

## **Sustainable Bonds**

Trends and Policy Recommendations



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TRENDS AND POLICY RECOMMENDATIONS



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### **Foreword**

The Sustainable Bonds: Trends and Policy Recommendations report explores key issues and trends in sustainable bond markets. It aims to inform policy discussions on the goals of investors when acquiring sustainable bonds, how these instruments may influence corporate and official sector issuers' decisions, and what can be done to develop the market for sustainable bonds further.

Sustainable bonds have grown significantly in the past decade and have become an important financing instrument in the transition to a more sustainable economy. By investing in projects with positive environmental and social impacts, and by linking financial performance to sustainability, sustainable bonds can encourage issuers to adopt sustainable practices and expand their investor base.

The development of new classification systems underscores the need for enhanced interoperability among taxonomies and standards both regionally and globally, to ensure holders of sustainable bonds have access to credible, consistent and comparable information.

The ability of investors to assess the sustainability performance of these financial instruments may depend on the transparency of sustainability-related disclosures and the level of ambition of sustainable objectives. The use of second party providers to verify sustainable bonds has increased significantly in recent years, suggesting the possible need to pay greater attention to this market segment. In parallel, the ambition of sustainability performance targets for sustainability-linked bonds could be enhanced by corporate governance tools, such as stewardship codes.

Chapter 1 presents policy recommendations to inform discussions among policymakers and regulators on further developing sustainable bond markets and safeguarding the interests of investors in sustainable bonds. Chapter 2 analyses the sharp rise in sustainable bond issuance, the dominance of green bonds, the widespread adoption of international standards and taxonomies and the common use of proceeds and sustainable key performance indicators. Lastly, Chapter 3 examines the primary reasons investors allocate capital to sustainable bonds, the dynamics that drive issuers to use sustainable bonds, and key elements that may impact investor protection.

This report has been developed by the Capital Markets and Financial Institutions Division of the OECD Directorate for Financial and Enterprise Affairs. It was prepared by Valentina Cociancich, with the support of Adriana De La Cruz, under the supervision of Caio de Oliveira, Head of the Sustainable Finance and Corporate Governance Team, and Serdar Çelik, Head of Division. This report is an updated and expanded version of Chapter 3 of the OECD *Global Debt Report 2024: Bond Markets in a High-Debt Environment*, published in March 2024. This report was prepared for discussion by the Working Party on Sustainable Finance of the OECD Committee on Financial Markets.

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## **Abbreviations and acronyms**

ASEAN	Association of Southeast Asian Nations
CBI	Climate Bonds Initiative
CBS	Climate Bonds Standard
CPI	Consumer Price Index
DMO	debt management office
ECB	European Central Bank
ESG	Environmental, social and governance
EU GBS	European green bond standard
EU	European Union
EUR	euro
GHG	greenhouse gas
GSS	Green, social and sustainability
ICMA	International Capital Market Association
ISIN	International Securities Identification Number
KPI	key performance indicator
OECD	Organisation for Economic Co-operation and Development
RIC	LSEG Identification Code
SLB	sustainability-linked bond
SPT	sustainability performance target
UK	United Kingdom
US	United States
USD	United States dollar

## **Executive summary**

Sustainable bonds can be classified into two major categories. "Use-of-proceeds bonds" are bonds whose proceeds should be used to finance eligible environmental, social or sustainable projects. "Sustainability-linked bonds" are bonds for which the issuer's financing costs or other bond characteristics can vary depending on whether the issuer meets specific sustainability performance targets within a timeline but whose proceeds do not need to be invested in projects with an expected positive environmental or social impact.

In 2024, global issuance of sustainable bonds amounted to USD 522 billion in the corporate sector and USD 473 billion in official sector. At the end of the year, the outstanding amount in the corporate sector totalled USD 2.4 trillion, representing 7% of all outstanding corporate bonds. It stood at USD 2.2 trillion in the official sector, representing 3% of all official sector bonds. Green bonds were the dominant type of sustainable bond issued by both corporations and the official sector with, respectively, USD 382 billion and USD 257 billion. After a record amount of USD 115 billion in 2021, corporate sustainability-linked bond (SLBs) issuance has sharply declined since, while in the official sector the volume of SLBs remained low.

Between 2015 and 2024, Europe dominated sustainable bond issuance, issuing half of all corporate and official sector sustainable bonds. Companies in the People's Republic of China (hereafter "China") and the United States follow, while governments and agencies were active issuers in Developed Asia Pacific excl. US and Latin America. Ninety-three per cent of issuances used the standards developed by the International Capital Market Association (ICMA) to label sustainable bonds. Sustainable bonds tend to exhibit lower liquidity compared to their conventional counterparts, both in the official and corporate sectors.

The use of a second party opinion provider increased substantially in the last five years: in 2019 less than half of sustainable bond issuers required a pre-issuance verification, while in 2024 it was a common practice for 81% and 69% of corporate and official sector issuers, respectively. When analysing the legal documentation of a sample of bonds, three-fourths of the green, social and sustainability (GSS) bonds mention that the refinancing of existing eligible projects with the proceeds is allowed. Furthermore, no prospectus mentions a contractual penalty if the issuer does not use all proceeds to finance or refinance eligible projects. In the case of SLBs, failure to meet the sustainable performance target(s) usually triggers a coupon step-up, with a 25-basis point increase applied in about half of the cases.

Despite the rapid growth of the sustainable bond markets, there is no clear evidence that issuers systematically benefit from a so-called "greenium". Based on an analysis of 1 477 pairs of corporate bonds and 192 official sector bonds issued globally, there is no statistically significant evidence that issuers systematically benefit from a premium for issuing a sustainable bond as opposed to a conventional one, both for the corporate and official sectors.

If the proceeds of all sustainable bond issuances are invested in projects that deliver positive environmental and social benefits for relatively small costs, investors and society at large will benefit. However, the regulatory and institutional frameworks must guarantee that markets work efficiently, and that the interest of investors is protected. The following recommendations are based on the data analysed in this report

and are proposed to guide the discussions by policymakers, regulators, central banks and standard-setters on how to develop sustainable bond markets further and make them function more efficiently.

- A. Regulatory authorities should encourage the interoperability of sustainable bond standards and taxonomies for sustainable activities, with a focus on international comparability and harmonisation between markets.
- B. The disclosure of sustainability-related metrics relevant to holders of sustainable bonds should be reliable, consistent, and comparable.
- C. Standard-setters and regulatory authorities may consider the extent to which refinancing concluded projects using the proceeds of green, social and sustainability bonds should be allowed, and if so, what the appropriate disclosure practices should be.
- D. Key service providers, such as second party opinion providers, may warrant treatment comparable to that to external auditors and credit rating agencies.
- E. Institutions setting stewardship codes may consider adopting guidance on institutional investors acquiring sustainability-linked bonds, including the importance of analysing whether they have ambitious sustainability-related performance targets.

## 1 Key policy recommendations

This chapter presents policy recommendations to inform discussions by policymakers, regulators and other market participants to further develop sustainable bond markets and safeguard the interests of bondholders. It includes recommendations on the interoperability of standards and taxonomies, the disclosure of sustainability-related metrics, the use of the proceeds of sustainable bonds for refinancing existing projects, second party opinion providers, and stewardship codes.

The development of the sustainable bond markets has been successful. Looking ahead, if funds raised through sustainable bonds are allocated to projects that generate meaningful environmental and social benefits for relatively limited costs, investors and society at large will benefit. However, the regulatory frameworks and relevant institutions must guarantee that markets work efficiently, and that the interest of investors is protected. This chapter proposes recommendations to guide the discussions by policymakers.

## A. Regulatory authorities should encourage the interoperability of sustainable bond standards and taxonomies for sustainable activities, with a focus on international comparability and harmonisation between markets

Two types of frameworks are relevant for entities issuing sustainable bonds: standards and taxonomies. Standards present a series of requirements and recommendations for bonds to be classified as use-of-proceeds bonds such as green, social and sustainability bonds or sustainability-linked bonds. Taxonomies for sustainable activities help issuers define in which projects they can invest the proceeds of "use-of-proceeds" bond issuance.

Although most issuers align their bonds with the principles developed by the ICMA, several local standards are emerging at regional or national levels. Similarly, various taxonomies are used to classify bonds as sustainable. Regulatory authorities should work with relevant standard-setters to improve the comparability of national, regional and international standards and taxonomies that govern sustainable bond issuance. This should take account of scientific evidence and broader policy objectives and recognise that taxonomies focused on the activities of official sector entities may not be easily used by the corporate sector. Any regulatory intervention should weigh costs and benefits and favour aligning standards and taxonomies with established international frameworks. The capacity of issuers and the level of economic development in a jurisdiction should be considered where flexibility could improve access to sustainable and transition finance.

### B. The disclosure of sustainability-related metrics relevant to holders of sustainable bonds should be reliable, consistent, and comparable

Issuers of sustainable bonds should be required to disclose reliable, consistent and comparable metrics to ensure bondholders can assess whether proceeds have been used according to the bond contract, in the case of use-of-proceeds bonds, and how issuers are performing against the sustainability-related targets, in the case of sustainability-linked bonds. Whenever possible, the disclosure should be prepared in accordance with internationally recognised accounting and disclosure standards, and it should be assured by an independent, competent, and qualified attestation service provider. For use-of-proceeds bonds, investors should have access to transparent information regarding the environmental or social projects financed by their investments, rather than broader and non-project-driven purposes. Information should be disclosed annually, but less frequent disclosure may be allowed whenever the cost of collecting and disclosing the information is excessively high.

#### C. Standard-setters and regulatory authorities may consider the extent to which refinancing concluded projects using the proceeds of green, social and sustainability bonds should be allowed, and if so, what the appropriate disclosure practices should be

The possibility of refinancing concluded projects using proceeds of use-of-proceeds bonds allows to differentiate between the capital raised through use-of-proceeds bond issuances and the amount the issuer invests in new eligible projects. This may not be evident to many investors, and it can reduce the potential of the sustainable bond markets to improve the environmental and social impact of companies and official sector entities. A possible way to mitigate this issue could be to recommend issuers to disclose the planned allocation of proceeds between financing and refinancing of eligible projects in the offering documents.

D. Key service providers, such as second party opinion providers, may warrant treatment comparable to that of external auditors and credit rating agencies

A second party opinion is an assessment of whether the bond contract is aligned with a specific sustainable bond standard and/or a taxonomy for sustainable activities. Requiring a second party opinion is a common practice in the market, with 81% of sustainable bonds from the corporate sector and 69% from the official sector being assured in 2024. These service providers play a similar role to external auditors and credit rating agencies and potentially face comparable conflicts of interest. They provide services relevant to the public interest but are hired by the issuers they are meant to provide assurance to, potentially creating a conflict of interest. Specific codes of conduct, regulation or supervision for providers of second party opinions and other forms of assurance for sustainable bonds may be needed.

E. Institutions setting stewardship codes may consider adopting guidance on institutional investors acquiring sustainability-linked bonds, including the importance of analysing whether they have ambitious sustainability-related performance targets

Sustainability-linked bonds are a useful tool for aligning investors' sustainability-related preferences with investee entities' impact on the environment and society. Nevertheless, sustainability-linked bonds with unambitious targets function *de facto* as conventional bonds because they do not change the decision making process of the issuer and its consideration of sustainability-related impacts. Therefore, institutional investors may need to have their own assessment. In this context, stewardship codes serve as an important complement to regulatory requirements, encouraging institutional investors to monitor and engage with their investee companies.

