

"Green" bonds – a tool for financing "green" projects in countries

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Abstract. This article discusses the issue of "green bonds". "Green" bonds are relevant and attractive for investors today. The features of "green" bonds are presented and the development practice in Europe is studied. The figures show the number of climate–aligned and green bonds worldwide in 2018 by region, the distribution of green bond issuance in Europe in 2019 by type of regional issuers, and the volume of green bond issuance in selected European countries in the first half of 2020.

1 Introduction

Green bonds are fixed fundraising funds that are reserved for fundraising specifically for climate and environmental projects for sustainability purposes. It is a comparatively attractive investment compared to comparable taxable bonds, as it offers tax benefits such as tax breaks and tax breaks. This is different from regular bonds, because the money received from this bond is only used for green projects [1].

Changes in the financial sector in the green sector. Green bonds, debt financing instruments that have traditionally been used to attract long–term, low–risk capital, can respond to calls for a change in behavior in the financial sector [2].

After the Industrial Revolution, bonds played an important role in financing infrastructure in cities and towns. Green bonds can't reduce risks and provide stability, given the long–term effects of climate change – they can also change the way we think about money and income.

2 Methods

At the time of writing, the methods of logical generalization and a systematic approach to the analysis of green bonds were used. When writing the article, the provisions of the classical theory, the provisions of the basic concepts of green bonds were used.

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3 Results

"Green bonds" are loans issued to finance "green" projects.

Private players have since entered this market, which was initially dominated by institutional players such as the World Bank. These accounted for only 20 % of emissions in 2016, while large companies and banks now play a leading role in the sector [3, 4].

The green bond market is growing rapidly. In 2014, they represented 4.5 billion USD. A figure multiplied by 10 in one year (44.2 billion in 2015) and which amounted to 81 billion USD in 2016. While green bonds accounted for just 1 % of bond issues at the start of 2017, growing investor interest and the entry of large government bond issuers into this market (previously occupied by large corporations only) is expected to be a game changer.

China is thus the first country to issue green bonds, which are used to build clean coal plants... a company can always argue that an investment that is used to improve the efficiency of a polluting technology reduces emissions and is therefore, in a sense, "green" [5, 6].

4 Discussion

Green bonds not only provide the same financial returns as regular bonds, but also allow you to get additional "green" returns on your investments. These bonus moral incentives may eventually begin to shape social and environmental awareness in the financial sector [7, 8].

This means that the financial sector, as investors and representatives of the expansion, is beginning to think about climate change in the long term. Even more exciting is that changes in the low-carbon financial system are happening simultaneously around the world.

Corporate green bonds accounted for 36% of issuance which is the highest ever, followed by municipalities with 15% and banks with 12% among the most notable newcomers in the green bond market were Brazilian green 500 million), almost 45% of the Green bond yields for renewable energy [9].

In India, Climate Bonds were first issued in 2015 for use in financing renewable energy projects such as solar, wind, renewable energy, energy efficiency and biomass, and spread rapidly and some banks and institutions have issued many of these bonds, the increasing popularity of green bonds has inspired the stock market and the SEC to create a more favorable environment for green bonds [10-14].

The eurozone has also seen significant developments in the green bond market based on a large financial infrastructure, and the EU market has seen participants and investors as well as increased support from EU institutions [15-30].

This statistic displays the number of climate-aligned and green bonds worldwide in 2018, broken down by sector. That year, there were almost 2,000 green bonds issued for the North America region (figure 1).

In 2007–2008 multilateral development banks began to develop the green bond market, in July 2007 the European Investment Bank issued the first green bond.

150 green bonds in twenty currencies for investors and institutional investors around the world.

As of the end of fiscal year 2018, there were 91 projects worthy of funding through bonds and pledges totaling \$ 15.4 billion. Of these pledges, 8.5 billion in green bond proceeds have been allocated and spent to support projects in 28 countries, and another 6.8 billion is under implementation [30].

In 2019, the biggest green bond issuers in Europe were non-financial corporate issuers, followed by government-backed entities and financial corporates, accounting for a total of

almost 70 percent of the green bonds issued. Green bonds are fixed income securities which finance investments with environmental or climate-related benefits. The investments can be targeted at new or existing projects for renewable energy, energy efficiency, sustainable waste management, sustainable land use, efficient buildings, clean transportation, sustainable water management, or climate change adaptation.

