1.4 COVERED BONDS AS FINANCING INSTRUMENT FOR GREEN AND SOCIAL INVESTMENTS

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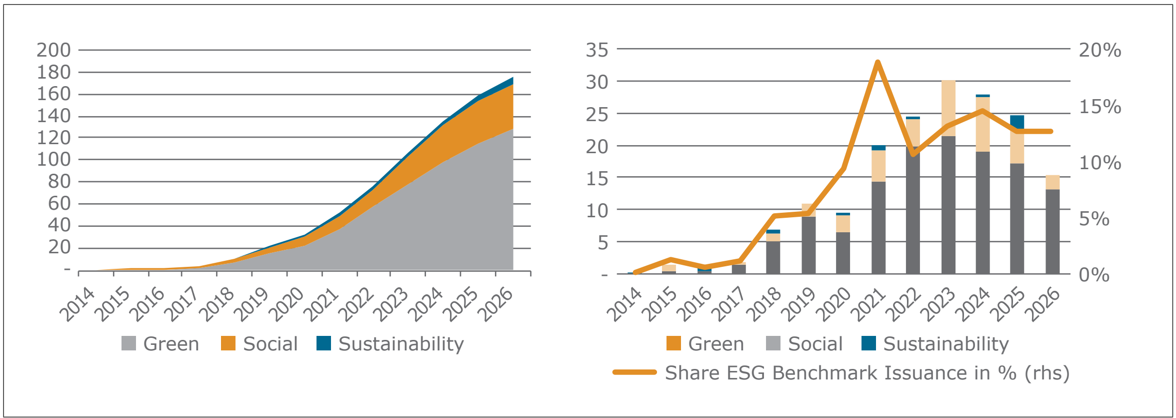
MARKET OVERVIEW

More than ten years after the first ESG covered bond came to market, the segment has become an established part of the covered bond universe rather than a niche add-on. What began in 2014 with a single ESG-labelled transaction has developed into a sizeable market across jurisdictions, currencies and issuer types. The first EUR benchmark ESG covered bond followed in 2015, and since then the product has gained a permanent role in the primary market. In the current year, ESG covered bonds account for around 11% of EUR benchmark covered bond issuance. This is below the 2024 peak of 13%, but still confirms that ESG supply remains a relevant pillar of the asset class.

Over this period, the issuer base has broadened substantially. So far, 88 issuers from 21 jurisdictions have entered the ESG covered bond market. Issuance activity reached at least EUR 25 bn in each of the last four years. In 2025, 49 ESG covered bonds were issued by 36 different issuers across public and private placements, different currencies and transaction sizes. Total issuance in 2025 reached roughly EUR 30bn equivalent. By the end of June 2026, publicly placed ESG covered bonds outstanding amounted to just under EUR 137bn. The market is clearly euro-dominated: ESG covered bonds have been issued in nine currencies, but EUR-denominated transactions represent more than 72% of the number of deals and 84% of outstanding volume. Private placements add more than EUR 19bn and extend the currency spectrum by three additional currencies.

> FIGURE 1: SUSTAINABLE COVERED BONDS: HISTORY OF MARKET GROWTH AND GROWING IMPORTANCE



Aggregated issue volume in EUR bn. Source: Bloomberg, LBBW Research

Despite this progress, the pace of further expansion remains constrained by the availability of eligible ESG assets. For many issuers, the volume of qualifying green or social collateral effectively sets the ceiling for repeat issuance. In addition, ESG covered bond supply is shaped by relative funding considerations, including the choice between senior and covered funding, achievable execution benefits, the potential greenium and overall issuance certainty.

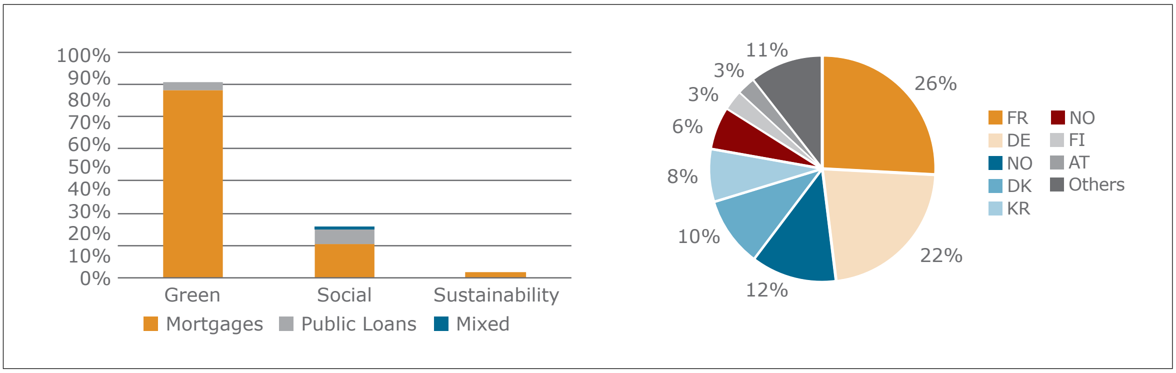
A particularly important milestone in the current year has been the arrival of covered bonds issued under the EU Green Bond Standard (EuGBS). Nordea Mortgage Bank opened this segment with a three-year transaction, marking the first EuGBS-labelled covered bond. BPCE SFH and Argenta Spaarbank followed with further EuGBS covered bond transactions. While issuance under the EU Green Bond Standard is still at an early stage, the first covered bond transactions mark an important milestone for the market. They show that covered bonds can be aligned with the more demanding EuGB framework, which offers a higher degree of regulatory standardisation than traditional ICMA-aligned green covered bonds, including requirements such as taxonomy alignment of the underlying assets and a pre-issuance factsheet.