# Trends in the sustainable bond markets

This chapter analyses the trends in the issuance and outstanding amounts of sustainable bonds since 2015. It also looks at the most common use of proceeds, key performance indicators for sustainability-linked bonds, the maturity profiles of sustainable bonds, and analyses the main characteristics of sustainable bond issuers and standards and taxonomies used globally.

Sustainable bonds can be classified into two major categories (ICMA,  $2022_{[1]}$ ). "Use-of-proceeds bonds" are bonds whose proceeds should be used to either partially or fully finance or re-finance new or existing eligible green, social or sustainable projects. In the case of "use-of-proceeds bonds" issued by financial institutions, the proceeds are typically allocated to finance or refinance the provision of loans for the development of eligible projects. "Sustainability-linked bonds" (SLBs) are bonds for which the issuer's financing costs or other characteristics of the bond (e.g. its maturity) can vary depending on whether the issuer meets specific sustainability performance targets within a timeline, but whose proceeds do not need to be invested in projects with an expected positive environmental or social impact.

The "use-of-proceeds bonds" include green, social and sustainability bonds. The proceeds of green bonds must be applied to finance projects with expected environmental benefits, which may include, for instance, projects in renewable energy, clean transportation, biodiversity conservation, and wastewater management (ICMA, 2021<sub>[2]</sub>). In this classification, "blue bonds" and "climate bonds", which focus on environmental issues related to the sea and climate change, respectively, would be classified as "green bonds". The resources raised through social bonds must be invested in projects that aim to address or mitigate a specific social issue or seek to achieve positive social outcomes, including affordable housing, food security and the empowerment of minorities (ICMA, 2023<sub>[3]</sub>). Sustainability bonds are bonds where proceeds should be used to finance a combination of both green and social eligible projects.

#### 2.1. Issuance and outstanding amount

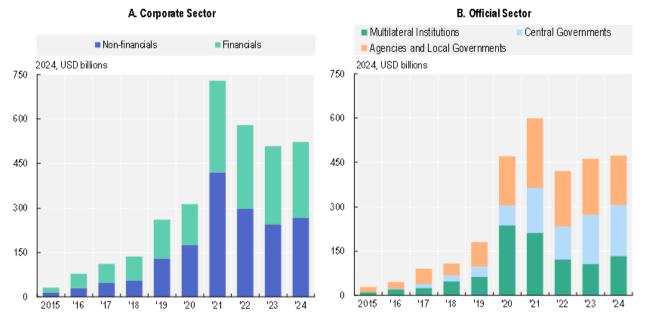
Over the past five years, sustainable bonds have become a more important source of capital market financing for both the corporate and official sectors (the latter category includes national and subnational governments and their agencies, as well as multilateral institutions). Globally, companies issued USD 522 billion in sustainable bonds in 2024, while the official sector issued USD 473 billion. The total amount issued through corporate sustainable bonds was four times larger in 2020-2024 than in 2015-2019. Meanwhile, the amount issued by the official sector in the last five years was five times larger compared to 2015-2019.

In 2021, a record amount of USD 728 billion was issued by corporates, of which 58% was issued by non-financial companies (Figure 2.1, Panel A). Corporate issuance fell slightly in the following two years, only to rebound in 2024, when it increased by 3% compared to the previous year.

Sustainable bonds issued by the official sector reached record amounts in 2020 and 2021, with total issuance of USD 462 billion and USD 508 billion, respectively (Figure 2.1, Panel B). In 2020, multilateral institutions issued almost USD 230 billion in sustainable bonds. In 2023, corporate sustainable bond issuance decreased by 30% compared to 2021, and the official sector experienced a similar decrease.

Figure 2.1. Global sustainable bond issuance by issuer, 2015-2024

Global sustainable bond issuances have increased sharply since 2020, in both the corporate and the official sector



Note: In Panel B, agencies and local governments include national government agencies (e.g. KFW), local governments (e.g. Prefecture of Shiga in Japan), and national development banks (e.g. Brazilian National Development Bank). The category *Multilateral Institutions* includes organisations formed by three or more jurisdictions (e.g. International Finance Corporation), and the European Union. The inflation adjustment of the issued amounts over the year is measured by the Consumer Price Index (CPI).

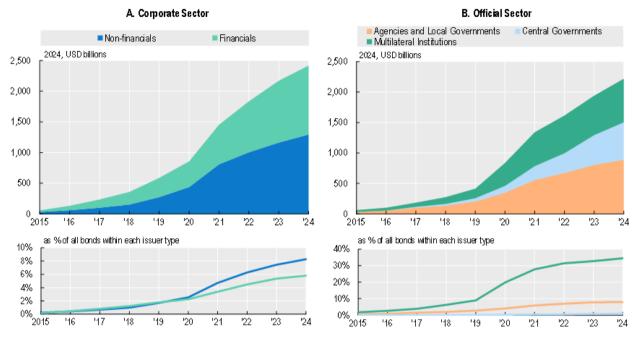
Source: OECD Corporate Sustainability dataset, LSEG.

In 2024, the outstanding amount of sustainable bonds issued by the corporate sector totalled USD 2.4 trillion, against USD 2.2 trillion by the official sector. The outstanding amount of sustainable bonds issued by the non-financial corporate sector accounted for USD 1 295 billion, representing 8% of the total outstanding amount of bonds issued in the sector. Financial companies' outstanding amount of corporate bonds totalled USD 1 121 billion, which is 6% of the outstanding amount of all corporate bonds issued by financial companies (Figure 2.2, Panel A).

For the official sector, the outstanding amount of sustainable bonds reached USD 891 billion for agencies and local governments, USD 718 billion for multilateral institutions and USD 612 billion for central governments in 2024 (Figure 2.2, Panel B). Multilateral institutions are the biggest issuers of sustainable bonds in the official sector, with their share representing 34% of total issuances. In contrast, sustainable bonds represent 8% of the outstanding bonds from agencies and local governments, whereas only 1% of bonds issued by central governments are labelled as sustainable.

Figure 2.2. Global outstanding sustainable bonds by issuer

Multilateral institutions are the most active issuers of sustainable bonds, with 34% of all outstanding bonds



Source: OECD Corporate Sustainability dataset, LSEG.

Europe has been the most active region in terms of sustainable bond issuances in both the corporate and official sectors. From 2015 to 2024, 45% of the global amount issued through non-financial corporate sustainable bonds was raised by European companies. China and the United States follow with 17% and 13%, respectively. Europe also dominates the issuance of sustainable bonds by financial corporates with 54%, followed by Developed Asia-Pacific excl. US (16%), China (15%), and the United States (7%) (Figure 2.3, Panel A). In the official sector, sustainable bonds issued by central governments have been mainly issued by European countries (65% of global issuance by central governments in 2015-2024), followed by Latin American Governments (15%). Issuance by agencies and local governments is also dominated by European issuers (62% of the global amount), followed by issuers in Developed Asia-Pacific excl. US (17%) (Figure 2.3, Panel B).

Figure 2.3. Global sustainable bond issuance by region, 2015-2024

Corporate sustainable bonds in Europe account for half of global sustainable issuances



Source: OECD Corporate Sustainability dataset, LSEG.

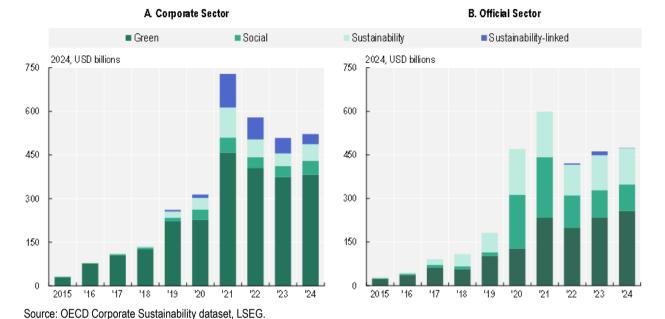
Green bonds were the most important type of sustainable bonds issued in 2024, both for the corporate and the official sector with, respectively, USD 382 billion and USD 257 billion (Figure 2.4).

While corporate green bonds accounted for almost all sustainable issuance before 2020 (92% on average), other types of sustainable bonds have gained in importance in the last five years. In particular, SLBs, issued for the first time in 2019, reached an average of 10% of total sustainable issuances between 2020 and 2024. In 2024, social, sustainability and sustainability-linked bonds averaged 9%, 11% and 7% of all corporate sustainable issuances, respectively. After a record issuance of SLBs in 2021 (USD 115 billion), the prominence of these instruments has declined in global corporate issuances, with only USD 35 billion issued in 2024.

The issuance of green bonds is less prevalent in the official sector, representing about half of the amount issued over the last three years. Governments and multilateral institutions have commonly used social (22%) and sustainability (26%) bonds over the last three years (Figure 2.4, Panel B). Official sector SLBs were issued for the first time in 2022, making up only 1% of the share of sustainable bonds issued in the last two years.

Figure 2.4. Global sustainable bond issuance, by type

Green bonds are the most widely used type of sustainable bond globally



In Table 2.1, the categories of "use of proceeds" in GSS bonds are ranked by their importance for each issuer type. The analysis is based on the targeted destination of the proceeds, as established in the GSS bond documentation. "Eligible green projects" and "General purpose" categories are considered separately, as they effectively present an open investment scope, and, thus, not a sustainability-related specific purpose. The first one is commonly disclosed for GSS bonds issued by non-financial corporates, while GSS bonds with a general purpose use of the proceeds are issued by 9% of multilateral institutions.

"Clean energy" (21% of the total issued amount) and "green buildings" (16%) rank first among GSS bonds issued by financial and non-financial corporates, respectively. "Energy efficiency" and "clean transportation" projects are also often indicated as eligible categories for corporate GSS bonds' use of proceeds.

"Social expenditures" was the preferred use of proceeds for agencies and local governments and multilateral institutions between 2015 and 2024. Additionally, "biodiversity conservation", "energy efficiency" and "clean transportation" are the top 3 priorities in central governments' issuance of GSS bonds, with 20%, 12% and 11% of the total amount raised, respectively.

Table 2.1. GSS bonds' use of proceeds, 2015-2024

Energy-related projects received the largest share of corporate financing through sustainable bonds

	Corpora	ite sector	Official sector			
	Non- financials	Financials	Agencies and local governments	Central governments	Multilateral institutions	
Agriculture	0%	0%	0%	1%	1%	
Biodiversity conservation	4%	5%	5%	20%	6%	
Circular economy	3%	3%	1%	7%	1%	
Clean energy	21%	15%	8%	7%	7%	

	Corpora	ite sector	Official sector			
	Non- financials	Financials	Agencies and local governments	Central governments	Multilateral institutions	
Clean transportation	10%	11%	11%	11%	6%	
Climate change adaptation	6%	7%	5%	10%	8%	
Energy efficiency	18%	15%	9%	12%	7%	
Green buildings	10%	16%	5%	7%	5%	
Infrastructure	9%	5%	17%	3%	17%	
Social expenditures	3%	9%	29%	10%	27%	
Water or wastewater management	4%	6%	4%	6%	4%	
General purpose	5%	4%	4%	2%	9%	
Eligible green projects	6%	4%	2%	2%	2%	

Note: The table is built from the categories of use of the proceeds disclosed by the issuer before or at the time of the issuance. When more than one category is disclosed for a single issuance, a flat allocation of the issued amount of each GSS bond is applied.

