 2020; Borodin et al., 2021; Borodin et al., 2023).

All over the world, environmentalists are sounding the alarm about the increase in atmospheric temperature, which entails the melting of glaciers and related possible cataclysms. The root cause of warming is endless greenhouse gas emissions due to the development of production and increased consumption. The

European Union plans to introduce cross-border carbon regulation, the purpose of which is to curb carbon dioxide emissions through the introduction of additional duties on emissions and the gradual abolition of carbon quotas. As a result, companies will be forced to modernize production and reduce emissions. Here, an effective tool for reducing CO₂ emissions is the implementation of green projects through the issuance of green bonds (Borodin et al., 2022; Koukouzas et al., 2018; Coria, 2019; Chen, Zhao, et al. 2022). This will reduce emissions and, as a result, reduce the required number of quotas according to carbon border adjustment mechanism (CBAM).

The relevance of this work lies in the fact that the existing mechanisms for stimulating the issuance of green bonds in the form of subsidies from the states of part of coupon payments are insufficient, there is no positive dynamics in the number of green bond issues. Additional mechanisms are needed to stimulate the issuance of green bonds in the form of income tax benefits. The scientific novelty lies in the development of a new mechanism to stimulate the issuance of green bonds by providing companies with income tax benefits as compensation for part of the coupon payments on such bonds.

2. LITERATURE REVIEW

The problem posed to the authors is covered in many EU documents, since it is the European countries that are the leaders in issuing green bonds and legislators of the CBAM system. The decision to create and operate a market stability reserve for the EU greenhouse gas emissions trading scheme, the proposal for a solution concerning the creation and operation of a market stability reserve for the greenhouse gas emissions trading scheme, climate and energy goals for a competitive, safe and low-carbon EU economy are de-scribed in detail in documents (Jia et al., 2022; Wilson et al., 2005; Yang et al., 2017; Ghacham et al., 2015).

The publication of the total number of quotas in circulation in 2021 for the purposes of the market stability reserve under the EU emissions trading system and the number of unallocated quotas in the period 2013-2020 is described in the document. The publication of the total number of quotas in circulation in 2020 for the purposes of the market stability reserve within the framework of the EU emissions trading system is described in the document. The total number of quotas in circulation in 2019 for the purposes of the market stability reserve under the EU emissions trading system, verified emissions for 2019, publication of the total number of quotas in circulation in 2018 for the purposes of the market stability reserve under the EU emissions trading system.

Publication of the total number of quotas in circulation in 2017 for the purposes of the market stability reserve under the EU emissions trading system, publication of the total number of quotas in circulation for the purposes of the market stability reserve under the EU emissions trading system. The Commission's decision on determining the auction shares of the member States in the period 2021-2030 in the EU emissions trading system, the regulation on the auction and the agreement on joint procurement, regulation of auctions and impact assessment, consolidated rules for auctions.

A joint procurement agreement to provide common auction platforms. The decision to amend the agreement on joint procurement for the acquisition of common auction platforms for the purpose of auctioning benefits for the modernization fund and the innovation fund on common auction platforms, amendments to the agreement on joint procurement to provide common auction platforms are described in documents.

An information note from the European Commission on contacts with economic operators or their representatives on issues related to the joint procurement procedure for the acquisition of common auction platforms and auction monitoring, a notification to the Commission on transparency regarding the application of certain articles of the auction regulations and transparency measures regarding documents related to the announcement of tenders are provided in documents.

The Climate Bonds Initiative website provides information on the volumes of green bonds issued, the main issuing regions. The websites of Roscongress, MOEX, European Energy Exchange (EEX), and the Central Bank of the Russian Federation provide data on issued green bonds, coupon payments, and bond maturity dates.

Alternative use of CO₂, its storage, chemical reactions using CO₂ are described by researchers in studies.

The paper presents data from the annual reports of several major Russian industrial companies that seek to reduce their CO₂ emissions. Thus, based on the financial reports of the largest Russian oil and gas companies Rosneft, Gazprom, Novatek, the feasibility of introducing lowering coefficients to taxes for the purpose of subsidizing coupon payments on green bonds is assessed. The trend is such that almost all major players in the industry market consider themselves adherents of the principles of Environmental, Social and Corporate Governance (ESG).

