



8th Environment Action Programme

Green bonds



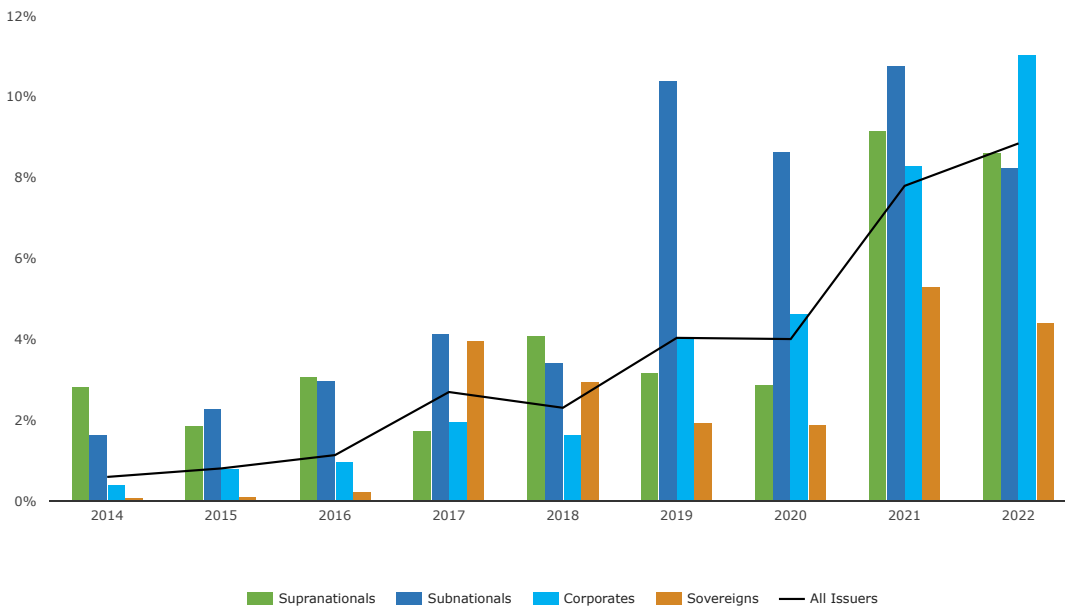
Green bonds

Published 28 Apr 2023

[Home](#) > [Analysis and data](#) > [Indicators](#) > [Green bonds](#)

Bonds used to finance activities that address climate change and environmental issues – known as green bonds – provide a means to increase green investment. Green bonds accounted for only 0.6% of all bonds issued in the EU in 2014, rising to 8.9% in 2022. This increase reflects the financial sector’s growing interest in offering products that support sustainability and the increasing demand among investors to finance environmentally sustainable projects. Various types of entities – government, corporate, supranational, and subnational entities – can issue green bonds, and issuance by all types has increased since 2014, although at different rates. Green bond issuance may increase further in the coming years, partly because of the ambitious environmental and climate goals of the European Green Deal.

Figure 1. Green bond issuance as a percentage of total bond issuance by all issuers and each type of bond issuer in the EU, 2014-2022



Source: Refinitiv EIKON/ESMA/EEA.

Data used in the graph

Year	Supranationals	Subnationals	Corporates	Sovereigns	All Issuers
2014	2.83	1.65	0.41	0.09	0.6
2015	1.86	2.29	0.79	0.12	0.81
2016	3.07	2.98	0.99	0.23	1.14
2017	1.73	4.14	1.98	3.98	2.7
2018	4.09	3.43	1.66	2.96	2.31
2019	3.17	10.39	4.07	1.94	4.04
2020	2.89	8.67	4.66	1.9	4.01
2021	9.16	10.76	8.31	5.32	7.8
2022	8.62	8.25	11.04	4.42	8.85