- Top 1
- Top 3
- Top 4
- Top 5

Source: OECD Corporate Sustainability dataset, LSEG.

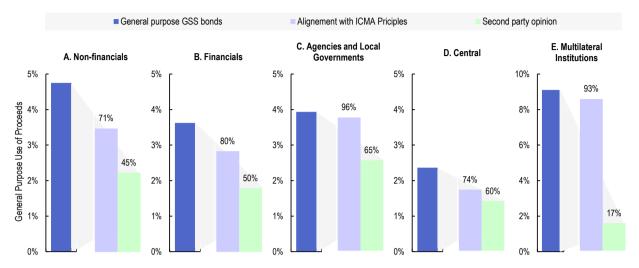
An analysis of bonds designating "general purpose" as the sole eligible use of proceeds reveals that USD 83 billion of GSS bonds fell under this category between 2015 and 2024 (Figure 2.5). Bonds that listed "general purpose" as a use of proceeds category alongside one other accounted for USD 90 billion of total issuance. Considering a flat allocation, half of this amount was allocated to general-purpose projects, lacking a specific sustainability objective. An additional USD 113 billion was raised in bonds with "general purpose" as one of three eligible categories (USD 38 billion was allocated to general purpose, assuming a flat allocation). Other issuers disclose a "general purpose" within a longer list of eligible projects.

According to the ICMA, a GSS bond enables capital-raising and investment for new and existing projects with environmental, social or a combination of both green and social benefits. As discussed, the "general purpose" category does not align well with this definition, allowing instead for a broader and non-project-driven allocation of the proceeds. Nevertheless, among the GSS bonds in the sample that disclose a general purpose use of proceeds, most of them state an alignment with the ICMA Principles. Notably, non-financial issuers disclosed alignment with the ICMA Principles for 71% of their general purpose GSS bonds, financial issuers for 80%, agencies and local governments for 96%, central governments for 74% and multilateral institutions for 93%.

Alignment with standards and principles is generally enforced by a pre-issuance verification ("second party opinion"), which plays a key role in ensuring investor transparency on the future destination of the raised funds. Second party opinion providers assured half of the general-purpose GSS bonds in the corporate sector and around two-thirds of bonds issued by agencies and local governments and central governments. For multilateral institutions, only 17% of these bonds received a second party opinion. Figure 2.5 displays the shares of GSS bonds that include "general purpose" among the eligible use of proceeds categories, broken down by type of issuer. Additionally, it illustrates the proportion of these bonds that disclosed alignment with the ICMA Principles and the proportion that were verified by a second party opinion provider.

Figure 2.5. GSS bonds with general purpose use of proceeds

Most bonds with an open investment scope claim ICMA alignment, often verified by a second party opinion provider



Note: The figure shows the shares of the amount of bonds issued with general purpose use of proceeds that disclose alignment with the ICMA Principles or the pre-issuance assurance by a second party opinion provider. The blue bar represents the share of GSS bonds issued between 2015 and 2024 that include "general purpose" as an eligible category. The purple bar indicates the share of these bonds that align with the ICMA Principles, while the green bar reflects the share of bonds that have received a second-party opinion. Source: OECD Corporate Sustainability dataset, LSEG.

SLBs include specific sustainability performance targets to be met within a defined timeline. To this end, key performance indicators (KPIs) are selected by the SLB issuer to achieve the sustainability objectives at the entity level. As shown in Table 2.2, most of the KPIs in SLBs relate to climate transition, such as "Scope 1 and Scope 2 GHG emissions", accounting for 28% of the SLBs issued by corporates, or "Carbon intensity" (24%), and "Renewable energy" (8%). Although less frequently, non-climate transition KPIs were also mentioned for some corporate SLBs, such as "Women Board Members" (1.4%). The KPIs of SLBs issued by the official sector are also included in the table, but only very few have been issued so far, which limits the comparability between the numbers for the corporate and official sectors.

From 2015 to 2024, almost 80% of sustainable corporate bonds were issued with a medium-term maturity – ranging from 2 to 10 years. Short-term corporate sustainable bonds (with a maturity of less than two years) represented only a fractional amount, accounting for only 3% of the corporate sustainable bonds in 2024. The official sector has issued sustainable bonds with longer maturities than the ones issued by the corporate sector. While in 2024 long-term bonds accounted for 18% of the total amount issued by the corporate sector, long-term bonds by the official sector amounted to 36% (Figure 2.6).

Table 2.2. Key performance indicators in SLBs, 2019-2024

Globally, companies primarily link the financial characteristics of SLBs to their climate performance

	Corporate sector	Official sector	
Carbon Intensity	24%	20%	
Energy Consumption and Efficiency	6%	4%	
Renewable Energy	8%	6%	
Scope 1 and Scope 2 GHG Emissions	28%	6%	
Scope 1, Scope 2 and Scope 3 GHG Emissions	3%	0%	

	Corporate sector	Official sector
Scope 3 GHG Emissions	8%	0%
Sustainable Forest Management	0%	6%
Women Board Members	1.4%	15%
Other	22%	42%

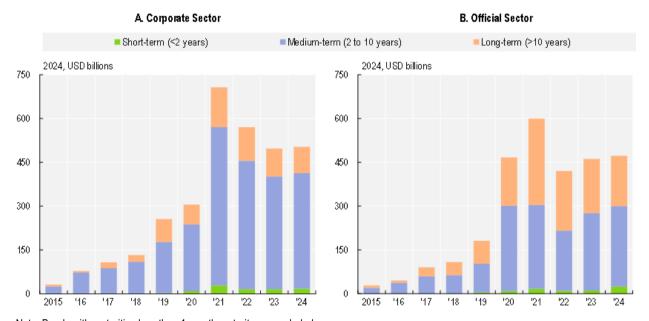
Note: The table is based on the disclosure of sustainable KPIs reported by the issuer before or at the time of the issuance. When more than one KPI is disclosed for a single issuance, a flat allocation of the amount issued for each SLB is applied.

Top 1
Top 2
Top 3
Top 4
Top 5

Source: OECD Corporate Sustainability dataset, LSEG.

Figure 2.6. Short, medium and long-term sustainable bonds

Sustainable bond issuers have shown a preference for medium-term issuances over the past decade



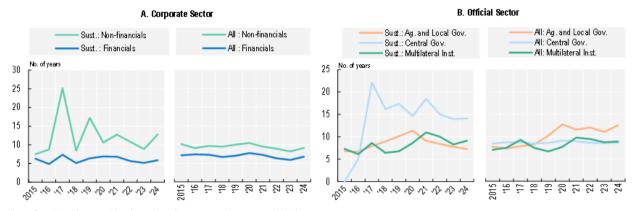
Note: Bonds with maturities less than 1-month maturity are excluded. Source: OECD Corporate Sustainability dataset, LSEG.

Since 2015, sustainable bonds issued by corporates and by governments and multilateral institutions have displayed less stable value weighted maturities when compared to all conventional and sustainable bonds. On average, sustainable bonds issued by nonfinancial corporates present a value weighted maturity of 12.3 years against a maturity of 9.4 years for all bonds issued by nonfinancial corporates (Figure 2.7, Panel A). This gap is smaller in the financial sector, where sustainable bonds present on average a slightly shorter value weighted maturity of 6 years against 6.9 years for all bonds.

Multilateral institutions show the same maturity (8.2 years) for both sustainable and all bonds, whereas agencies and local governments' value weighted maturity averages 8.5 years for sustainable bonds and 10.1 years for all bonds (Figure 2.7, Panel B). For central governments, the value weighted maturity of sustainable bonds was almost double that of all bonds issued since 2017, averaging 16.5 years against 8.7 years, respectively.

Figure 2.7. Value-weighted average maturity

Sustainable bonds exhibit greater volatility in value-weighted maturity compared to the entire bond market



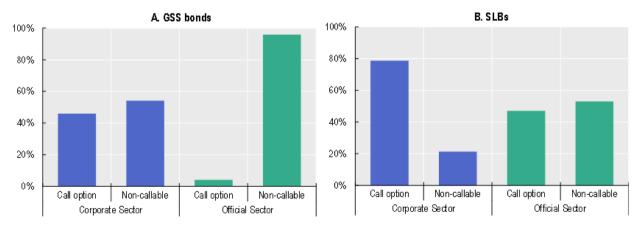
Note: Bonds with maturities less than 1-year maturity are excluded. Source: OECD Corporate Sustainability dataset, LSEG.

Between 2015 and 2024, 46% of the total corporate sector issuance of GSS bonds included a call option, allowing the issuer to redeem the bond before maturity (Figure 2.8, Panel A). This option was included in a significant portion of SLBs issued by corporates (79%) (Figure 2.8, Panel B).

A similar trend is also visible for the official sector. While 47% of the amount of SLBs issued by official sector entities included a call option, only 4% of GSS bonds included such an option. The existence of a call option in SLBs may be a cause for concern, as issuers could, by exercising the call option, seek to reduce the amount of any penalty that could arise from not meeting the sustainability performance targets. The establishment of a penalty if targets are not met at the time of exercising the call option can potentially mitigate that concern. UI Haq and Doumbia (UI Haq and Doumbia,  $2022_{[4]}$ ) analysed 40 SLBs with a call option (up to December 2021) and found that 42.5% displayed mentioned penalty if the targets are not met at the time of the call.

Figure 2.8. Callable GSS bonds vs. SLBs, 2015-2024

Call options in SLBs may allow issuers to limit penalties for missing sustainability targets



Source: OECD Corporate Sustainability dataset, LSEG.

#### 2.2. Sustainable bond issuers

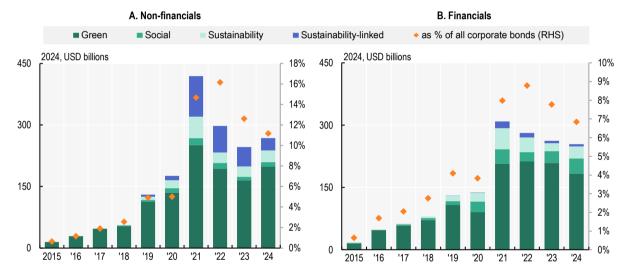
#### 2.2.1. Corporate sector

Corporate issuance of social and sustainability bonds increased significantly between 2023 and 2024 (by 30% and 28%, respectively). In contrast, the issuance of SLBs declined, particularly in the non-financial sector, where issuances decreased by one-third. Additionally, if green bond issuance by non-financial companies increased by 20%, it declined among financial issuers, falling 12% below the 2023 level (Figure 2.9, Panel A).

In 2015, sustainable bonds accounted for only 0.6% of the total issuance of all non-financial bonds. By 2024, this share had risen to 11%, after peaking at 16% in 2022. A similar upward trend was observed among financial companies, where the proportion of corporate sustainable issuance over all bonds jumped from 0.6% in 2015 to 7% in 2024.

Figure 2.9. Sustainable bond issuance by corporates, 2015-2024

Sustainable corporate bond issuances increased from less than 1% of financial bonds in 2015 to 7% in 2024

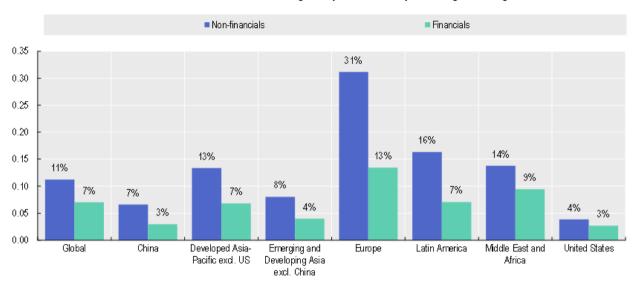


Source: OECD Corporate Sustainability dataset, LSEG.