3. MATERIALS AND METHODS

To determine the mechanism for stimulating the issue of green bonds, the current legislation of the Russian Federation was reviewed, which defines the mechanism for subsidizing coupon payments. Based on the restrictions on subsidies defined in the law, the maximum amounts of compensation for coupon payments were determined. Based on the financial reports of oil and gas companies for 2021, the amounts of taxes paid, in particular MET, property tax and income tax, were determined. The initial data were processed based on the methods of comparison, modeling, analysis and deduction. The methodological basis of the research is general scientific methods: analysis, synthesis, classification, generalization, systematization, induction, deduction, comparative analysis, statistical analysis. The study used an abstract method, a logical method, and an integrated approach to determining the advantages of the proposed mechanism for stimulating the issuance of green bonds. Data on global trends in green bonds and the cost of CO₂ emission quotas were determined according to the Climate Bonds Initiative and EEX data.

In accordance with the principle of “restriction and trade,” the European Union Emissions Trading System (EU ETS) sets a fixed maximum amount of CO₂ emissions that enterprises can produce. After such calculation, emission quotas are put up for auction, they are distributed free of charge. After the free quota volume ends, bidders can buy paid lots. Companies must report their emissions to certain EU regulators, if a company exceeds the amount of quotas received, then it can purchase the necessary amount of quotas from another company. Accordingly, a company that has used up the volume of quotas less than the planned volume has the right to sell the excess volume of quotas. That is, companies are allowed to trade emissions quotas with each other. However, if a company throws out more in a year than it claimed, then large fines may be imposed on it. At the moment, EU documents define a fine of 100 euros for each excess tonne of CO₂ emissions, and even at the same time, the company must pass quotas for uncovered emissions next year - thus, a fine of 100 euros is not the maximum price for excess emissions. Companies that still have unspent quotas can keep them to cover future needs. The EEX in Leipzig is a common auction platform for the vast majority of countries participating in the EU ETS. ICE Futures Europe (ICE) acts as a trading platform for CO₂ emissions in the UK and is located in London. It can be seen from the above graph (Figure 1) that the volume of issued and traded quotas on the EEX is decreasing from year to year, and the price of a quota unit, on the contrary, has a growth dynamics.

Such a change in the volume of traded quotas corresponds to the European policy on reducing CO₂ emissions into the atmosphere, and is also a logical mechanism for implementing the Paris Agreements.

In connection with the above, it becomes clear that companies need to reduce traditional production methods and increase more environmentally friendly, “green” production methods. One of the main financial instruments in increasing investments in the field of “green” projects are “green” bonds. The purpose of such bonds is to attract investments specifically for the implementation of environmentally friendly projects.

The graph below (Figure 2) shows the global issue of green bonds.

It becomes clear from the dynamics that green bonds are becoming a new driver of economic development. Data for 2022 were predicted due to the actual volume of bond issuance in the first two months of 2022. The annual volume of green bond issuance for the first time exceeded half a trillion dollars in 2021, amounting to 522.7 billion US dollars, which is 75% more than in 2020.

The graph below (Figure 3) illustrates the share of green bond issuance in the markets of developed countries (Europe and North America), developing (Asia-Pacific) and other supranational markets.

Europe has become the main territory for issuing green bonds, while the Asia-Pacific region has seen the fastest annual growth in green bond issuance (129%). The USA retained its leading position as an issuer of green bonds, the volume of which increased by 63%

Figure 1: Comparison of the volumes of issued quotas for CO₂ emissions and prices for such quotas. It can be seen from the graph that the number of quotas decreases over time, and their cost tends to constantly increase. Data according to EEX

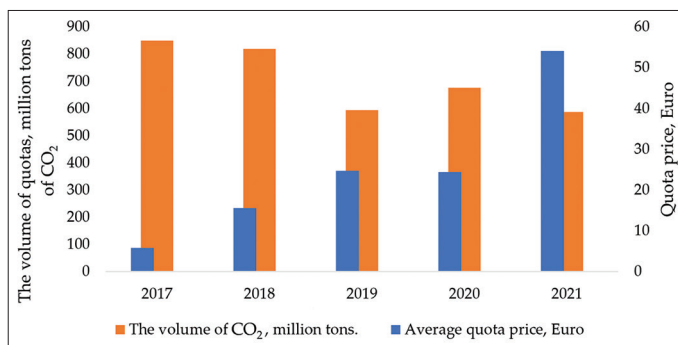


Figure 2: The graph shows the volume of green bonds issued in billions of dollars. The growth of issued green bonds is clearly traced, the volume of bonds in 2022 is predicted on the basis of the first half of 2022. Data according to Climate bonds