In terms of ESG format, green covered bonds remain the dominant category. The proceeds of ESG covered bonds are primarily used to finance or refinance assets linked to the environmental transformation of the building sector on the one hand and to social housing on the other. However, the range of eligible uses is broader, including areas such as water supply, healthcare facilities and public transport. Green covered bonds account for around 73% of total ESG covered bond volume issued to date, compared with 23% for social covered bonds and around 3% for sustainability covered bonds.

The cover pool composition confirms the strong connection between ESG covered bonds and mortgage finance. Around 90% of ESG covered bonds outstanding are mortgage-backed, while public sector covered bonds represent approximately 9%. Mixed cover pools account for only around 1% of the market. The social covered bond segment is somewhat more diverse, with different types of cover assets used more frequently than in the green segment, reflecting the broader range of eligible use-of-proceeds categories.

From a country perspective, France has moved into the leading position and now represents around 26% of ESG covered bond issuance volume. Germany follows with roughly 22%, ahead of Norway with 12% and Denmark with 10%. This distribution highlights that the market is no longer driven solely by a small number of early movers. Instead, ESG covered bonds have become a cross-border funding format, with both European and non-European issuers contributing to market depth.

> Figure 2: Types of cover for ESG covered bonds; country distribution of ESG issuance



Amount outstanding. Source: Bloomberg, LBBW Research

The index footprint of ESG covered bonds has also increased. In the iBoxx Euro Covered index, ESG covered bonds now account for 11.5%, compared with 8.4% at the end of 2023. The ESG covered bond volume included in the index has grown to EUR 108bn, confirming that ESG-labelled covered bonds have become a structural component of the benchmark universe rather than a marginal segment.

Overall, ESG covered bonds are now firmly established in the covered bond market. Future growth will depend primarily on eligible asset availability, funding considerations and the practical relevance of the EU Green Bond Standard. The first EU GBS covered bond transactions are unlikely to have a major impact on supply in the short term, but they set a useful precedent for future green covered bond issuance linked to taxonomy-aligned assets and transparent reporting.

SUSTAINABLE COVERED BONDS FINANCE A BROAD VARIETY OF ASSETS

Sustainable covered bonds are mostly issued in accordance with the four pillars of ICMA's voluntary Green Bond Principles (GBP), Social Bond Principles (SBP) or Sustainability Bond Guidelines (SBG), and have a dedicated environmentally sustainable and/or a social use of proceeds. Sustainability-linked bonds (SLB) remain scarce in the banking segment and have not yet been issued in covered bond format.

These ICMA frameworks promote best practices through global guidelines, emphasizing the importance of impact and disclosure in the sustainable bond market.

> GBP were first introduced in 2014, marking the beginning of a structured approach to green finance in the bond market;

> SBP followed in 2017, replacing earlier guidance and addressing the growing need for financing projects with social impact;

> SBG were introduced in 2018 to support bonds that combine both green and social objectives.

The Principles put emphasis on transparency and integrity of the information that is disclosed and reported by issuers through four core components and two key recommendations.

> Figure 3: Sustainable covered bonds seek alignment with the GBP, SBP and SBG

Four components of alignment					
I	**Use of proceeds:**		Demonstrate how the issuer will use proceeds from the issuance of the sustainable bonds		
	Green			**Social**	
1	Renewable energy	√	1	Affordable basic infrastructure	√
2	Energy efficiency	√	2	Access to essential services	√
3	Pollution prevention and control	√	**3**	**Affordable housing**	**√**
4	Environmentally sustainable management of living natural resources and land use	√	4	Employment generation, and programmes designed to prevent and/or alleviate unemployment stemming from socioeconomic crises, climate transition projects and/or other considerations for a "just transition" (such provision and/or promotion could include SME financing and microfinance)	√
5	Terrestrial and aquatic biodiversity	√			
6	Clean transportation	√			
7	Sustainable water and wastewater management	√			
8	Climate change adaptation	√			
9	Circular economy adapted products, production technologies and processes, and/or certified eco-efficient products	√	5	Food security and sustainable food systems	√
			6	Socioeconomic advancement and empowerment	√
10	Green buildings	√			
II	**Process for project evaluation and selection:**		Issuer to outline due diligence in terms of how it identifies and ultimately decides on suitable projects		
III	**Management of proceeds:**		Clearly state how the proceeds from the sustainable bonds will be used		
IV	**Reporting:**		The issuer of the sustainable bond should provide regular updates and transparent information concerning projects, proceed utilisation and allocation		
Key recommendations for heightened transparency:					
i	Green, social or sustainability bond frameworks				
ii	External reviews				

Source: ICMA

The ICMA promotes two recommendations for transparency.

(i) Issuers should explain the alignment of their sustainability bond with the four core criteria in an ESG bond framework. In doing so, issuers are encouraged to also incorporate any relevant information on their overall ESG strategy.

(ii) Issuers are recommended to seek pre- and post-issuance assessment by an external review provider to ensure that projects financed and the reporting are aligned with the use of proceeds and commitments set out in the bond framework. Also, issuers should consult the Guidelines for External Reviews for recommendations and explanations on the different types of reviews.