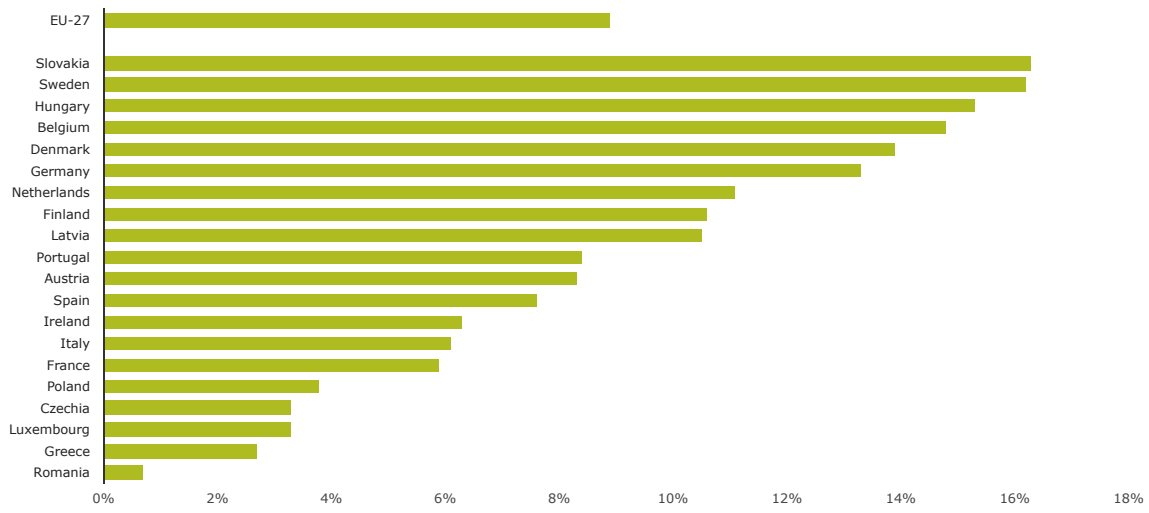
The European Green Deal ^[1] underlines the need to redirect capital flows to green investments. One way to do this is by issuing green bonds, which finance projects, assets or specific business activities that address environmental and climate change issues.

Green bond issuance increased significantly in the EU between 2014 and 2022, from 0.6% to 8.9% of total bonds issued. This indicates an increasing demand to finance sustainable investments, driven in part by the European Green Deal and the need to fund the transition to a low-carbon, green economy.

Green bonds can be issued by various types of entities, and the rates at which these entities have increased green bond issuance vary. In recent years, green bond issuance by corporate entities has increased rapidly, from 4.7% of total corporate bonds issued in 2020 to 8.3% in 2021 and 11.0% in 2022. Green bond issuance by supranational bodies (e.g. European Commission, European Investment Bank) has also increased substantially, reaching 9.2% in 2021, before declining slightly to 8.6% in 2022. Green bond issuance by municipalities and agencies, such as government-sponsored enterprises, increased particularly rapidly between 2018 and 2019 and has remained at a relatively high level since then. The issuance of green bonds by sovereign governments has increased less than issuance by other entities, to 5.3% in 2021 and falling to 4.4 % in 2022.

In the coming years, green bonds may account for an increasing percentage of total bonds issued, for several reasons. First, demand for green bonds will remain high, not least because of the ambitious environmental and climate objectives of the European Green Deal. Second, the European Commission intends to issue more green bonds to fund up to EUR 250 billion (or 30%) of its NextGenerationEU recovery plan ^{[2][3]}. The framework conditions for sustainable finance are also changing. For example, the EU action plan for financing sustainable growth ^[4], which includes the European green bond standard (EUGBS) ^[5] and the EU taxonomy for sustainable activities, aims to boost sustainable investment and thereby the issuance of green bonds.

Figure 2. Green bond issuance by corporate entities and sovereign governments, by Member State, 2022



Source: Refinitiv EIKON/ESMA/EEA.