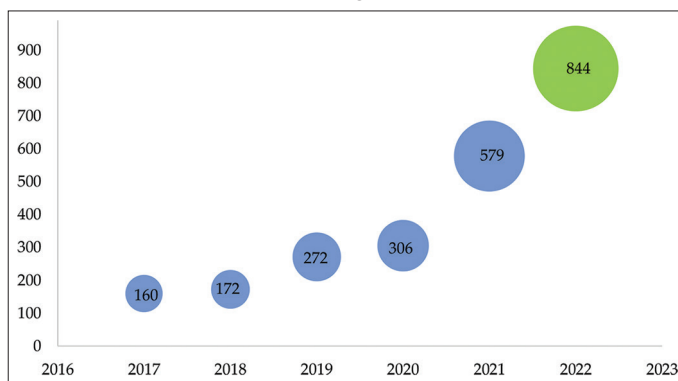


Figure 3: The volume of green bond issuance by market type for 2021. Developed countries have an absolute advantage here, followed by developing and supranational markets in last place. Data according to Climate bonds



and amounted to 81.9 billion US dollars in 2021. The total volume of US green bonds is 304 billion US dollars, which is more than 50% more than China’s (199 billion US dollars).

Within the framework of the theme of sustainable development, Latin America has demonstrated impressive growth, increasing the issue of green bonds by 338% year-on-year to 11.5 billion US dollars. Most of these funds came from sovereign issuers (mainly from Chile).

4. RESULTS

Most of the volume of green bonds in 2021 came from developed countries, while 21% from developing countries, and only 4% were issued by supranational organizations.

As for Russia, the only company that has issued green bonds certified according to European standards has become Russian Railways. Russian railways became a party to the UN Global Compact in 2007 and in recent years have been paying more and more attention to sustainable development issues. Their green bonds were issued by the Irish subsidiary RZD Capital (Table 1). The funds raised through the issue of green bonds were used to purchase Lastochka trains.

In general, the Russian green bond market is not too large. According to MOEX, the following volume of green bonds in Russia has been announced (Table 2).

If we sum up the above data by year and compare it with the total volume of the bond issue, we get the following model (Table 3).

The share of green bonds is still too small in Russia, but the practice of foreign countries shows that green bonds are becoming a new driver of economic development.

To attract green bonds to various sectors of the economy, we will develop and propose a mechanism for subsidizing and tax incentives for such loans. The result of this study is a reasonable proposal to stimulate the issuance of green bonds by providing companies with income tax benefits as compensation for part of coupon payments on such bonds.

A subsidy to an organization implementing an investment project involving funds received from the placement of bonds denominated in the currency of the Russian Federation is provided in the amount of 60% of the amount of actually incurred and documented expenses of the organization for the payment of coupon income on bonds.

If, in accordance with the investment project, it is planned to purchase equipment and technical devices manufactured on the territory of the Russian Federation in accordance with the requirements for industrial products imposed for the purpose of classifying it as industrial products manufactured on the territory

Table 1: The volume and conditions of the issue of green bonds of the Russian railways company on European exchanges

Date of issue	Instrument	Size	Tenor	Climate bonds sector criteria
May 2019	Use of proceeds	EUR 500 million (USD 585 million)	8 years	Low carbon land transport
March 2020	Use of proceeds	CHF 250 million (USD 264 million)	6 years	Low carbon land transport
March 2021	Use of proceeds	CHF 250 million (USD 254.6 million)	Perpetual	Low carbon land transport

Data according to climate bonds.

Table 2: The volume and terms of issuance of green bonds of Russian companies on MOEX

Company	Year of placement	Volume of issue, pcs.	Nominal value, rub	Output volume, million rubles
FPC "Garant-Invest"	2019	500,000	1000	500
FPC "Garant-Invest"	2020	500,000	1000	500
LLC "SFO RuSol 1"	2020	4,700,000	1000	4700
LLC "SFO RuSol 1"	2020	900,000	1000	900
LLC "SFO RuSol 1"	2020	100,000	1000	100
LLC "Transport Concession Company"	2016	1,241,000	1000	1241
LLC "Transport Concession Company"	2017	3,533,000	1000	3533
LLC "Transport Concession Company"	2019	1,374,000	1000	1374
LLC "Transport Concession Company"	2018	3,752,000	1000	3752
LLC "Transport Concession Company"	2016	2,013,083	1000	2013
Moscow Government	2021	70,000,000	1000	70,000
JSC "Nuclear Power Industry Complex"	2021	10,000,000	1000	10,000
JSC "Sinara - Transport Machines"	2021	10,000,000	1000	10,000
PJSC "Sberbank of Russia"	2021	25,000,000	1000	25,000
PJSC "KAMAZ"	2021	2,000,000	1000	2000
State Development Corporation "VEB.RF"	2022	50,000,000	1000	50,000