The exclusivity of assets that secure green/social bonds versus non-exclusivity

A key feature of use of proceeds bonds is that they (re)finance an earmarked portfolio of new or existing eligible green and/or social assets. This portfolio may have an overlap with assets that are eligible as cover pool assets but does not necessarily have to.

The ICMA Principles make a clear distinction between secured green/social bonds where the net proceeds are used to (re)finance sustainable assets that exclusively secure the green/social bonds only (**secured green/social collateral bonds**) versus those where the (re)financed sustainable assets may or may not secure the specific bond in whole or in part (**secured green/social standard bonds**).

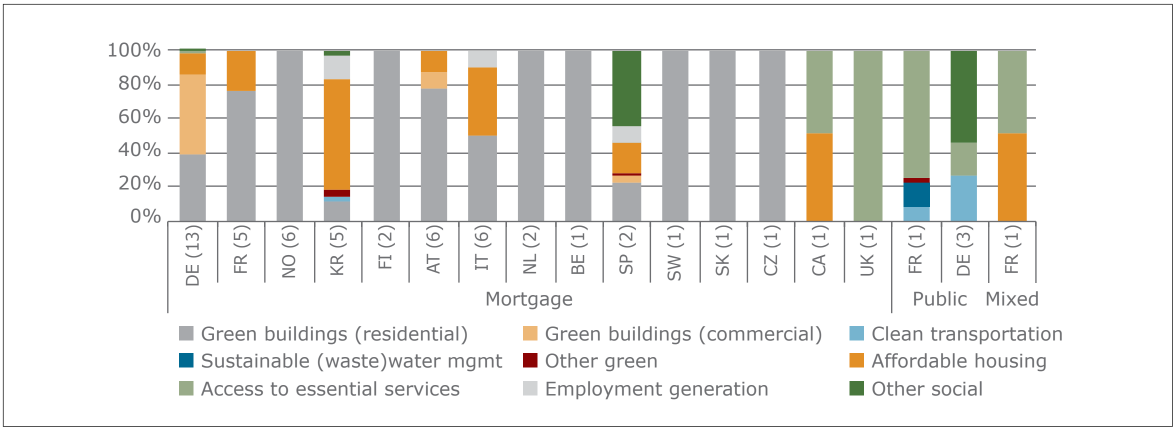
At this point only the social covered bonds issued by one of the South Korean covered bond issuers meet the definition of secured green/social collateral bond. All other sustainable covered bonds outstanding would fit into the category secured green/social standard bond.

Within the latter category of bonds, there are sustainable covered bonds that allocate proceeds to a portfolio of sustainable loans that are not part of the cover pool. A prominent example are the sustainable covered bonds issued by South Korean banks under the South Korean covered bond law. Separate from their use of proceeds, these sustainable covered bonds are secured by sufficient cover assets meeting the asset eligibility criteria stipulated by law and/or the bond programme documentation.

However, most sustainable "standard" covered bond issuers would generally strive to have sufficient eligible green and/or social loans in the cover pool to at least match the amount of sustainable covered bonds outstanding. For that reason, these loans not only have to meet the criteria stipulated in the sustainable bond framework, but also the asset eligibility criteria under the respective covered bond legislation or programme documentation. It is important to bear in mind that sustainable and vanilla covered bonds issued against one cover pool do have the same preferential claim on both the sustainable and non-sustainable assets that are part of the cover pool.

Some banks issue both green and social covered bonds against the same cover pool, either under one single sustainability bond framework, or via separate green and social frameworks. In turn, there is also an example of a covered bond issuer that issues both social public sector covered bonds and social mortgage covered bonds via the same social bond framework. Moreover, proceeds can be assigned to a distinct portfolio of assets per bond, or to a broader portfolio of sustainable assets (re)financed by multiple sustainable (covered) bonds (portfolio approach). The latter approach is most common.

> FIGURE 4: USE OF PROCEEDS SUSTAINABLE EUR COVERED BONDS*



* Shares of the sustainable proceeds allocations (bonds outstanding end of June 2026). Only EUR denominated covered bonds with a minimum EUR 250mn size are included. The number of issuers/pools per country are in brackets.
Source: Issuer information, ING

Green **mortgage covered bonds** primarily finance energy-efficient commercial or residential buildings (67% of all use of proceeds), with green residential real estate loans being the most important use of proceeds category (53%). Banks with mortgage cover pools (partly) comprised of social housing loans often issue social or sustainability mortgage covered bonds. Affordable housing loans represent 17% of the sustainable covered bond use of proceeds aggregate.

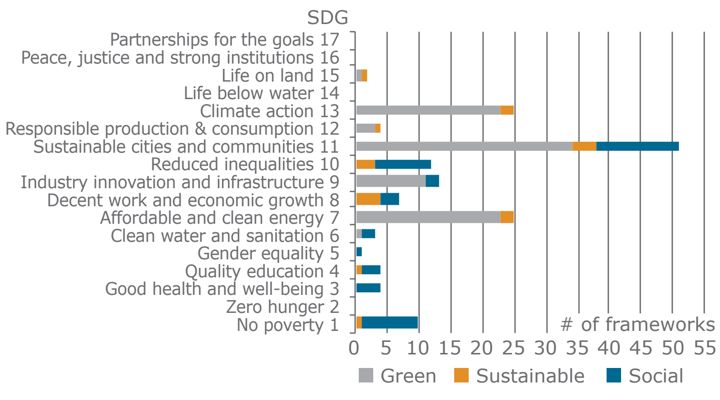
Access to essential services is the most important use of proceeds category for sustainable **public sector covered bonds** (8% of all use of proceeds). Public sector covered bonds were at first solely issued in social format to finance community projects in areas of healthcare and education. However, there are nowadays also public sector covered bonds outstanding with a green use of proceeds, (re)financing among others clean transportation projects (2% of all use of proceeds).