Data used in the graph

Country	Percentage
EU-27	8.9
Slovakia	16.3
Sweden	16.2
Hungary	15.3
Belgium	14.8
Denmark	13.9
Germany	13.3
Netherlands	11.1
Finland	10.6
Latvia	10.5
Portugal	8.4
Austria	8.3
Spain	7.6
Ireland	6.3
Italy	6.1
France	5.9
Poland	3.8
Czechia	3.3
Luxembourg	3.3
Greece	2.7
Romania	0.7



Green bond issuance as a share of total bond issuance varies across the EU Member States. In 2022, green bond shares were highest in Slovakia, Sweden, and Hungary, while seven Member States did not issue green bonds.

The speed at which national green bond markets develop and mature depends on many variables, including policy and regulatory factors, market conditions and financing trends. Further growth in green bond issuance across the EU faces a range of challenges, including underdeveloped national bond markets, insufficient pipelines of standardised green projects ready for green bond funding, a lack of commonly accepted green bond standards and

definitions, and a general mismatch between small-scale projects and large-scale institutional investors ^[6]. Differences in financing norms and investment needs add to those challenges and lead to green bond markets of different sizes across the EU. The recently adopted uniform EUGBS ^[5] can help overcome some of these barriers and boost the share of green bonds in domestic (i.e. national) markets.

▼ Supporting information

Definition

Bonds

Bonds are loans provided by an investor to a borrower that are widely used to fund activities. The borrower agrees to pay back the loan with interest at a specified future date. Bonds can be used to finance a wide range of projects, and the proceeds are not necessarily earmarked for any particular purpose.

Green bonds

Green bonds are types of bonds that are issued specifically to finance green projects, i.e. the proceeds from green bonds are earmarked for green projects. The use of proceeds is typically guided by a set of criteria or green bond frameworks.

Green bond frameworks and standards

Frameworks and standards, such as the recently adopted [EUGBS](#), aim to provide a common language for the use of proceeds. This indicators only includes those green bonds that are either aligned with the four core components of the [International Capital Market Association \(ICMA\) green bond principles](#) or are certified by the Climate Bond Initiative (CBI), i.e. follow the [climate bond standard](#) or are CBI aligned (i.e. unlabelled (conventional) bonds issued by a CBI-aligned issuer or self-labelled green bonds that do not need to be aligned with ICMA principles or certified by the CBI).

Types of green bond issuers

Green bonds can be differentiated by the entity that issues them. For instance, corporate green bonds are issued by a corporate entity, such as a company or financial corporation. Sovereign green bonds are issued by a national government. Supranational green bonds are issued by an international body such as the EU, which started to issue green bonds in 2021 under the NextGenerationEU programme ^[7], or by international financial institutions (IFIs) such as the European Investment Bank, the lending arm of the EU. Data providers also differentiate green bonds issued by subnational entities such as municipalities or agencies from other types of green bond. Green bonds issued by agencies are usually securitised by a government-sponsored enterprise or a government department.

NextGenerationEU

The NextGenerationEU instrument was established to support the EU's recovery from the economic impacts of the COVID-19 pandemic. In the coming years, the European Commission intends to fund up to EUR 250 billion (or 30%) of its NextGenerationEU plan by issuing green bonds ^[3].

EU taxonomy for sustainable activities

The EU taxonomy for sustainable activities is a classification system that defines sustainable activities, e.g. activities for climate change mitigation and adaptation ^[8].

Methodology

This indicator is calculated based on data on the issuance of green bonds by companies, banks, governments, supranational bodies, and subnational bodies (municipalities and agencies) in the EU. It shows green bond issuance as a percentage of all bonds issued and by type of green bond issuer. Data on corporate and sovereign bonds were downloaded on 3 March 2023 by the European Securities and Markets Authority (ESMA), and data on bonds issued by supranational bodies, municipalities and agencies were downloaded by the EEA on 28 March 2023. Please note that the data for bonds issued by supranational bodies, municipalities and agencies tend to be less reliable than the data on bonds issued by corporate entities and sovereign governments. Moreover, as the groups of issuers were compiled by ESMA and Refinitive Eikon, minor double-counting at margins cannot be excluded, despite the utmost care.