Bonds are debt securities, which means that an investor temporarily lends money to a bond issuer. In return, the investor receives interest income. What makes green bonds different from ordinary bonds is that proceeds from green bonds go to environmental projects.

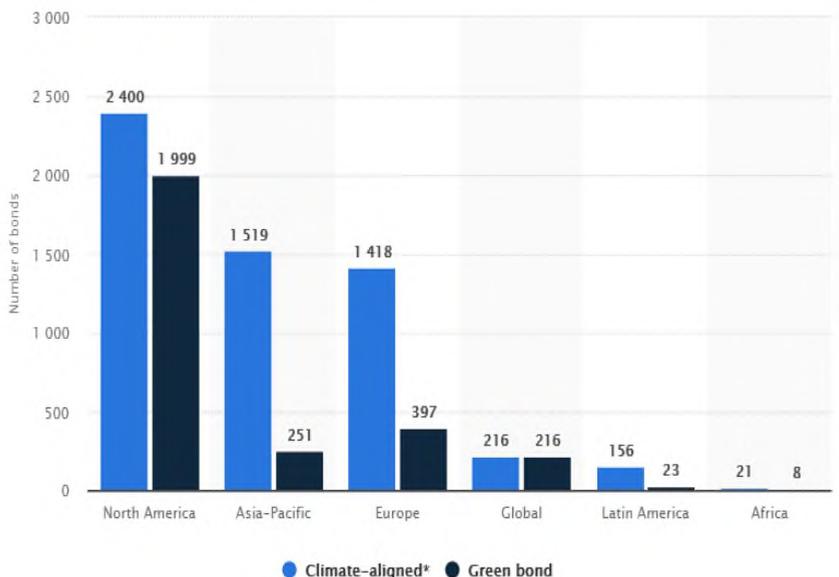


Fig. 1. Number of climate-aligned and green bonds worldwide in 2018, by region.

Distribution of green bonds issuance in Europe in 2019, by regional issuer type (Fig.2).

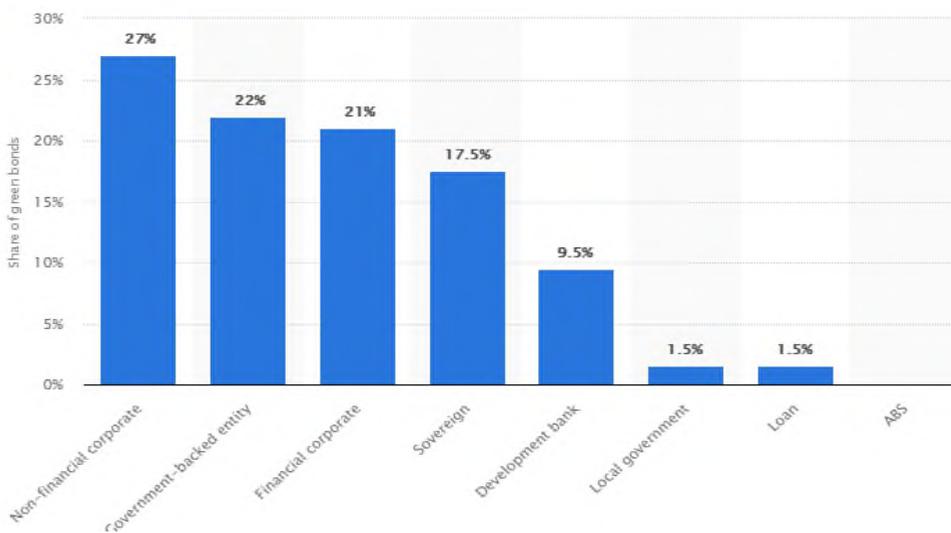


Fig. 2. Distribution of green bonds issuance in Europe in 2019, by regional issuer type. Source: <https://www.statista.com/statistics/754858/green-bonds-issued-by-issuer-europe/>.