Matching the use of proceeds with the sustainable development goals

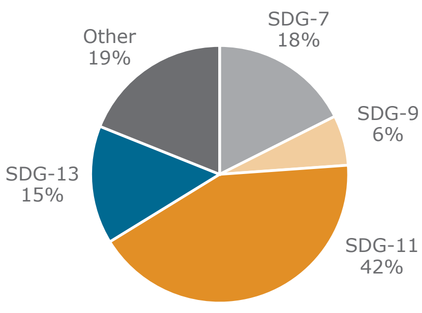
Sustainable covered bonds generally also aim to support the achievement of the United Nations sustainable development goals (SDG), established in 2015. Green use-of-proceeds bonds tend to align with a narrower set of SDGs compared to those focusing on social objectives. Among them, sustainable cities and communities (SDG 11) is the most frequently targeted goal.

While most sustainable bond frameworks indicate which SDGs are supported per use of proceeds category, only a few banks report the exact allocation of proceeds to specific SDGs. To estimate how sustainable covered bond proceeds are distributed across the SDGs, we applied a pro-rata matching of the reported proceeds allocations to the SDGs associated with each use of proceeds category. This analysis suggests that 42% of all sustainable covered bond proceeds support SDG 11 – sustainable cities and communities. This is followed, at a considerable distance, by SDG 7 – affordable and clean energy (18%), SDG 13 – climate action (15%) and SDG 9 – industry, innovation and infrastructure (6%).

> FIGURE 5: SDGS CONTRIBUTED TO BY SUSTAINABLE COVERED BONDS



> FIGURE 6: SHARE OF PROCEEDS ALLOCATIONS TO DIFFERENT SDGS



* Only for sustainable EUR covered bonds

Source: Issuer information, SPO providers, ING

Impact reporting – Delivering the underlying impact ambition

Besides issuer disclosures on use of proceeds allocations, impact reporting for green and social covered bonds is a key instrument for ensuring the transparent and credible use of the funds raised. It allows investors, regulators and the public to understand how and to what extent environmental and/or social goals have been achieved. For issuers, it is about demonstrating transparency and credibility to investors.

If the covered bond issuer is a credit institution that issues other forms of green or social bonds, such as senior unsecured, rather than a specialised institution that issues only covered bonds, the impact report will often show data related to the whole green or social portfolio. In rare cases, the issuer discloses a separate impact report for the cover pool.

> Figure 7: Many issuers are guided by recognized frameworks such as:

Standard	Description
ICMA GBP ICMA SBP ICMA SBG	Annual, transparent impact reporting as best practice is a key component. Recommends: - The use of qualitative and, where feasible, quantitative performance indicators - The disclosure of the underlying methodology and/or assumptions used - Adoption of guidance provided by the Harmonized Framework for Impact Reporting
ICMA Harmonised Framework for Impact Reporting (Green Bonds) ICMA Harmonised Framework for Impact Reporting for Social Bonds	- Provides metric-specific KPIs and methods (e.g. CO_2 savings per EUR million invested) - Provides qualitative and quantitative performance indicators (e.g. number of people who benefit)
Minimum standards for Green Pfandbrief Minimum standards for Social Pfandbriefe	Based on GBP Based on SBP Impact report needs to be made available via link on vdp website to issuer's own website
SDG reference	Environmental impacts are often also assigned to the SDGs
EU Green Bond Standard (GBS)*	Binding for "European Green Bonds", including mandatory impact reporting

*Until 30th June 2026 three covered bonds were issued as EuGB

Impact reporting involves presenting the environmental and social impact achieved by projects financed by green, social or sustainability bonds in quantitative and qualitative terms. As the objectives of financing green or social projects differ, the indicators used to measure the impact of the proceeds from issuance depend primarily on the intended use. While carbon performance is one of the key performance indicators for green covered bonds (whether they finance or refinance green buildings or green transport), the indicators for social covered bonds are more varied due to the vast range of potential projects that can be financed.

The ICMA Harmonised Framework for Impact Reporting (for green bonds) provides various core indicators to measure the energy and carbon performance, water efficiency and savings, waste management and certification standards of green buildings, where available. For green buildings, for example, the ICMA core indicators for energy and carbon performance are

> kWh/m² of gross building area (GBA) p.a.; and % of energy use reduced/avoided vs local baseline/building code

> kgCO2/m² of GBA p.a; and annual greenhouse gas (GHG) emissions reduced/avoided in tonnes of CO2 equiv. vs local baseline/baseline certification level; and/or

> % of carbon emissions reduced/avoided vs local baseline/baseline certification level.

The issuers of green covered bonds, which are used to finance or refinance green buildings, typically only report on the core indicators of energy and carbon performance.

Although the methodologies used to calculate impact metrics, which measure avoided energy use and GHG emissions, differ slightly from one another, covered bond issuers generally calculate impacts in a two-step process. For this, metrics such as energy consumption, a benchmark or reference value, energy sources, emission factors are necessary.

Two-step process (methodology principles):
1. Energy savings are calculated as the difference between the building energy consumption and the respective benchmark.
2. Determination of the avoided CO_2-emissions: Energy savings are multipiled with specific carbon emissions factors.