MOEX: Moscow exchange

Table 3: Comparison of the total volume of all bonds on the Russian market with green bonds according to the data of the Central Bank and MOEX

Year of placement	Volume of issue of bonds of all types, million rubles	The volume of the issue of green bonds, million rubles	The share of green in the total value of bonds (%)
2017	4,000,000	3533	0.09
2018	2,000,000	3752	0.19
2019	3,000,000	1874	0.06
2020	7,000,000	6200	0.09
2017	4,000,000	3533	0.09

MOEX: Moscow exchange

of the Russian Federation in the amount of at least 65% of the total cost of the purchased equipment and technical devices, the subsidy of the organization, implementing an investment project involving funds received from the placement of bonds denominated in the currency of the Russian Federation, it is provided in the amount of 90% of the amount of actually incurred and documented expenses of the organization for the payment of coupon income on bonds. Of greater interest is the tax incentive to attract subsidies for green bonds.

In our study, we will consider only companies that extract minerals, for example, companies in the oil and gas industry. Such companies pay the following taxes: mineral extraction tax, property tax, income tax.

We will introduce a new Kgb reduction coefficient to the mineral extraction tax (MET) rate, which will be responsible for the company's participation in green projects.

$$MET_{gb} = \text{Mineral extraction tax} * K_{gb} \tag{1}$$

Respectively, the amount of the tax benefit provided is equal to the difference in the volume of mineral extraction tax without benefits and mineral extraction tax with benefits.

If the MET benefits are not enough to cover 60% of the coupon payment or 90% of the coupon payment in the case of using domestic equipment and technologies, then the pro-vision of property tax benefits is further considered. This is because the MET tax is paid to the federal budget, while the property tax is a regional tax. The income tax is of a mixed nature – for Russian legislation, 3% of the income tax is paid to the federal budget and 17% to the regional budget.

Regional authorities should independently establish benefits for property tax. In Russia, the property tax is 2.2%, let's take this as the basis in our study.

If the property tax benefit is not enough, together with the MET benefit, we use the Pgb coefficient to cover expenses. Calculation of income tax in case of granting the ITgb = IT * Pgb, respectively, the amount of the income tax benefit provided is equal to the difference in income tax before the benefit and after the benefit. Russian oil and gas companies pay the following taxes (Table 4).

Now we will determine the coefficients of the Kgb and, if necessary, the Pgb on the basis of several large oil and gas companies.

The average coupon payment rate for bonds with a maturity of 3 years in Russia is 9.2% based on the Moscow exchange (MOEX) data. The average issue volume of green bonds on the Russian market is 11,600,000 pieces with a nominal value of 1,000 rubles per 1 piece. When multiplied, we get an average output volume in monetary terms of 11.6 billion rubles.

We will calculate the amount of the 9.2% coupon payable in the amount of 11.6 billion rubles of attracted green bonds.

$$\text{The coupon amount} = 11.6 \text{ billion rubles} * 9.2\% = 1.1 \text{ billion rubles} \tag{2}$$

There are 2 options for calculating the amount of the state's lost taxes:

Option 1 – compensation by the state for 60% of coupon payments. Then state support is equal to:

$$1.1 \text{ billion rubles} * 60\% = 660 \text{ million rubles} \tag{3}$$

Option 2 - state compensation of 90% of coupon payments in the case of using domestic technologies and equipment, then state support is equal to:

$$1.1 \text{ billion rubles} * 90\% = 990 \text{ million rubles} \tag{4}$$

As we can see from the example of Table 4, the size of the MET is much larger than the amount of calculated state support, so we will not use reducing coefficients to the MET.

The property tax is exclusively a regional tax, so we will not consider it to provide state support either.

The income tax has a federal and regional part. 15% of the income tax goes to the federal part, respectively, 85% goes to the regional budget (Table 5).

Accordingly, based on the conducted division of tax by budget types, we can observe that the introduction of any lowering coefficients to income tax is also impractical. Thus, we propose that when calculating state support for green projects of oil and gas companies, it is proposed to use a tax deduction from income tax. In this case, the profit tax of oil and gas companies will be (Table 6).