Environmental degradation and climate change pose serious physical and transitional risks to financial stability, such as business disruption, asset destruction, lower value of stranded assets, and increase in insurance costs. Whether to identify opportunities, mitigate risk, or align values, investors are recognising the potential of sustainable finance by launching new and restructuring old finance products. A little over a decade old, green bonds, also called climate bonds, are an example that investors are interested in sustainability. In 2018, Europe ranked third after North America and Asia by volume of green bonds, with bonds issued by developed green bond market countries valued at a total of 47.4 billion U.S. dollars. In 2019, European debut issuers only released green bonds worth over 35.6 billion U.S. dollars [20-30].

Volume of green bond issuance in selected European countries in the first half of 2020 (Fig.3).

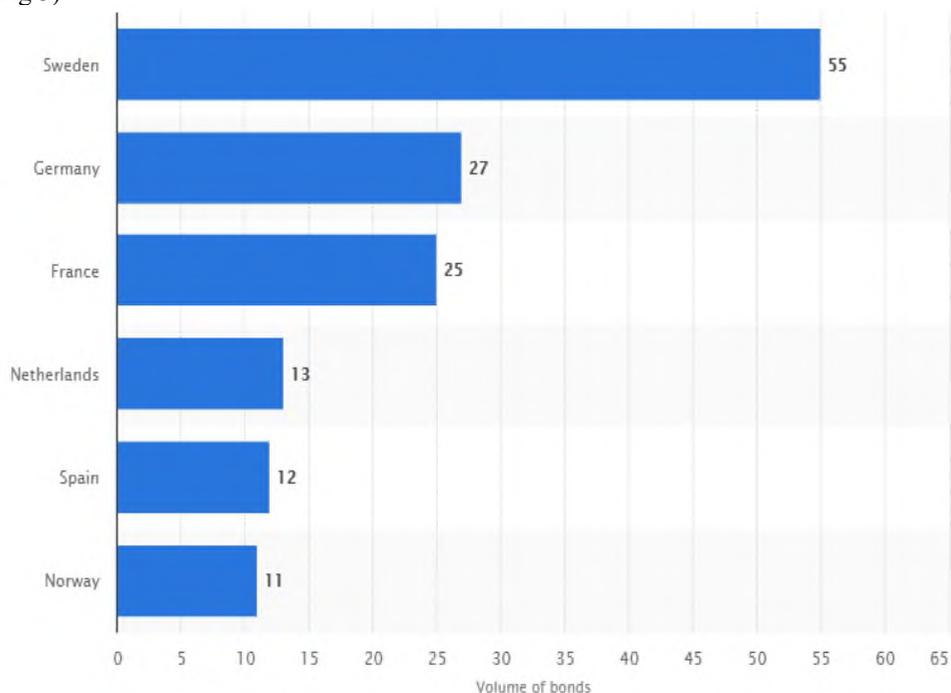


Fig 3. Volume of green bond issuance in selected European countries in the first half of 2020. Source: <https://www.statista.com/statistics/1090928/green-bonds-issuance-volume-europe/>.

The five leading financial institutions based on sales of green bonds reached over five billion U.S. dollars in transactions in 2019. The sales of these financial instruments by the United Kingdom-based bank, HSBC, amounted to 7.7 billion U.S. dollars that year (Statista, 2021) [8-30].

In 2019, the Amsterdam stock exchange listed certified climate bonds totalling eight billion U.S. dollars, which was the highest value for certified climate bonds recorded. Additionally, externally reviewed climate bonds amounted to two billion U.S. dollars. Overall, the highest value of green bonds was listed on the Luxemburg Stock Exchange (LuxSE), at nearly 20 billion U.S. dollars. Green bonds are fixed income securities, the proceeds of which finance investments with environmental or climate-related benefits.