> Impact is typically calculated per m² and year. To calculate the total energy savings rescpectively, the total CO_2-savings, the calculated energy savings or the CO_2-savings per building are multiplied with the building area.

> As a last step the total CO_2-savings are multiplied by the LTV ratio (Loan balance to value of the collateral) to calculate the bank's financing share of the CO_2-savings.

To calculate these metrics, information on the energy consumption of the underlying property, benchmark or reference value, and the energy sources and emission factors is necessary.

The primary data source for the energy consumption of the collateral is the building's EPC. For buildings where banks are unable to obtain actual energy consumption figures, they typically estimate energy savings based on building certificate requirements, national building requirements, year of construction and/or floor area. To achieve this, a combination of different sources is often required.

The benchmark for specific energy consumption (kWh/m²) is usually determined based on the average energy demand of comparable building types, as provided by national data sources.

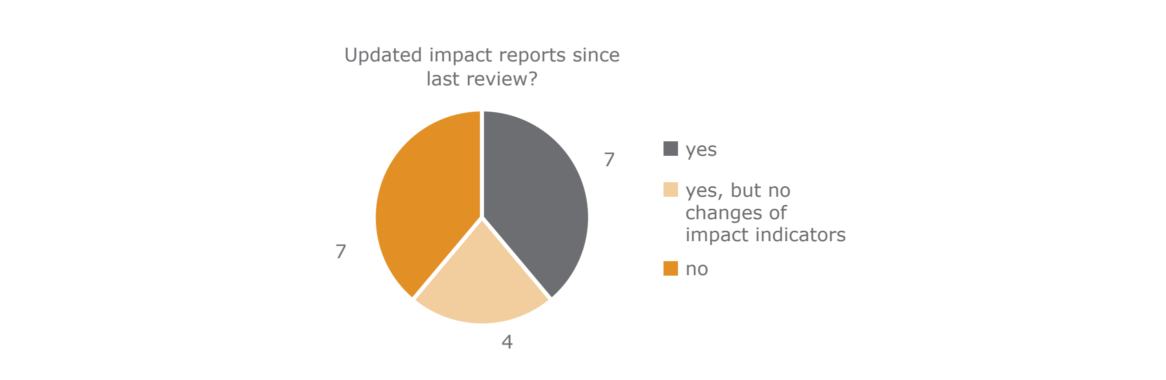
CO_2 emissions are calculated using standard conversion factors for specific energy sources (i.e. electricity mix and district heating supply) for a given region or country. Impact reports generally disclose the source of the emission factors and sometimes list the factors for various energy sources in a table, along with the applied factor(s). Sources range from national statistics created by federal agencies, industry initiatives or associations.

When it comes to the approaches used to assess and disclose GHG emissions, issuers either use national standards or those developed by the Partnership for Carbon Accounting Financials (PCAF), or they engage consultants who develop their own approaches.

When the performance indicators of a selected group of eighteen impact reports from the largest green covered bond issuers in twelve countries were re-examined, it was found that eleven reports had been updated since May 2025. Most of these reports showed changes in presentation, with some adding more transparency to the impact calculation methodology used and others making minor extensions to indicators of energy or carbon performance, which are not currently core. The following indicators were added:

- Energy consumption in kWh/m² p.a.
- Energy consumption in kWh/m² p.a. of the respective benchmark
- Energy savings (MWh/year) – financing share – per million euros
- GHG emissions (tCO_2e/year) – prorated

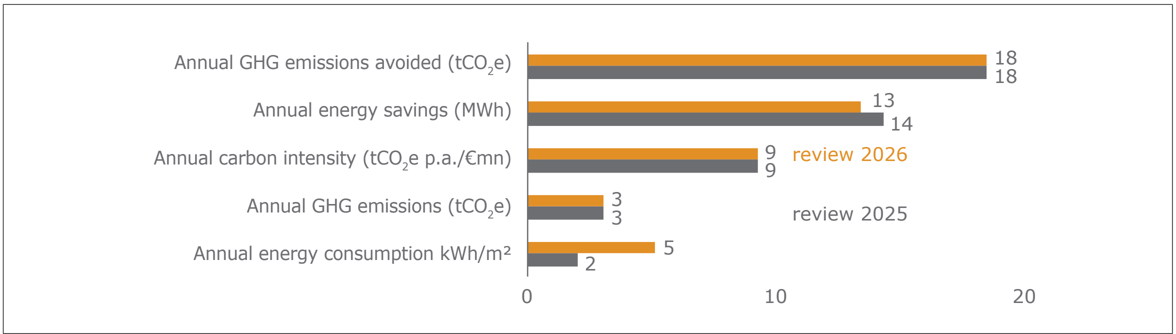
> FIGURE 8: UPDATED REPORTS MOSTLY SHOW EXTENSION OF INDICATORS THAT ARE LESS COMMON UP TO NOW



Number of reports that were renewed since the last review in June 2025
Source: 18 impact reports from issuers of green covered bonds located in AT, BE, CZ, FI, FR, DE, IT, NL, NO, SK, SP, SE), vdp

Issuers are, however, maintaining the indicators they have disclosed. Each issuer reported 'GHG emissions avoided (tCO_2e)' and fourteen reported on 'Annual energy saving (MWh/m² or kWh/m²).' Fewer than half of the reports indicated carbon impact intensity (tCO_2e per million euros). Some reports even break these figures down by building type or provide additional data.