Globally, sustainable non-financial corporate bonds accounted for 11% of all corporate bond issuance over the 2020-2024 period, and financial corporate bonds for 7%. Sustainable bonds represent a larger share of all corporate bond issuances in some regions, including Developed Asia-Pacific excl. US, Latin America, Europe, and the Middle East and Africa. Conversely, in China, the United States and Emerging and Developing Asia excl. China, sustainable bonds have represented 8% or less of all non-financials' bonds and 4% or less of all financials' (Figure 2.10).

Figure 2.10. Relative importance of sustainable bonds against all corporate bonds, 2020-2024

The share of sustainable bonds over all bonds issued globally varies widely from region to region

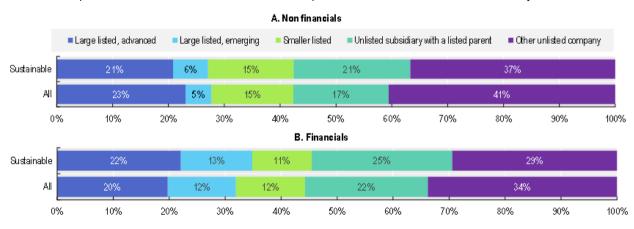


Source: OECD Corporate Sustainability dataset, LSEG.

In 2023 and 2024, unlisted companies were responsible for more than half of all sustainable bond issuances across the corporate sector, mirroring the distribution observed in all bond issuances. Among non-financial issuers, unlisted companies issued 58% of the total volume of sustainable bonds, large listed companies 27%, and smaller listed firms 15% (see Figure 2.11, Panel A). The pattern is similar in the financial sector, where unlisted companies issued 55% of the sustainable bonds, while large listed firms contributed 35% (Figure 2.11, Panel B). Interestingly, the shares of sustainable bonds issued are similar to those issued for all corporate bonds.

Figure 2.11. Corporate issuance by listed and unlisted issuers during 2023-2024

Unlisted companies have issued more than half of all corporate sustainable bonds in the last two years

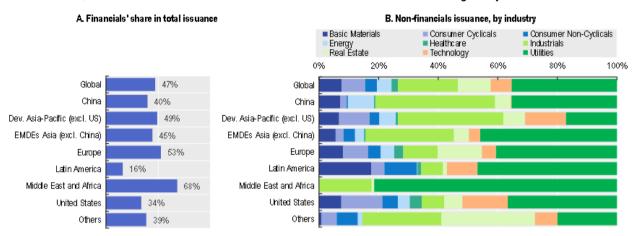


Note: The inclusion of a company in the MSCI World Index or in the MSCI Emerging Markets Index is considered as a proxy for a listed company being large. Unlisted companies were classified as either a subsidiary with a listed parent company or "other unlisted companies". Source: OECD Corporate Sustainability dataset, OECD Capital Market Series dataset, LSEG, MSCI.

Globally, financial companies were responsible for nearly half of the total issuance of corporate sustainable bonds in 2020-2024. However, there is substantial variation across regions (Figure 2.12, Panel A). Financial companies were more active issuers in Middle East and Africa (68%), Europe (53%) and Developed Asia-Pacific excl. US (49%), whereas in other regions, other industries play a more prominent role. In Latin America and the United States, utilities represented 47% and 37% of the other issuers, respectively. Basic materials issuers play a significant role in Latin America (18%), while technology issuers do in the United States (15%) (Figure 2.12, Panel B).

Figure 2.12. Industry distribution of sustainable bonds, 2020-2024

The financials, utilities and industrial sectors dominate the sustainable bond markets globally



Note: Panel B shows the industry distribution of the issuers of sustainable bonds, whose shares are allocated by excluding financial companies. Source: OECD Corporate Sustainability dataset, LSEG.

Sustainable bonds represented 31% and 28% of the total amount issued via corporate bonds by companies in the financial and utilities industries in 2024, respectively. These ratios are approximately five times larger than the average share (6%) for all other non-financial issuances in the same year (Table 2.3). Renewable energy issuers may explain, at least partially, the importance of the utilities industry in the sustainable bonds market.

Table 2.3. Share of sustainable bonds against all corporate bonds, by industry

Financials and utilities issuers have played a leading role in sustainable bond markets in the last five years

	2020	2021	2022	2023	2 24
Basic materials	5%	17%	16%	16%	14%
Consumer cyclicals	2%	9%	11%	14%	9%
Consumer non-cyclicals	1%	11%	13%	6%	3%
Energy	1%	8%	12%	11%	5%
Financials	18%	35%	41%	25%	31%
Healthcare	2%	11%	5%	3%	1%
Industrials	4%	8%	9%	8%	8%
Technology	3%	8%	10%	9%	5%
Utilities	15%	37%	34%	24%	28%

Note: "Real estate" industry was included under "Financials" industry for all years.

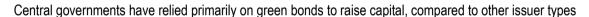
Source: OECD Corporate Sustainability dataset, LSEG.

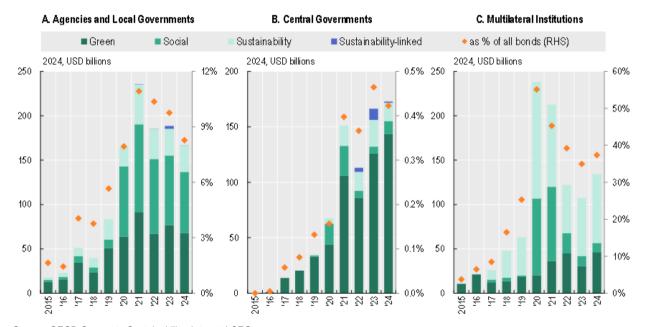
#### 2.2.2. Official sector

Agencies and local governments, central governments and multilateral institutions have increasingly issued sustainable bonds, particularly since 2020. Nevertheless, while such issuances have become significant for multilateral institutions, they remain relatively limited for central governments (Figure 2.13). Central governments have been the least frequent issuers of sustainable bonds compared to all bonds, reaching only 0.4% of the amount issued in 2024. Agencies and local governments have been more regular users of sustainable bonds, averaging 9% of all bonds issue since 2020.

Recently, multilateral institutions have stood out as the issuer group that relies most heavily on sustainable bonds for capital market funding when compared to both other official sector entities and the private sector. Prior to 2018, sustainable bonds accounted for a maximum of 8% of the total amount issued through bonds by multilateral institutions. By 2020, they represented 55%. Since then, at least 35% of their bond issuance has corresponded to sustainable bonds (Figure 2.13, Panel C). Among all multilateral institutions the International Bank for Reconstruction and Development has issued 37% of the sustainable bonds, followed by the European Union (21%) and the European Investment Bank (12%). The International Development Association, the Inter-American Development Bank and the Asian Development Bank accounted for around 4.5% each of the amount issued by multilateral institutions.

Figure 2.13. Sustainable bonds issuance by the official sector





Source: OECD Corporate Sustainability dataset, LSEG.

#### 2.3. Sustainable standards and taxonomies

Sustainable bonds are a recent innovation in debt markets. It is natural, therefore, that very few jurisdictions have a regulatory or self-regulatory framework for sustainable bonds (as opposed to China and Japan which do). Nevertheless, since its inception, the sustainable bond markets have seen the development of standards and taxonomies. While standards are a set of rules or guidelines that promote uniformity with a benchmark, taxonomies qualify as a classification system that categorises sustainable activities. Issuers commonly use both to classify their bond as sustainable.

Alongside the two widely used international standards developed by private-sector-led institutions, the International Capital Market Association (ICMA) and the Climate Bonds Initiative (CBI), other standards have been increasingly adopted in the market.

The ICMA published the first edition of its "Green Bond Principles" in 2014, and, in more recent years, its "Social Bond Principles", "Sustainability Bond Guidelines" (hereinafter, "ICMA Use-of-proceeds Principles" referring to the three of them) and "Sustainability-Linked Bond Principles" (all together, "ICMA Principles") (ICMA, 2025[5]).

The ICMA Use-of-proceeds Principles have four core components, recommending transparency and disclosure on (i) the use of proceeds, to be described in the bond legal documentation, (ii) the process for evaluation and selection of the eligible projects, (iii) the management and tracking of the net proceeds, and (iv) the annual reporting of the proceeds' allocation. ICMA Use-of-proceeds Principles allow issuers to use proceeds for refinancing eligible projects but, if this is the case, it is recommended that issuers provide an estimate of the share of financing versus refinancing. Regarding the verification, the ICMA Principles recommend issuers to appoint an external review provider to assess whether the sustainable bond aligns with the relevant core components before issuance (known as a "second party opinion"). Additionally, they recommend verifying the allocation of the funds after the issuance. However, issuers may still claim compliance with the ICMA Principles even without undergoing these assessments.

The five core components the ICMA Sustainability Linked- Bond Principles cover (i) the selection of the Key Performance Indicators (KPIs) which should be relevant, measurable and material to the issuer's sustainability strategy, (ii) the calibration of Sustainability Performance Targets (SPTs) to be ambitious and realistic, (iii) bond's characteristics that will vary based of the KPIs' performance, (iv) the annual reporting, and (v) the annual verification of the KPIs.

The Climate Bonds Initiative (CBI) published the first edition of its Climate Bonds Standard (CBS) in 2012, now covering both green and sustainability-linked bonds with climate-related KPIs (CBI, 2024[6]). The CBS provides a framework for certifying bonds that fund climate-related projects, establishing eligibility requirements for different sectors. It builds upon the ICMA Principles and notably recommends how pre- and post-issuance assurance of the sustainable bond can take place. The CBI envisages using an external assurance service provider to verify compliance with the CBS but then certifies itself the bond as compliant after receiving such an assurance statement.

While, ICMA's Executive Committee is composed of 24 organisations, with equal distribution between investors, issuers, and underwriters (ICMA, 2024<sub>[7]</sub>), the CBI's Board is composed of associations representing institutional investors and environmental non-government organisations (CBI, 2025<sub>[8]</sub>).

Starting from 2021, a larger number of local principles have been used (Figure 2.14). The ASEAN Green, Social and Sustainability Standards, the Japan Green Bond Guide and the China Green Bond Principle align with ICMA Principles and emphasise transparency, proper fund allocation, and timely reporting.

Importantly, the ICMA Principles – and other standards that closely follow their framework – provide only a suggested and non-exhaustive list of broadly defined eligible green and social project categories. Issuers may typically refer to third-party taxonomies for sustainable activities or to their own classification of which projects would be eligible.

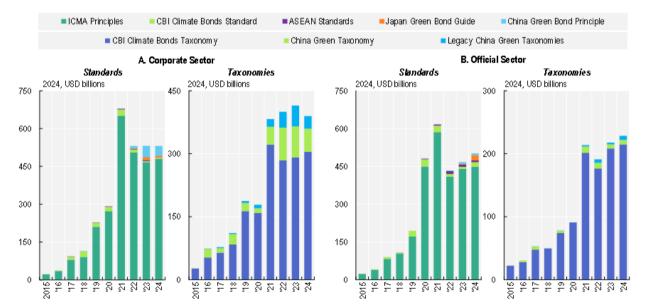
The taxonomies classify economic activities in a similar way that nomenclatures for national economic statistics and international trade do (e.g. the International Standard Industrial Classification), but they also aim at defining whether these activities are sustainable (and, in some cases, setting different levels of sustainability). For activities that may not be considered inherently sustainable, the taxonomy would normally set a level of environmental or social performance above which the activity would be reckoned as sustainable (e.g. the construction of a building certified as green according to a specific benchmark).