Based on the above research, it becomes clear that green bonds are extremely effective tools for raising capital for the implementation of green projects. The developed mechanism of state support through the provision of income tax benefits by the state is effective and allows for evenly distributing tax benefits between the regional

Table 4: Indicators of tax deductions of the main oil and gas producing Russian companies according to the data of the public financial statements for 2021, in billion rubles

Company	MET	Property tax	Income tax
Rosneft	2250	41	240
Gazprom	1358	141	332
Novatek	83	5	49

MET: Mineral extraction tax

Table 5: Distribution of income tax to the federal and regional budgets of the Russian Federation, billion rubles (compiled by the authors)

Company	Profit tax	Profit tax to the federal budget	Profit tax to the regional budget
Rosneft	240	36	204
Gazprom	332	49.8	282.2
Novatek	49	7.35	41.65

Table 6: Calculation of income tax depending on the applicable option of state support for coupon payments, billion rubles (compiled by the authors)

Company	State support option 1 (%)	State support option 2 (%)	Income tax in option 1	Income tax in option 1
Rosneft	0.66	0.99	239.34	239.01
Gazprom			331.34	331.01
Novatek			48.34	48.01

and federal parts of the state budget. Based on the above research, it becomes clear that green bonds are extremely effective tools for raising capital for the implementation of green projects. The developed mechanism of state support through the provision of income tax benefits by the state is effective and allows for evenly distributing tax benefits between the regional and federal parts of the state budget.

5. DISCUSSION

The markets of environmentally friendly and sustainable bonds continue to develop at a rapid pace, and issuers are increasingly attracting funds aimed at projects in the field of sustainable development. However, even such a growing dynamic is not enough to successfully achieve the goals of the Paris Agreement. Most of the economic activities carried out by companies are high-carbon, especially if it concerns the energy sector. Most companies have yet to plan the projects needed to achieve an environmentally friendly carbon economy.

The paper pays special attention to the CBAM mechanism and its consideration by “green bonds,” which can become a new driver for achieving carbon neutrality goals, as well as provide producers of goods with additional incentives to reduce their emissions. Possible regulatory mechanisms within CBAM are considered:

Option 1 – the introduction of an import tax on carbon emissions, which will be paid by importers of goods when importing products into the EU. The tax will be levied by customs at the border based on the EU carbon price combined with the default carbon intensity of products. At the same time, importers are given the opportunity to demand a reduction in CBAM based on their individual CO₂ emissions and the carbon price paid in the country of production.

Option 2 involves issuing certificates (“CBAM certificates”) to importers based on CO₂ emissions, which are set by default for the product line. Certificates are purchased at market prices according to the EU ETS.

Option 3 assumes a mechanism in which the importer must independently report the emissions produced by him during production, and on the basis of these data provide the required number of CBAM certificates.

Option 4 is similar to option 3. However, this option also provides for a phased period during which the free distribution of benefits under the EU ETS will be gradually reduced by 10% points each year.

Option 5 is an example of option 3 with the extension of the scope of CABM throughout the value chain of goods.

Option 6 provides for the introduction of additional excise taxes on carbon-intensive goods in conjunction with EU ETS quotas.

During the impact assessment by the European Commission, it was concluded that option 4 is a priority over all other options considered. Therefore, the EU considers it appropriate to introduce CABM certificates based on actual CO₂ emissions. It is also pro-posed to gradually introduce CBAM simultaneously with the reduction of free quotas within the ETS. During the impact assessment by the European Commission, it was concluded that option 4 is a priority over all other options considered. Therefore, the EU is proposed to introduce CBAM for individual products in the form of CBAM certificates based on actual emissions. It is also proposed to gradually introduce CBAM simultaneously with the reduction of free quotas within the ETS. The Emissions Trading System of the European Union (EU ETS) is a “restriction and trade” scheme, which establishes a restriction on the right to emit certain pollutants in certain territories, producers have the right to trade quotas on their territory. The European Trade Mechanism covers about 45% of greenhouse gas emissions in the EU.

The system of cross-border carbon regulation based on the actual emissions obtained from the production of imported goods ensures fair and equal treatment of all imports and close correlation with the EU ETS. However, the CBAM system needs to be supplemented with the ability to base payment calculations based on certain default emissions volumes for certain types of goods. This calculation should be used in a situation of insufficient data to determine the exact value of CO₂ emissions. In addition, at the initial and transitional stage, when importers may not yet be able to provide the actual emissions data required by the system, the default value may also be applied. The EU also focuses on ensuring that imports of goods are not subjected to less favorable conditions compared to domestic production of goods.