> FIGURE 9: GREEN BUILDINGS: ABSOLUTE ANNUAL GHG EMISSIONS (tCO_2/m^2) ARE STILL RARELY DISCLOSED

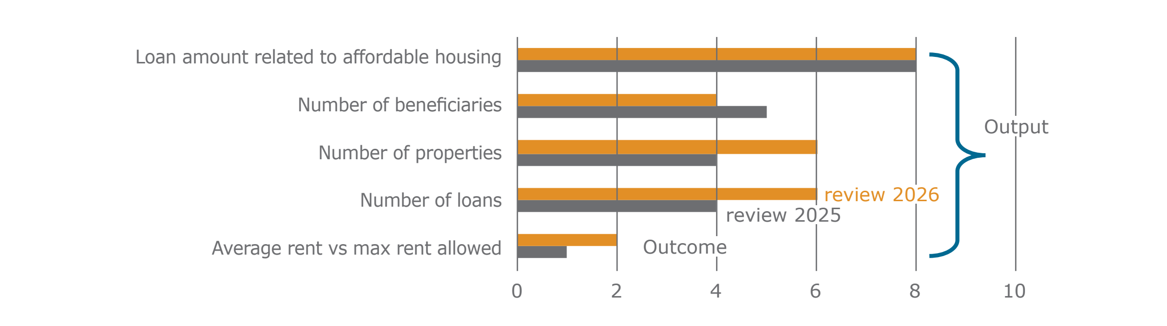


Number of green bond impact reports disclosing energy and carbon performance indicators
Source: 18 impact reports from issuers of green covered bonds located in AT, BE, CZ, FI, FR, DE, IT, NL, NO, SK, SP, SE), vdp

The review also revealed that sometimes it is unclear whether the disclosed energy or carbon performance indicators consider only the financing share of the issuer. For example, only ten of the eighteen reports made it clear in the indicator nomenclature that the disclosed annual GHG emissions avoided referred only to the financing share.

Finally, it was found that, only a few reports disclosed the absolute amount of GHG emissions in tonnes of CO_2e, either for the total allocated amount or per million Euro invested. Best practice reports and market standards will be developed further, and investor demands to meet reporting requirements may lead to further disclosure of data to deliver transparency.

> FIGURE 10: AFFORDABLE HOUSING: OUTPUT INDICATORS MORE FREQUENT, IMPACT INDICATORS STILL MISSING



Number of social/sustainability bond impact reports disclosing social indicators
Source: 8 impact reports from covered bond issuers from AT, CA, DE, SP, FR, SKO, SE

Impact reporting on social projects financed by a covered bond issuer refers to the ICMA Harmonised Framework for Impact Reporting on Social Bonds. This framework provides various indicators to measure the impact of social projects.

Output indicators typically focus on the number of people benefiting from relevant projects or the products resulting from an organisation's activities. For the category affordable housing, examples of output indicators include the number of individuals or families benefiting from subsidised housing, the number of affordable dwellings built, and the number of homeless people supported. Outcome indicators measure improvements or changes in this area, including rental costs compared to regional or national rent indices and reductions in the number of people experiencing poor housing and homelessness. Impact indicators address longer-term outcomes, such as those proposed by the framework for affordable housing: improved safety and shelter.

Upon re-examining a selected group of eight impact reports from large social covered bond issuers in seven countries (though the composition changed with regard to two issuers), refinancing projects of affordable housing, it was found that all reports specified the loan amount related to affordable housing. Typical output indicators, such as the number of beneficiaries and the number of properties or units financed, were also disclosed. Two reports included an outcome indicator. All of the reports that were reviewed last year have been updated and it has been found that some have increased the number of indicators. However, impact indicators are not yet being disclosed.

MARKET DYNAMICS, PRICING AND RELATIVE VALUE

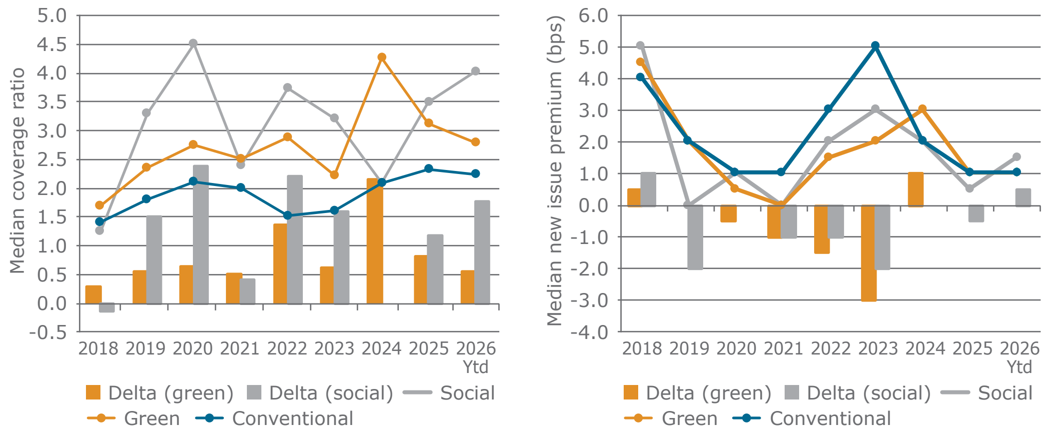
Market dynamics:

Green and social covered bonds benefit from the same high security standards as regular covered bonds. At the same time, printing in green or social format involves additional costs for an issuer (i.e. additional ESG reporting, drafting and maintaining a framework, costs of SPO(s)). Hence one could assume that issuers are only willing to make these investments if printing a green or social bond compensates for these costs.