There are many national and international taxonomies for sustainable activities as a result of both government and market-led initiatives, including, for instance, the "Green Bond Endorsed Project Catalogue – 2021" ("China Green Taxonomy" in the Figure 2.14) set by China's central bank and securities regulator (The People's Bank of China, 2021[9]), and the "Climate Bonds Taxonomy" developed by the CBI (CBI, 2021[10]). The taxonomies typically apply both to the corporate and official sectors, regardless of the differences in their activities.

In December 2023, the European Union enacted the EU Green Bond Standard (EU GBS) regulation. The EU GBS is a voluntary framework setting out criteria for the use of proceeds, which must be allocated to projects aligned with the EU Taxonomy for sustainable activities. The standard requires issuers to disclose the relevant information in the legal documentation and undergo external verification to ensure compliance. The regulation entered into force in December 2024 and allows issuers to officially label their bonds as "EU green bonds". This explains why, at the end of 2024, no bond used the EU GBS.

Figure 2.14. Sustainable bond issuance following different standards and taxonomies

The ICMA Principles are the most used standard, but local standards have emerged recently



Note: The values correspond to the total amount issued following different standards and taxonomies. The values indicate the standards or taxonomies a sustainable bond conforms to or is aligned with (as reported by the issuers). A single sustainable bond can exhibit compliance/alignment with one or more standards or taxonomies.

Source: OECD Corporate Sustainability dataset, LSEG.

## **3** Key issues in the sustainable bond markets

This chapter explores why investors may allocate their capital to sustainable bonds and the factors that may drive issuers to issue sustainable bonds rather than conventional bonds with similar characteristics, including the existence of a premium for sustainable bonds. It also discusses trends in the oversubscription of sustainable bonds and the liquidity of sustainable bond markets, as well as market features that may affect the protection of sustainable bond investors.

Sustainable bonds present the same rights and risks to their holders as conventional bonds, but they also create a commitment. In the case of GSS bonds, the issuer ordinarily commits to having developed or to plan to invest in eligible sustainable projects with a value that is equal to or higher than the outstanding value of the GSS bonds it has issued. In the case of SLBs, the issuer commits to reaching sustainability performance targets, such as reducing its greenhouse gas emissions. The potential for these commitments to effectively change the investment decisions of companies and the official sector, as well as whether investors assign any value to such commitments, are central to determining the presence of incentives for issuers and investors.

#### 3.1. Incentives for investors

Investors may have at least three main reasons for acquiring a sustainable bond instead of a conventional bond with similar characteristics. First, individual investors and clients of institutional investors may be concerned about the social and environmental impact of their investments, or face pressure from other relevant stakeholders to demonstrate such concern. Second, investors with well-diversified portfolios may consider how the externalities of the companies they invest in might affect their long-term financial return. Third, there may be a public policy that incentivises investments in sustainable bonds.

#### 3.1.1. Sustainability-conscious investors and stakeholders

Individual investors can buy a bond through a brokerage firm. Arguably, in most cases, they will have neither the sophistication nor the time to assess the bond's legal documentation and the issuer's business in detail. In the same way that one of these investors may consult the credit rating of the issuance to assess the credit risk profile of the bond, a sustainability-conscious investor might prefer to invest in a bond labelled as "sustainable", trusting that it will have a better social and environmental impact than a conventional bond.

Individual investors may often prefer to invest in capital markets through a professional investor, such as an asset manager or a pension fund. In this case, the individual investor will ordinarily choose among several investment vehicles that allow managers different levels of discretion on how to select assets to invest in. The mandates in these vehicles can restrict, for instance, the asset classes managers can acquire and, more recently, some of them promise to consider environmental and social matters in the investment-making- process. In January 2024, investment funds self-labelled as "sustainable" accounted for USD 1.3 trillion, or 2.8% of the total assets under management of investment funds globally (OECD, 2024<sub>[11]</sub>).

The precise obligations of asset managers and other professional investors when selecting bonds to invest in will largely depend on their contracts with their investors. In some cases, managers may need to simply follow an index composed of sustainable bonds and, therefore, they would not be able to buy conventional bonds. In most other cases, however, a mandate to consider both financial returns and the sustainability-related impact of investments may not mean that asset managers can only acquire sustainable bonds for their fixed-income portfolio. For instance, investing in the conventional bonds issued by a company with a positive social and environmental impact may be well-aligned with the sustainability-related goals of the asset managers. Nevertheless, it is undeniable that the label of "sustainable" may be attractive for some asset managers with sustainability-related goals merely from a compliance perspective.

In a less direct way, insurance companies, banks and governments may decide to invest in sustainable bonds to improve their reputation as "sustainable" as a response to external pressure. For instance, an insurance company may invest part of their reserves in sustainable bonds to advertise that it is a "sustainability conscious" institution and, subsequently, attract more clients, even if the insurer does not offer any product labelled as "sustainable". As another example, banks may face pressure from civil society

organisations if their credit portfolio is concentrated in high-polluting companies, which can arguably harm their reputation with some environmentally-conscious clients and employees.

Sovereign Wealth Funds and central banks may also face relevant pressure from civil society organisations to consider sustainability-related matters in their asset allocation decisions because citizens are *de facto* the final beneficiaries of the government's holdings. Central banks, which are typically the main holder of securities in the official sector, acquire (especially sovereign) bonds for two main reasons: (i) due to central banks' asset purchase programmes (i.e. quantitative easing), and (ii) to establish foreign-currency reserves. In that regard, there is evidence that governments' holdings of conventional and sustainable bonds differ (OECD, 2024[11]). Additionally, a few central banks have sustainability objectives in their mandates (Dikau and Ulrich, 2021[12]), including the European Central Bank (European Central Bank, 2022[13]). A decision to set a sustainability objective for central banks may consider not only the environmental and social impact of its portfolio, but also the example it wishes to set for institutional investors in terms of good sustainability-related policies and practices.

Most G7 central banks have not bought sustainable bonds as part of their asset purchase programmes, (OECD, 2024[11]). As central banks' asset holdings are substantial (USD 23 trillion in G7 countries alone), the absence of some major central banks from the sustainable bond market greatly affects the investor base compared to conventional bonds. Among G7 countries, the only central bank that holds a significant amount of sustainable bonds is the European Central Bank (ECB), which between 2018 and 2022 purchased an increasing amount of corporate and government sustainable bonds (Elderson and Schnabel, 2023[14]). Nevertheless, most central banks have discontinued their asset purchase programmes and are unwinding their balance sheets since the beginning of the monetary policy tightening cycle in 2021.

Concerning foreign reserve holdings, central banks held roughly USD 12 trillion in different asset types as of September 2023 (IMF, 2023<sub>[15]</sub>), representing approximately 20% of the global sovereign bond market. The main objectives for keeping reserves are to work as a buffer to finance required imports, provide assurances to the market that the government can honour its foreign exchange debt obligations, intervene in the foreign exchange markets, and provide some space to maintain price and financial stability in the face of large exchange rate swings (Schanz, 2019<sub>[16]</sub>). To meet these goals, central banks often choose liquid and safe securities that still provide some return, which can include conventional and sustainable bonds.

Sustainable bonds provide the same rights and present the same risks to their holders as conventional bonds. For instance, a sustainable bond and a conventional bond issued by the same entity with similar characteristics can have the same credit risk. Sustainable bonds tend not to have differences in price due to their sustainability-related commitments and have only a slightly lower liquidity (Figure 3.6). The more limited liquidity of sustainable bonds may explain why central banks do not often acquire them, because being able to sell an asset quickly is essential to their activity. The relatively small importance of sovereign sustainable bonds in the market for all sovereign bonds (Figure 2.13) might be another important explanatory factor.

#### 3.1.2. Portfolio management

Even for investors who are not concerned with the social and environmental impact of their investee companies, a decision to invest in sustainable bonds may still maximise their financial return for a given level of risk. This would be true in two circumstances. First, where the investor wants the company to adopt a new business strategy that better accounts for long-term environmental and social trends such as climate change, and, therefore, a strategy that would maximise the company's value.

Second, where the investor wishes the company to reduce its negative externalities (or increase its positive ones) despite a possible reduction of the company's value, but with the view that the benefit for the investor's other investee companies would more than compensate the loss in value for the first company.

An example of the second circumstance would be the reduction in GHG emissions by an investee major energy company that would facilitate the transition to a low carbon economy, which would be financially positive for investee companies in the tourism sector with assets in tropical regions.

In either of the above circumstances, it is important to highlight that, at least potentially, the commitments in a sustainable bond contract can alter the decision making process of a company more efficiently than, for instance, buying equity shares in the same company. For example, an SLB with ambitious targets for a company to reduce GHG emissions and a meaningful potential coupon increase in case the target is not met could be more effective in changing corporate behaviour than a minority equity stake, where the investor would not be in a position to alter the company's strategy.

#### 3.1.3. Public policies

Some jurisdictions offer favourable regulation and financial incentives to encourage investments in sustainable bonds, including tax credit bonds, direct subsidy bonds, and tax-exempt bonds (CBI, 2022<sub>[17]</sub>). Tax credit bonds offer investors the opportunity to receive tax credits in lieu of traditional interest payments. Direct subsidy bonds are another option that provide government cash rebates to offset net interest payments. Tax-exempt bonds, for instance municipal bonds in the U.S. and wind projects in Brazil, allow investors to avoid income tax on interest.

Some central banks are also supporting sustainable investments to meet climate targets, often through favourable policies for sustainable bonds (European Central Bank, 2022[13]). These measures may include lower capital requirements or preferential treatment in risk-weighting assessments, making such bonds potentially more attractive to financial institutions.

Banks hold bonds, among other reasons, to meet liquid asset requirements and manage their short-term liquidity. To achieve these two objectives, banks use bonds as collateral for repurchase agreements (repo) transactions with other institutions, namely the central bank or the country's debt management office (DMO). Therefore, the eligibility of an asset for meeting liquid asset requirements and to be used for repo transactions is a major incentive for banks to hold a security. An analysis of the repo eligibility of sustainable bonds issued by governments and corporates reveals that, as of 2023, sustainable bonds were mostly eligible in Europe, which helps explain why European banks held 84% of all banks' holdings in sustainable bonds. More specifically, of the 41 sovereign sustainable bonds that are repo eligible with central banks, 38 were eligible in European countries (32 eligible with the ECB, 4 in the United Kingdom and 2 in Hungary); of the 823 corporate sustainable bonds that are repo eligible with central banks, 750 are eligible with the ECB; and of the 501 agency and supranational sustainable bonds that are repo eligible with central banks, 463 are eligible in European countries (457 with the ECB, 4 in Sweden and 2 in Switzerland) (OECD, 2024[11]).

#### 3.1.4. Stewardship codes

The G20/OECD Principles of Corporate Governance recognise stewardship codes as a mechanism that may complement regulatory requirements to encourage institutional investors' engagement with their investee companies (Principle III.A). As a matter of fact, stewardship codes increasingly recommend integrating sustainability considerations into the engagement and voting policies of institutional investors.