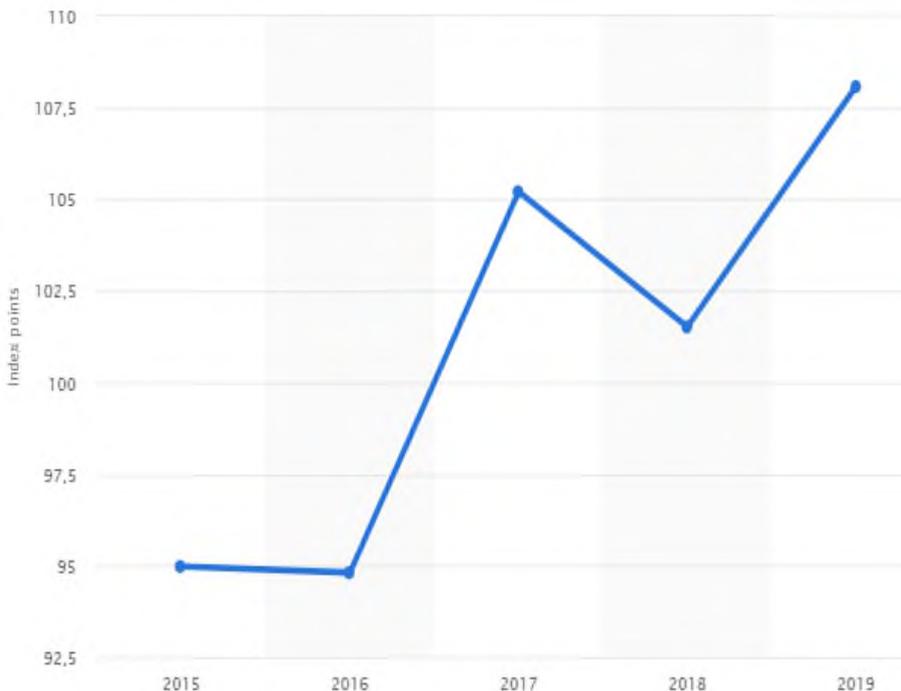


Fig. 4. Annual development of the Bloomberg Barclays MSCI Global Green Bond Index 2016–2019. Source: <https://www.statista.com/statistics/1109189/bloomberg-barclays-msci-global-green-bond-index-development/>.

Green bond indices make it easier for investors to track the performance of green bonds and compare it with other investments. Bloomberg Barclays MSCI Global Green Bond Index was launched in 2014 with the aim provide a benchmark for the green bonds market. Between 2015 and 2019, the Bloomberg Barclays MSCI Global Green Bond Index saw an overall increase, reaching 108.08 index points as of the end of 2019.

While Sweden came second to last by value of bonds, it accounted for the highest number of deals [13-30].

Green bonds are bonds of a special purpose. It is literally the use of money from bonds sold for special purposes. At this time, green bonds are intended to be used only for climate-related or company-related environmental projects.

Green bonds, as the name suggests, are debt securities that are used to finance a number of projects. Examples of such projects are investments in renewable energy sources, that is, in the construction of wind, hydroelectric, solar panels, or the transition to cleaner technologies as part of the burning of fossil fuels. Energy projects are the largest group in terms of emissions, accounting for more than 50 % of emissions. Other projects that can be financed with green bonds are energy-efficient construction projects. This includes projects for pollution control and prevention, or projects for water management and cleaner transport. Among the interesting projects are investments in the conservation of biodiversity or more gentle fishing and land use [23-30].

Currently, the largest issue of green bonds is the issue of ING N. V. in the amount of more than 2.5 billion euros. This question is based on the developed concept of sustainable development until 2030 and takes from it 17 set goals. To get a better view of their activities include investment in renewable energy sources, the construction of the so-called “green” buildings or improving the management of water resources.

5 Conclusion

The green bond market was created around 2007, but this idea was not established until a few years later. Emissions rose by more than 7 billion in 2013 and to almost 150 billion in 2018, with further increases expected in the coming years. For comparison, the total volume of corporate bonds issued by non-financial organizations in 2018 exceeded 11.5 trillion euros. Europe has the largest share of the green bond market—about 37 %, followed by North America and Asia.

There are several features associated with the issuance and management of these bonds that may have initially hindered the development of this market. One of them was certification. It was necessary to determine how to justify or determine whether the issue under consideration really corresponds to the idea of green investment. Green investment principles have been established, and international institutions and companies continue to build on these principles. It was also linked to emissions in China, which aimed to invest in better and cleaner forms of energy, but still based on coal.

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