Primary market data:

From figure 11 it can be derived that both green and social covered bonds – measured by the (median) coverage ratios of their order books – are able to attract larger order books than regular covered bonds and therefore have the benefit of reduced execution risk compared to conventional format. It is important to note, however, that the social covered bond market remains relatively small, and our findings for this subtype are based on a limited set of jurisdictions.

> FIGURE 11: MEDIAN COVERAGE RATIO AND MEDIAN NEW ISSUE PREMIUM ON EUR BENCHMARK COVERED BONDS (AUSTRIA, GERMANY, FRANCE, NETHERLANDS, FINLAND, NORWAY AND SWEDEN) VERSUS GREEN AND SOCIAL COVERED BONDS



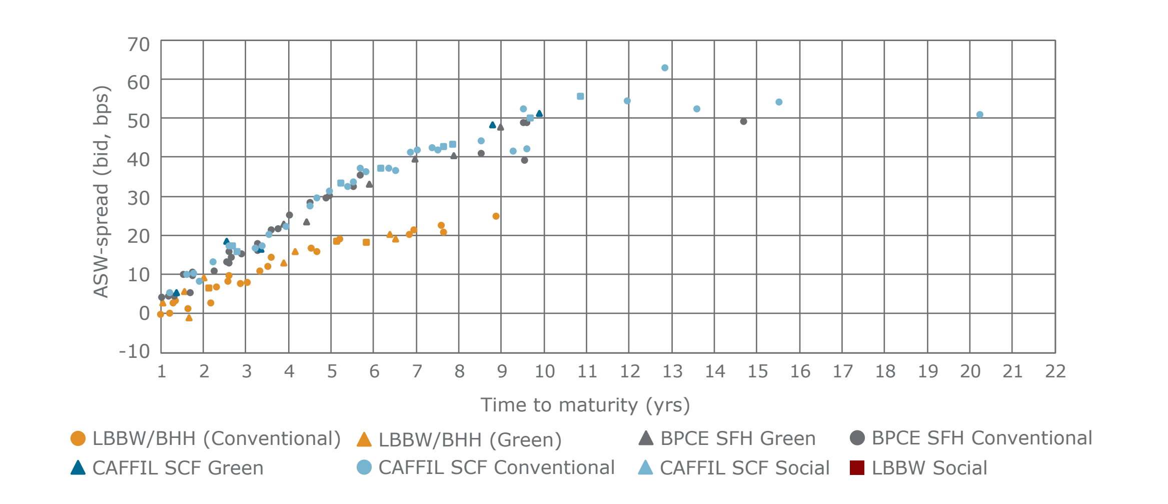
Source: Rabobank Research

At the same time, market data on new issue premiums (NIP) as displayed in figure 12 indicates that ESG-labelled covered bonds were able to benefit from lower NIPs compared to regular covered bonds between 2021 and 2023. However, since 2024 we observe a different story: the median NIP for green and social issuances is higher than for conventional bonds. This effect is mainly driven by timing differences and issuer-specific reasons. During 2024, NIPs were higher at the start of the year, a period with relatively more ESG-labelled covered bonds. Market conditions improved throughout the year and as a result less green issuance was printed when conditions improved and hence NIPs were lower. For both 2025 and 2026 YTD, the data indicates that ESG-labelled covered bonds have not benefitted from a meaningful pricing advantage over conventional covered bonds. The overall conclusion for the last 18 months is that there is no visible greenium.

Secondary market data:

A different perspective can be generated by studying secondary market data. We compared ASW-based average spreads as of 30 June 2026 for issuers with both ESG-labelled and conventional covered bonds outstanding. Overall, spread differentials remain limited, providing little evidence of a persistent green or social premium. Some issuer-specific differences can be observed depending on the maturity segment of the curve, although these are generally limited to around 1bp. The clearest example is BPCE, where two green covered bonds in the 4–6yr area trade approximately 1bp tighter than comparable conventional bonds. However, this differential gradually disappears at longer maturities. Overall, the secondary market evidence continues to suggest that investors do not consistently differentiate between ESG-labelled and conventional covered bonds in terms of pricing.

> FIGURE 12: A SELECTION OF FRENCH AND GERMAN ISSUERS WITH CONVENTIONAL COVERED BONDS AND GREEN OR SOCIAL COVERED BONDS OUTSTANDING



Source: Rabobank Research

PUBLIC SECTOR COVERED BONDS AS A KEY INSTRUMENT TO FINANCE GREEN AND SOCIAL INVESTMENTS BY THE LOCAL PUBLIC SECTOR

1. Introduction

In the European Union, local and regional governments are responsible for over 50% of total public investments. A significant part of these inestments contributes to achieving key social and environmental objectives in sectors such as education, public transportation, public healthcare, waste management and water management.

Local authorities primarily use the loan market to finance these investments. In many European countries, public sector covered bonds are used to refinance a significant share of these loans to local government entities.

2. Eligibility of local government lending under european covered bond regulation

Loans to local authorities or guaranteed by local authorities within the European Union are eligible as cover pool assets compliant with the definition provided by article 129 of the CRR.