Japan's Stewardship Code provides that institutional investors are responsible for enhancing their investee companies' corporate value and sustainable growth, taking into consideration ESG factors (Financial Services Agency, 2020<sub>[18]</sub>). Similarly, the Brazilian Stewardship Code states in its third principle that institutional investors should integrate ESG factors in their investment processes and scrutinise their impact on the sustainable development of the securities' issuers (Associação de Investidores no Mercado de Capitais, 2016<sub>[19]</sub>).

According to the UK Stewardship Code, stewardship allows the creation of long-term sustainable value creation for clients and beneficiaries. The code also recognises the significant increase in investments other than listed equity. In this respect, it includes reporting expectations for fixed income investments such as the review of prospectus and transaction documents (Financial Reporting Council, 2025<sub>[20]</sub>).

#### 3.2. Incentives for issuers

The growth of the sustainable bond market might reflect investors' increasing focus on sustainable and responsible business issues as an incentive to invest in these assets. Nevertheless, it is not clear whether these assets provide economic incentives to issuers by trading at a premium, which is defined, for sustainable bonds, as a "greenium". At the same time, the oversubscription of sustainable bonds may also indicate that the market positively prizes sustainability, which could lower financing costs, attract investors and strengthen issuers' sustainability strategies. An analysis of these two components follows.

It is worth noting that, beyond economic incentives, issuers of sustainable bonds may also benefit from other advantages, such as reputational and strategic benefits, which can help attract a more diversified investor base.

#### 3.2.1. The "greenium" in the bond markets

Essentially, a greenium infers that the yield an investor accepts to invest in a green asset is less than the yield the same investor would be willing to accept to invest in an equivalent conventional asset. This means that the issuer of the bond can obtain financing at lower cost when issuing a green security. This differentiation manifests itself in the primary market as a higher price for the green bond compared to a conventional bond at issuance. The existence of a greenium in secondary markets would imply that a green bond is being traded at a superior price – or a lower yield – compared to a conventional bond with similar traits. This indicates that an environmentally conscious investor is willing to receive a reduced yield in return for the chance to contribute to a greener alternative.

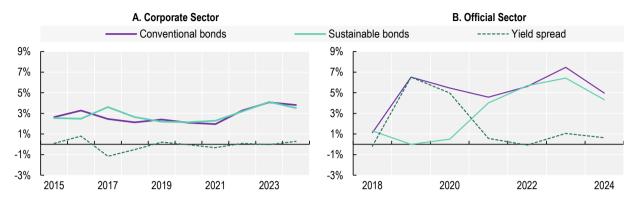
Several methodologies and key variables have been used for the potential identification of a greenium, with different, and not always consistent, results. The literature indicates varied outcomes concerning the presence of a green premium in the primary market, while showing a more consistent outcome on the secondary market (MacAskill et al., 2021<sub>[21]</sub>). The mixed findings suggest that if the greenium does exist as an incentive for issuers of sustainable bonds, it is generally minimal – with possible exceptions for some countries that are greatly vulnerable to the effects of climate change, transition and physical risks (Bolton et al., 2022<sub>[22]</sub>).

The results from an empirical OECD analysis are consistent with the studies on this topic. The premium for a bond being labelled as sustainable is not statistically significant and may depend on several variables that are not entirely related to the nature of sustainable or conventional bonds per se. Using a data sample consisting of 234 820 corporate bonds and 274 269 official sector bonds, and following the methodology in Bolton et al. (2022<sub>[22]</sub>), it has been possible to obtain two sets of quasi-exact matched bonds for both categories: 7 556 matched bonds for corporate bonds and 1 686 matched bonds for official sector bonds. Further restrictions were then applied to combine bonds with the shortest distance in terms of maturity and issue date, reaching a final sample of 2 954 matched corporate bonds and 384 matched official sector bonds.

In these two sets, each sustainable bond perfectly matches one conventional bond by issuer, domicile, currency, coupon type (fixed vs. floating coupon), and seniority. Constraints of similar issue date, maturity date and amount issued were also applied. Matching sustainable and conventional bonds issued by the same entity is essential because differences between issuers can affect the characteristics of sustainable bonds in ways that are not immediately observable.

Figure 3.1. Yield to maturity of conventional vs. sustainable bonds, by sector

There is no statistically significant yield premium for sustainable bonds



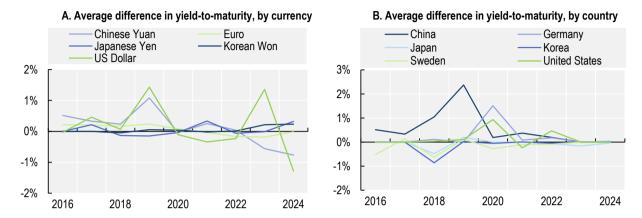
Note: Only pairs of matched bonds are considered. Matching procedures are based on an exact matching methodology based on issuer, domicile, currency, coupon type, and seniority, and the nearest matching for issue date, maturity year, and amount issued. The dotted lines in the figure show the yield spreads for the corporate and official sectors, respectively. The yield spread is calculated as the difference between the average yield to maturity of conventional bonds and that of sustainable bonds in the sample. A positive value, therefore, indicates a lower yield for sustainable bonds.

Source: OECD Corporate Sustainability dataset, LSEG.

The empirical work's main result, consisting of applying a t-test and a basic linear regression model, found no statistically significant evidence of a premium, here expressed as the impact of being labelled as sustainable on the yield to maturity. When looking at the difference in the yield to maturity between sustainable bonds and their matched conventional bonds, the trends do not show any particular and constant differences (Figure 3.1). Furthermore, when looking at the average premium calculated by currency and issuer's domicile, not only is the constant absence of a premium for "sustainability" confirmed, but a potential common trend is also missing. Examining the averages for the official sector during the 2018-2024 period, the sustainable premium of 17 basis points indicates that sustainable bonds had a slightly lower yield than conventional bonds. Conversely, in the corporate sector, the yield spread had the opposite side, with a difference of +18 basis points between the yield of sustainable and conventional bonds. However, in both cases, the model shows no evidence of a systematic difference in the yields.

Figure 3.2. Average difference in yield-to-maturity of conventional and sustainable bonds, by currency and domicile

Neither currency nor domicile seem to affect the yield spread between green and conventional bonds

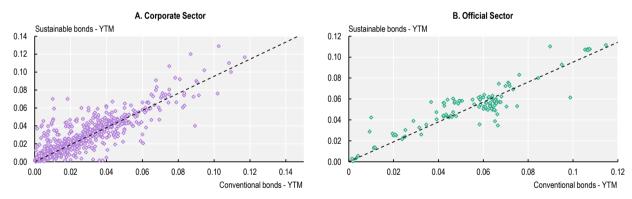


Note: Only pairs of matched bonds are considered. Matching procedures are based on an exact matching methodology based on issuer, domicile, currency, coupon type, and seniority, and the nearest matching for issue date, maturity year, and amount issued. The average yield difference by currency and country (domicile) is calculated on the entire dataset of sustainable bonds, from both the corporate and official sectors.

Source: OECD Corporate Sustainability dataset; LSEG.

Figure 3.3. Yield distribution of conventional vs. sustainable bonds, by sector

Yield spread varies across conventional and sustainable bonds, with no systematic evidence of a greenium



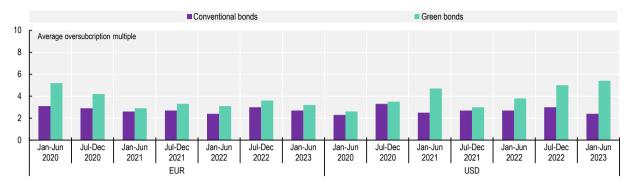
Note: Only pairs of matched bonds are considered. Matching procedures are based on an exact matching methodology based on issuer, domicile, currency, coupon type, and seniority, and the nearest matching for issue date, maturity year, and amount issued. Source: OECD Corporate Sustainability dataset, LSEG.

#### 3.2.2. Trends in oversubscription

Large issuances of green bonds in EUR and USD in recent years consistently showed slightly higher average oversubscription ratios (orders received over the value of the issuance) than conventional ones. The oversubscription ratios for USD-denominated bonds ranged from 2.6 to 5.2 for green bonds and from 2.3 to 3.3 for conventional bonds (Figure 3.4).

Figure 3.4. Average oversubscription of green and equivalent conventional bonds

Investor demand for green bonds consistently exceeded the amount offered in the recent years



Source: Climate Bond Initiative.

#### 3.2.3. Liquidity

Although the sustainable bond markets can benefit from the legal and regulatory environment for conventional bonds as well as the expertise of issuers and intermediaries, they can support the development of the sustainable bond markets only up to a certain point. Ultimately, a market is functional only to the extent that issuers and investors can find a counterpart to trade their security – that is if markets are liquid. Market liquidity refers to the degree to which trading an asset impacts its value. The wider and deeper the issuer and investor base for an asset, the more likely it is for investors to buy and sell assets without meaningfully affecting the current price, which reduces the costs associated with entering or exiting from a position in the market. Everything else held constant, there is a reinforcing loop in which the more issuers and investors are active in the market of an asset, the more attractive this market becomes for other investors and issuers due to the benefits of a liquid market. In that way, a diversified investor and issuer base is crucial for the development of markets.

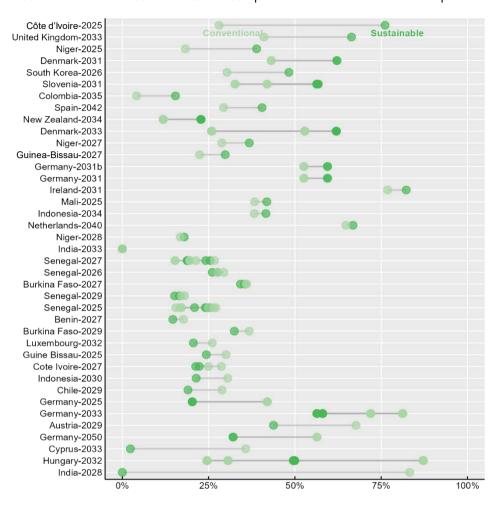
This section assesses the liquidity of sustainable bond markets by comparing the bid-ask spread between a set of matched sustainable and conventional bonds in the corporate sector. The set of bonds is the same as in the analysis of the greenium, and the matching controls for, among other variables, the issuer, currency, issue date, and maturity year (see Annex A for details). The bid-ask spread refers to the difference between the price at which participants offer to buy and sell a security. It is the most used proxy for market liquidity and the one that conveys the most information in bond markets (Fleming, 2002<sub>[23]</sub>).

Figure 3.5 compares the weekly average bid-ask spread since issuance between sustainable and conventional bonds from the official sector. It shows that, out of the 202 matched bonds, in 136 of them the average bid-ask spread is higher for the sustainable bond than for their conventional counterpart. This pattern was observed in multiple countries — namely France, Germany, Hungary, Lithuania, the Netherlands, Spain, Sweden, and the United Kingdom. Exceptions are found in a minority of cases, such as in Poland and Serbia. The trend persists across the maturity spectrum, with bonds maturing from 2025 to 2051.