Green bond indicators such as this may contain discrepancies, as they rely on data provided by various commercial data providers, which report on issuances at different dates and rely on different green bond standards or frameworks or make errors. Moreover, numbers from the same provider can vary depending on the date of data download and the currency exchange rate used.

It is important to note that the indicator does not provide information on the environmental impact or the sustainability of the projects financed by green bonds. In addition, the indicator does not capture the varying 'greenness' levels of the projects financed by different bonds or the contribution of financed projects to achieving the Paris Agreement goals, which are increasingly important factors for investors and regulators. Finally, fixed-income instruments cover only parts of the financial system and this green bond indicator therefore only partially reflects trends in financing green assets. Those trends might be different for different environmental objectives depending on the financial preferences and the 'investability' of the projects and activities funded.

Policy/environmental relevance

This indicator is a headline indicator for monitoring progress towards meeting targets of the Eighth Environment Action Programme (8th EAP). It contributes mainly to monitoring in relation to aspects of 8th EAP Article 3(u), which requires 'mobilising resources and ensuring sufficient sustainable investments from public and private sources... consistent with the Union's sustainable finance policy agenda' ^[7]. The European Commission communication on the 8th EAP monitoring framework specifies that this indicator should be used to monitor the 'increase [in] the issuance of green bonds to boost public and private financing for green investments' ^[9].

Accuracy and uncertainties

Data sources and providers

- [Refinitive Eikon \(direct link to the datasets is not available\)](#), Refinitive
- [ESMA \(direct link to the datasets is not available\)](#), ESMA

▼ Metadata

DPSIR

Response

Topics

Sustainable finance

Tags

green bond issuances # European Green Deal # SUFI004 # sustainable finance # 8th EAP

Temporal coverage

2014-2022

Geographic coverage

Austria	Belgium
Bulgaria	Croatia
Cyprus	Czechia
Denmark	Estonia
Finland	France
Germany	Greece
Hungary	Ireland
Italy	Latvia
Lithuania	Luxembourg
Malta	Netherlands
Poland	Portugal
Romania	Slovakia
Slovenia	Spain
Sweden	

Typology

Descriptive indicator (Type A - What is happening to the environment and to humans?)

UN SDGs

Sustainable cities and communities

Unit of measure

Green bond issuance is measured as a share (%) of total bond issuance.

Frequency of dissemination

Once a year

Contact

info@eea.europa.eu

▼ References and footnotes

1. EC, 2019, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions 'The European Green Deal', COM (2019) 640 final of 11 December 2019.
↵
2. EC, 2021, Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee, the Committee of the Regions 'The EU economy after COVID-19: implications for economic governance', COM (2021) 662 final of 19 October 2021.
↵
3. EC, 2023, 'NextGenerationEU green bonds', (https://commission.europa.eu/strategy-and-policy/eu-budget/eu-borrower-investor-relations/nextgenerationeu-green-bonds_en) accessed April 17, 2023.
a b
4. EC, 2018, Communication from the Commission to the European Parliament, the European Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions 'Action plan: financing sustainable growth', COM (2018) 97 final of 8 March 2018.
↵
5. EC, 2021, Proposal for a regulation of the European Parliament and of the Council on European green bonds, COM (2021) 391 final of 6 July 2021.
a b
6. OECD, 2015, *Green bonds: mobilising the debt capital markets for a low-carbon transition*, Policy Perspectives, Organisation for Economic Co-operation and Development, Paris.
↵
7. EU, 2022, Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a general Union Environment Action Programme to 2030, OJ L 114, 12.4.2022, p. 22–36.
a b
8. EU, 2020, Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, OJ L 198, 22.6.2020, p. 13-43.
↵
9. EC, 2022, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the monitoring framework for the 8th Environment Action Programme: measuring progress towards the attainment of the programme's 2030 and 2050 priority objectives, COM (2022) 357 final of 26 July 2022.
↵