The EU in its documents say that for the successful functioning of CBAM, it is necessary that all EU member states, without exception, accept the terms of this mechanism, so as not to create conditions under which it would be more profitable for producers from certain countries to produce not on their territory at the expense of the adopted CO₂ emission standards. CBAM’s tasks also include a gradual reduction of free EU ETS emission quotas and a complete transition to auction trading of these quotas.

The practice of companies issuing green bonds and implementing green projects with borrowed funds reduces CO₂ emissions, which has a positive effect on the CBAM mechanism, as companies reduce their CO₂ emissions.

The CBAM certificates planned for launch will differ from the traded EU ETS emission quotas, since the emission prices according to the EU ETS are determined on the basis of a daily auction. When setting prices for CBAM certificates on a daily basis, they make their publication excessively burdensome and confusing for operators, since daily prices become obsolete almost

immediately after publication. Thus, the publication of CBAM prices on a weekly basis would more accurately reflect the pricing trend of EU surcharges on ETS and would pursue the same climate goal. Penalties for non-compliance with the approved rules of cross-border carbon regulation are also provided for in the EU. For example, if the supplier of goods does not have a declaration on May 31, he is ordered to pay a fine identical to the fine for exceeding emissions. If the declarant exceeds the permissible amount of emissions for the reporting period in accordance with the number of certificates issued to him, he pays a fine equal to the product of the price of the CBAM certificate by the amount of emissions, while such a fine does not exempt him from the need to declare over emissions and close them with the required number of certificates. EU Member States may apply administrative or criminal sanctions for non-compliance with CBAM legislation in accordance with their national legislation.

The EU predicts a minimal negative macroeconomic effect from the introduction of cross-border carbon regulation on the territory of its countries. This is explained by the fact that the most carbon-intensive industries make up a relatively small part of the EU economy. Also, this judgment is supported by the fact that there are already some restrictions on CO₂ emissions under the “Fit for 55” program, so the new restrictions will not be a shock to the market as a whole. Taking into account the above considerations, the results of the JRC-GEM-E3 model show that GDP for the 27 EU countries will decrease by about 0.22%-0.23% in 2030. There will also be a negligible impact on investment from the introduction of emissions regulation.

However, it should be borne in mind that the proposal to create a CBAM will increase the costs of both import and domestic production. The import of basic materials from third countries involves carbon emissions costs similar to those of European manufacturers. Thus, the implementation of green projects at the expense of green bonds will avoid additional costs for both imports and domestic production in the EU. The research hypothesis is that if states apply the proposed mechanism of tax incentives for issuing green bonds, this will encourage companies to implement green projects, and investors will be able to receive high coupon yields, part of which is subsidized by the states. Accordingly, companies will buy less emissions quotas according to the CBAM mechanism. The results of the study are directly useful and can be applied by the governments of exporting countries of their products in the form of using the developed mechanism of tax incentives to reduce CO₂ emissions.

Companies will benefit from the results obtained, as an inexpensive way to attract financing for the implementation of green projects, as well as the global community, since the implementation of green projects means improving the environment and reducing greenhouse gas emissions.

6. CONCLUSION

Together with the growth of global production, the climate agenda is becoming a very relevant topic for regulation. The main component affecting climate change is greenhouse gases,

in particular, carbon dioxide emissions. The participation of companies in improving the environmental friendliness of their products, reducing greenhouse gas emissions can provide a significant boost to the development of the economy in the context of “greening” trends. Investors in the new generation often pay attention to the sustainable development of the company, the most important part of which is ecology. Today, companies are trying to attract investors by the environmental friendliness of their projects, even companies that have historically specialized in fossil natural energy sources are launching “green projects” related to the cleaning of territories from pollution, the capture and storage or burial of carbon dioxide. Green bonds are a new driver of the economy, which contributes to the promotion of the Paris Agreements to reduce CO₂ emissions. Over the past 6 years, the number of green bonds issued has increased 6 times.

Investors are increasingly striving to ensure that the investment portfolio is carbon-neutral, so mitigation of climate change has long been one of the goals in the field of responsible investment. A variety of ESG factors combined with climate change mitigation make green bonds a very attractive instrument for attracting financing.

To accelerate the transition to a green economy, the paper proposes a mechanism to stimulate the issuance of green bonds by providing a tax deduction from income tax. This method was justified from the point of view of choosing the type of tax, and the possibilities of applying lowering coefficients to tax rates were also considered.

In the future, the study of the problem of state regulation of CO₂ emissions raised in the article will continue, it is planned to further consider the use of green financial instruments in order to stimulate the implementation of environmentally friendly projects.

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