On average, the spread is 3.2 basis points higher for sustainable bonds. It is worth noting that this difference in the average for the bid-ask spread over time for paired bonds reflects a moderate but persistent liquidity gap, i.e. the tendency for the bid-ask spread to be modestly higher for sustainable bonds (see Annex A for bond-specific time series data).

Figure 3.5. Bid-ask spread in matched official sector sustainable and conventional bonds

Sustainable bonds in the official sector tend to be less liquid than their conventional counterparts

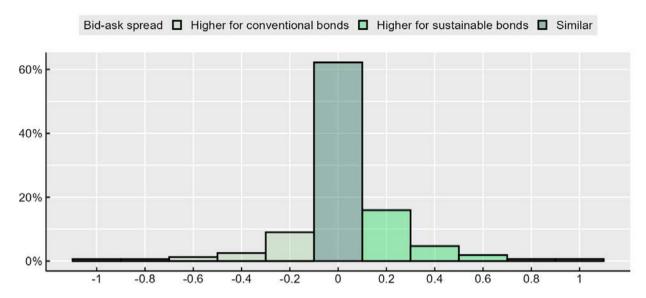


Source: OECD Corporate Sustainability dataset, LSEG, OECD calculations.

For corporate bonds, there is also a small tendency for conventional bonds to have a lower bid-ask spread compared to the corresponding sustainable bond pair. Figure 3.6 shows the distribution of the average differences in the bid-ask spread between 9 320 pairs of sustainable and conventional corporate bonds. This set of pairs covers companies from various continents and sectors, and securities with varying maturities. Although the distribution of these differences is centred around zero, meaning that finding a negligible difference in the bid-ask spread between the two types of instruments is more likely, a larger size of the distribution is on the right, which represents the cases in which the bid-ask spread is larger for sustainable bonds. A difference greater than 0.10 in the bid-ask spread occurs more frequently for sustainable bonds (25.2%) than for conventional ones (14.4%). On average, the bid-ask spread is approximately 10.6% wider for sustainable bonds than conventional ones. Additionally, the volatility of the spread confirms no consistent dominance in relative dispersion across bond types.

Figure 3.6. Bid-ask spread differences between sustainable and conventional corporate bonds

Liquidity tends to be slightly higher for corporate conventional bonds than for sustainable ones



Source: OECD Corporate Sustainability dataset, LSEG, OECD calculations.

#### 3.3. Investor protection

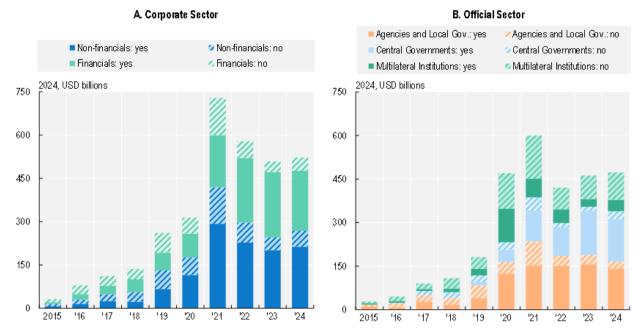
#### 3.3.1. Second party opinion providers

The market practice of providing a second party opinion on whether the bond contract is aligned with a specific sustainable bond standard and/or a taxonomy for sustainable activities imposes an extra cost for the issuance of sustainable bonds in comparison to that of conventional bonds. Nevertheless, second-party opinions can enhance investor protection. An independent assessment can improve investors' ability to compare the bonds' sustainability-related information and assess their investments' potential sustainable impact. This can bring further transparency and credibility to the market. The ICMA Principles recommend but do not require a second party opinion for issuers to claim alignment with the standard.

These service providers have increasingly assured sustainable corporate bonds globally, reaching 81% of corporate bonds and 69% of official sector bonds in 2024.

Figure 3.7. Sustainable bond issuance with (without) the use of a second party opinion provider

Second party opinions are playing a growing role in assuring sustainable bonds



Source: OECD Corporate Sustainability dataset, LSEG.

#### 3.3.2. Contracts

An analysis of a sample of 145 sustainable bonds issued between 2017 and 2024 can provide useful information on market practices for designing contracts. The sample is composed of the 72 largest issuances and 73 randomly selected issuances that have their prospectuses and legal documentation easily accessible in LSEG, Bloomberg or FactSet in English. These issuances belong to the following categories: GSS bonds issued by financial corporations (30); GSS bonds issued by non-financial corporations (28); SLBs issued by financial corporations (20); SLBs issued by non-financial corporations (31); GSS bonds issued by official sector entities (30); SLBs issued by official sector entities (6). The sample includes issuers from Australia, Bermuda, Brazil, Canada, Chile, China, Croatia, Estonia, France, Germany, Hong Kong (China), Israel, Italy, Japan, Jersey, Luxembourg, Mexico, New Zealand, Philippines, South Africa, Sweden, Thailand, Türkiye, the United Arab Emirates, the United States and Uruguay. The sample also includes multilateral institutions such as the African Development Bank and the European Union.

With respect to the "use of proceeds" of GSS bonds in the sample, three issues are worth noting: the possibility of refinancing; the existence of contractual penalties; and the commitment to provide annual assurance.

As allowed by the ICMA Use-of-proceeds Principles, three-fourths of the GSS bonds' legal documentation mention that the refinancing of existing eligible projects with the proceeds is allowed. Nevertheless, the documentation does not estimate the share of financing versus re-financing, differently from what the mentioned principles recommend. Notably, no prospectus in the sample specifically mentions that the proceeds would not be used for refinancing. The possibility of refinancing an eligible asset may incentivise the issuer not to sell it, but, evidently, no new investment will be made because the asset already exists. Actually, in some circumstances, it may even be negative for society to incentivise a company with access to the sustainable bond markets to keep an asset instead of selling it to another company that may be able

to operate the asset more efficiently but which does not have easy access to public capital markets (for instance, if the former is a listed company and the latter is not).

No GSS bond prospectus in the sample refers to a contractual penalty if the issuer does not use all proceeds to finance or refinance eligible projects. As a matter of fact, the prospectus of a major non-financial corporate issuance defines that 70% of the proceeds would be invested in eligible green projects but the remaining would be used as working capital of the issuer. More than half of the legal documentation notes that non-compliance with the commitment to use proceeds for eligible projects would not be considered an event for the default of the GSS bond. Of course, this does not mean that issuers can simply disregard their obligation to use the proceeds according to what is defined in the bond contract. Moreover, while symptomatic of their lack of importance for market participants, some prospectuses may not have included penalties that are indeed established in the bond contract. However, leaving as the only recourse to investors filing a lawsuit for a damages award may not offer them enough safety in some jurisdictions, especially because the effective damage may be difficult to assess in such a case.

Still in relation to the GSS bonds in the sample, two-thirds of the bonds' documentation (64%) establishes that the issuer will provide an annual assurance of the use of proceeds ("allocation report"). In two cases, the assurance of the allocation reports will be published quarterly. This is a good practice and, if the chosen assurance provider is highly qualified and effectively independent from the issuer, the information will be valuable for investors. One-third of the prospectuses (33%) establish that the issuer will provide an annual assurance – and, in two cases, a quarterly assurance – of the impact of the projects financed by the bond's proceeds.

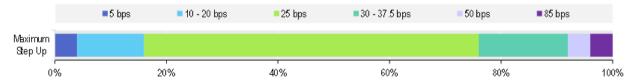
With regards to the sustainability-linked bonds in the sample, two issues are worth noting: the consequence of not reaching their sustainability performance targets; and the commitment to provide a report on the performance against the KPIs relevant to the targets.

All but three issuers in the sample face the same consequence if they do not meet the sustainability performance target(s) set in their SLB contract: an increase in the annual coupon rate after the predetermined date to reach the target (Figure 3.8). Increases range from 5 basis points (i.e. 0.05% per annum) to 85 basis points (i.e. 0.85% per annum). In 54% of the cases, the increase amounts to 25 basis points. Only in the case of three non-financial corporate issuances, the "penalty" for not reaching the target was a one-off payment of 10, 20, or 25 basis points. The money was to be donated either to eligible environmental organisations or local governments, or to be used to buy carbon credits and to fund green projects (and not paid to the bondholder as in all the other SLBs).

Interestingly, 39% of SLBs in the sample have only one Sustainability Performance Target (SPT), one-third have two SPTs, and the remaining bonds have three SPTs.

Figure 3.8. Maximum coupon rate increase of sustainability-linked bonds

Half of the SLBs foresee a 25-basis points coupon increase if the sustainability performance target(s) are not met



Source: Bond legal documentation, OECD analysis and calculations.

Two-thirds (68%) of the SLBs' prospectuses in the sample, including four SLBs from the official sector, commit to annually provide a report on the performance against the SPTs and relevant KPIs. For the other SLBs in the sample, such a report would be provided only after the targets were supposed to be met, or

the prospectus did not mention a commitment to issue a performance report. For two sovereign SLBs in the sample, the reporting frequency is not annual for all KPIs because, as explained in the prospectuses, the assessments depend on costly data collection (e.g. satellite images).

The annual disclosure of the performance is a requirement by the ICMA Sustainability-Linked Bond Principles In some cases, it was also promised that an assurance provider would be hired to ensure the quality of the reports mentioned. While accounting and reporting on the issuer's performance against relevant KPIs may be costly, in some cases the annual disclosure of this information – and not only when the target is supposed to be reached – may be material for investors. Particularly, this will be the case if targets are ambitious and the established penalties are relevant in relation to the yield of the issuance, because investors may incorporate the possibility of receiving a higher coupon in the future when pricing the SLB.

In any sovereign bond issuance, investors must be aware that it may be difficult for them to obtain or enforce judgements of foreign courts against a sovereign government. Specifically, in the case of SLBs, it may even be challenging for investors to enforce the payment of the due coupon increase in the national judiciary of the sovereign issuer if a sustainability performance target has not been met. The existence of a bond contract may not be considered sufficient reason to limit the power of newly elected officials to legislate and to establish public policies that are different from the ones envisaged at the time of the bond issuance. Of course, a change in a SLB contract or the decision of not paying the coupon increase contractually due would probably harm the reputation of the sovereign issuer with investors, and this may be enough to deter any incompliance.

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# Annex A. Methodology for data collection and classification

#### **OECD Corporate Sustainability dataset**

Sustainable bonds are mainly collected from LSEG. This dataset contains deal-level information of nearly 19 000 bonds issued by both the corporate and official sectors from 109 jurisdictions since 2013. This dataset provides a detailed set of information for each sustainable bond issue, including the identity, nationality, and industry of the issuer; the type, interest rate structure, maturity date and rating category of the bond, the amount of and "use of proceeds" obtained from the issue. The issuance amounts were adjusted by 2024 US Consumer Price Index (CPI).

For sustainable bonds, values for corporations, agencies, local governments, and multilateral institutions correspond to the "gross proceeds" (i.e. the amount paid by investors to acquire the bonds) in most cases. Where the information on the gross proceeds could not be retrieved, the "original amount issued" (i.e. the face value of the bonds in their legal documentation) has been used as follows:

- for corporates, 38% of the amount issued from 2013 to 2024 corresponds to the original amount issued, whereas the remaining 62% corresponds to the gross proceeds. For that 62% in which the gross proceeds are used, the gross proceeds are 7% higher than original amount issued. However, the amount issued in "all corporate bonds", which includes conventional bonds, corresponds to the gross proceeds amounts in all cases.
- for agencies and local governments and multilateral institutions, 23% of the amount issued from 2013 to 2024 corresponds to the original amount issued, whereas the remaining 77% corresponds to the gross proceeds. For that 77% in which the gross proceeds are used, the gross proceeds are 4% higher than original amount issued.
- for central governments, only the original amount issued (i.e. the face value of the bonds) is displayed for consistency with other OECD publications on sovereign debt markets.

Agencies and local governments include national government agencies (e.g. KFW, Transport for London), local governments (e.g. Prefecture of Shiga, Province of Ontario), and national development banks (e.g. China Development Bank, Brazilian Development Bank). This category does not contain US Municipals that are not readily available in LSEG. The category Central Governments includes governments, treasuries, and central banks. The category Multilateral Institutions includes organisations formed by three or more jurisdictions (e.g. Asian Development Bank, International Finance Corp), and the European Union.

The category "Developed Asia-Pacific excl. US" includes Australia, Canada, Hong Kong (China), Japan, Macau, New Zealand, Singapore, South Korea and Chinese Taipei. "Latin America" includes jurisdictions both in Latin America and in the Caribbean. "Europe" includes all jurisdictions that are fully located in the region, including the United Kingdom and Switzerland but excluding Russia and Türkiye. "Middle East and Africa" includes jurisdictions classified as "Middle East and Central Asia" in IMF's World Economic Outlook Database. Excluding those already considered in "Developed Asia-Pacific excl. US" and Israel. "Emerging and Developing Asia excl. China" includes all jurisdictions in Asia that are classified as emerging market

and developing economies in IMF's World Economic Outlook Database excluding China. "Others" includes jurisdictions that are not represented in the other categories (e.g. Türkiye).

LSEG data contains both Regulation S and Rule 144A sustainable bonds. Rule 144A presents a safe harbour from the registration requirements of the Securities Act for resales of securities not fungible with securities listed on a US securities exchange to qualified institutional buyers. Regulation S provides a safe harbour from the registration requirements of the Securities Act for offerings made outside the United States (Bruckhaus, 2017<sub>[24]</sub>). The calculations presented take account of this factor, and an exercise to eliminate the duplication when a single bond was issued both under Regulation S and Rule 144A was performed.

When calculating the outstanding amount of bonds in a given year, issues that are no longer outstanding due to being redeemed earlier than their maturity should also be deducted. Outstanding values refer to the "principal amount" or otherwise to the "original amount issued" (i.e. the face value of the bonds in their legal documentation) when the "principal amount" could not be retrieved. The early redemption data are obtained from LSEG and cover bonds that have been redeemed early due to being repaid via final default distribution, called, liquidated, put or repurchased. The early redemption data are merged with the primary bond market data via international securities identification numbers (i.e. ISINs).

In Table 2.1, for the GSS bonds where more than one "use of proceeds" was disclosed by the issuer, the amount issued by the GSS bond was equally split for each of the use of proceeds ("flat allocation"). For example, if a GSS bonds amounting to USD 1 000 displayed *clean transport* and *energy efficiency* as promised use of proceeds, USD 500 was allocated into the category *clean transport* and USD 500 into *energy efficiency* one.

In Table 2.2, for the SLBs where more than one key performance indicator was disclosed by the issuer, the amount issued by the SLB was equally split for each of the key performance indicators ("flat allocation"). For example, if a SLB amounting to USD 1 000 displayed *renewable energy* and *sustainable forest management* as key performance indicators, half of that amount was allocated into the category *renewable energy* and half into the *sustainable and forest management* one.

In Figure 2.11, the values correspond to the sum of the amounts issued in 2023 and 2024. The five displayed categories stand for: Large listed, advanced (bond issuers that are MSCI World Index constituents as of January 2025), Large listed, emerging (bond issuers that are MSCI Emerging Markets Index constituents as of January 2025), Smaller listed (bond issuers that are listed on a stock exchange but that are not constituents of the MSCI World nor the MSCI EM indexes), and Unlisted subsidiary with a listed parent (bond issuers that were delisted prior to 2023, or that have never listed their equity, and which have their immediate or ultimate parent listed), Other unlisted company (other bond issuers that were delisted prior to 2023, or that have never listed their equity). The bond issuer is categorised as listed if an International Securities Identification Numbering (ISIN) exists and if it is associated with a valid LSEG Identification Code (RIC) made up of the bond issuer's ticker symbol and an exchange code (based on the name of the stock exchange). If the bond issuer does not display an ISIN coupled with a RIC or its RIC shows a delisting year prior to 2023 (e.g. SPS.N^H97), it is classified as unlisted.

#### The greenium analysis

For greenium analysis, two datasets are used. The first one includes 234 820 for corporate bonds and the other one 274 269 bonds issued by official sector entities. Both datasets consider only issuers that have issued at least one sustainable bond and one conventional bond to ensure a balanced representation, to control for credit and exchange rate risk. To ensure data integrity and robustness in subsequent regression analysis stages, the focus is directed towards bonds with comprehensive data across specific variables.

These variables are the following: issuer, domicile, currency, seniority, issue date, maturity date, coupon, coupon type, yield-to-maturity and the amount issued in USD.

The *Nearest Neighbour Matching* technique was used for the matching process. This is a well-established method in propensity score matching analyses. A propensity score model was estimated using the selected variables to estimate the probability of each bond being sustainable. The matching was performed in a 1:1 ratio, meaning each sustainable bond was matched to one conventional bond. Propensity scores range between 0 and 1. In the context of propensity score matching, a propensity score is the probability of a unit (a bond, in this case) being assigned to a particular treatment given a set of observed characteristics. In other words, it is the conditional probability of receiving treatment (being a sustainable bond) as a function of observed characteristics. A score closer to 1 indicates a higher likelihood of being a sustainable bond, given the observed features, while a score closer to 0 suggests a lower probability.

With the Nearest Neighbour Matching, bonds were matched based on:

- nearest values in terms of issue date, maturity date, and amount issued
- exact matching on issuer, domicile, currency, coupon type, and seniority.

The objective of this technique is to achieve equilibrium in the distribution of observable characteristics between the treated group (sustainable bonds) and the control group (conventional bonds), thereby minimising bias and enabling a more dependable comparison between the two groups. The aim is to simulate a randomised experiment, where the sole systematic difference between green and conventional bonds is their "treatment" status, allowing any disparities in outcomes to be attributed to the sustainable status with a higher degree of conviction. This methodology allows for a robust comparison between sustainable and conventional bonds, controlling for potential confounding variables. It ensures that possible differences observed in yield-to-maturity can be attributed mainly to the bonds' "sustainable" status.

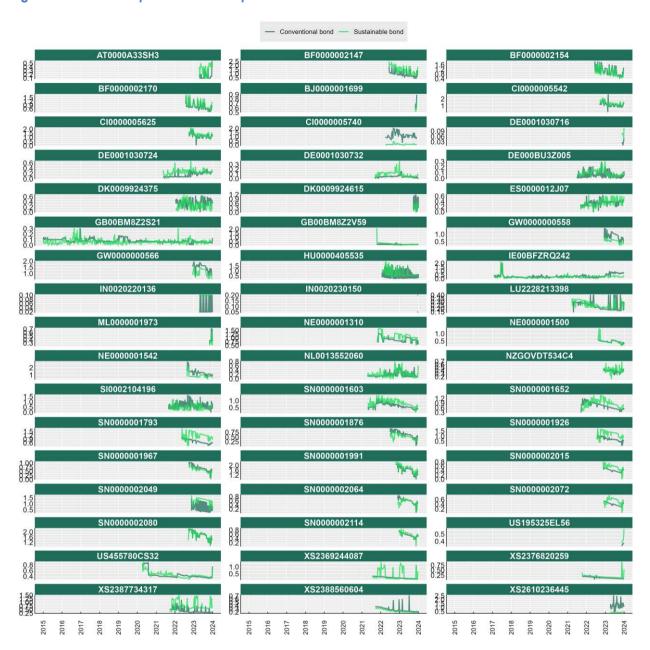
The obtained datasets include 1 686 official sector bonds (843 sustainable and 843 conventional) and 7 566 corporate bonds (3 783 sustainable and 3 783 conventional). Further constraints were applied to minimise potential bias when observing the yield differential between sustainable and conventional bonds. By controlling for issue and maturity dates, pairs of bonds were identified where neither the issuance nor the maturity date differed by more than two years compared to the paired bond. Final datasets comprised 1 477 pairs of corporate bonds and 192 pairs of official sector bonds.

Finally, a regression analysis was carried out to test the independence of the "sustainable effect". Alongside the yield to maturity, seniority, currency, coupon type, issuer and domicile were added as covariates. This was done to eliminate residual differences (i.e. to correct minor discrepancies that may have remained between groups after matching), improve model precision by reducing residual variance and obtaining more stable estimates and assess the robustness of the sustainable effect, i.e. whether it persists even when considering other factors.

#### **Bond-specific liquidity analysis**

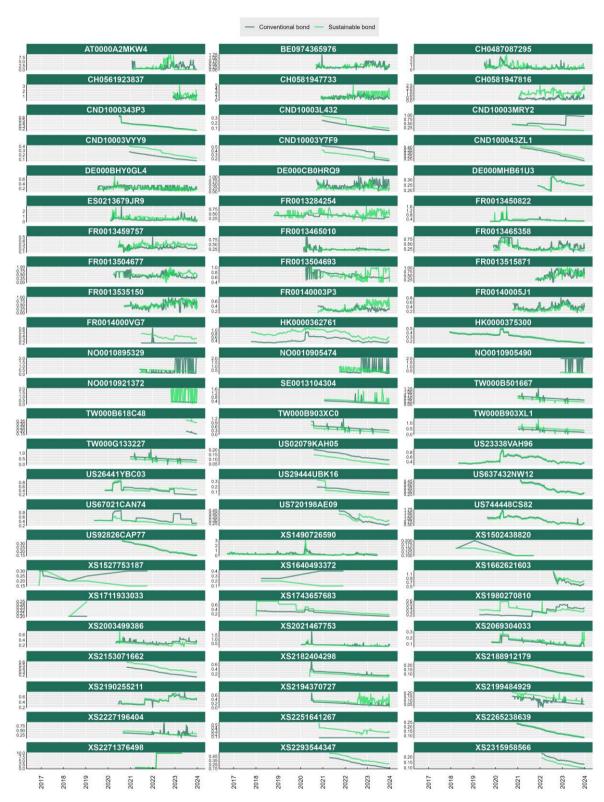
This section briefly presents the bond-specific bid-ask spread time series for selected bonds from the official (Figure A A.1) and corporate sectors.

Figure A A.1. Bond-specific bid-ask spread time series for the official sector



Source: OECD Corporate Sustainability dataset, LSEG, OECD calculations.

Figure A A.2. Bond-specific bid-ask spread time series for the corporate sector



Note: Due to size constraints, only 72 bonds with the best matching statistics are displayed. Source: OECD Corporate Sustainability dataset, LSEG, OECD calculations.

## **Sustainable Bonds**

### **Trends and Policy Recommendations**

Sustainable bonds have grown rapidly in the past decade. These bonds can play an important role in accelerating the transition to a sustainable economy by encouraging issuers to adopt better practices and expand their investor base. This report explores key issues and trends in sustainable bond markets. It aims to inform policymakers and market participants on the goals of investors when acquiring these instruments, how they may influence the decisions of corporate and official sector issuers, and what can be done to further develop the market.



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