1. To be eligible for the preferential treatment …, covered bonds …shall be collateralized by any of the following eligible assets:

   (a) exposures to or guaranteed by central governments, ESCB central banks, public sector entities, regional governments or local authorities in the Union

   Additional conditions apply for loans to local authorities outside the European Union under the same article:

   (b) … exposures to or guaranteed by …third-country regional governments or third-country local authorities that are risk weighted as exposures to institutions or central governments and central banks … and that qualify for the credit quality step 1 …, and exposures within the meaning of this point that qualify as a minimum for the credit quality step 2 …, provided that they do not exceed 20 % of the nominal amount of outstanding covered bonds of the issuing institutions.

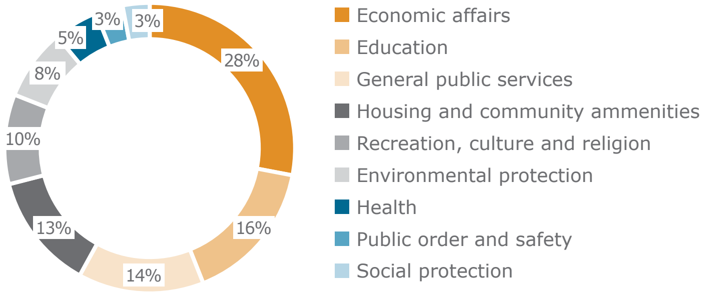
Financing green and social investments

Local governments exercise a wide range of responsibilities across Europe. Key responsibilities include:

- Local infrastructure, including the local rail and road network;
- Primary and secondary education;
- Local and regional public transportation;
- Basic services such as drinking water supply, sewerage, waste collection and treatment;
- Urban planning and development;
- Parts of the public health care system;
- Public order and safety, in particular municipal police forces, and emergency and fire-fighting services;
- Social housing.

The total volume of investments by local governments in the European Union amounted to EUR 304bn for the year 2025[1]. A significant share of these investments has important social and environmental benefits. Public education represents 16% of total local government investments, environmental protection including waste management and water management stands around 8%, and public healthcare around 5%.

> FIGURE 13: 2025 EUROPEAN UNION LOCAL GOVERNMENT INVESTMENTS BY FUNCTION



Source: Eurostat, 2025 data

3. Financing sources for local government investments

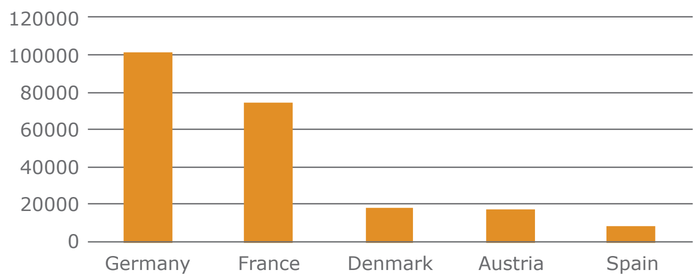
With a few exceptions, local governments generally lack the critical size for direct bond issuance on capital markets. Local governments across Europe generally rely almost exclusively on the loan market as a source of funding.

4. Local government financing provided by covered bond issuers

Covered bonds represent an attractive refinancing instrument for local government lenders. Covered bonds provide issuers with a possibility to provide small loans to a large number of local government borrowers, and to refinance these assets via the issuance of covered bonds. For investors, these instruments provide a high degree of liquidity and a strong credit quality. Germany and France are currently by far the largest markets with over EUR 175bn outstanding public covered bonds for these two markets together, equivalent to well over 75% of the overall public sector covered bond market.

1 All data is limited to the local government level, and for example do not include German federal states.

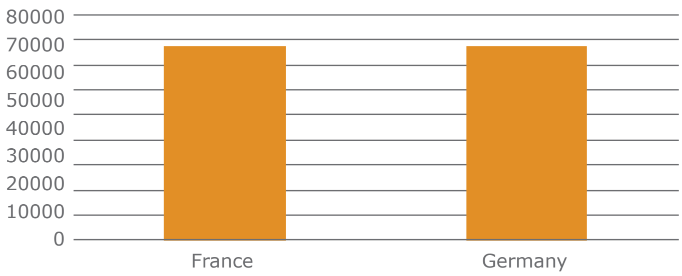
> Figure 14: Outstanding public sector covered bonds by country 2024 (EUR m)



Source: ECBC

These covered bonds play a key role for the financing of local government investments. French local government cover pool exposures for the main public sector covered bond issuers totaled EUR 77bn[2] at the end of 2025. For German local government entities, total cover pool exposures at the end of 2025 amounted to EUR 78bn.

> Figure 15: Cover pool exposures to local government entities (EUR m, 31.12.2025)



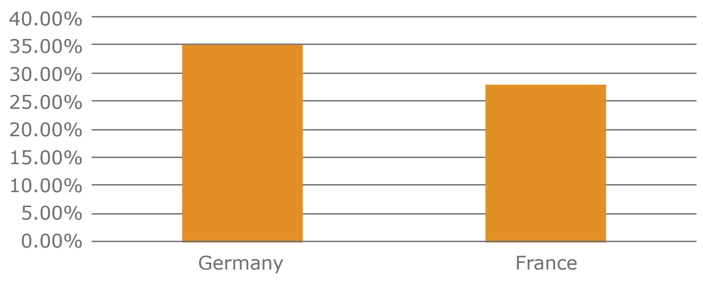
Source: Quarterly reporting published by vdp, Compagnie de Financement Foncier, SG SCF, Arkéa SCF, Caffil

Financing provided by covered bond issuers represents a significant share of the total financing raised by local government entities. For France, exposures by covered bond issuers represent close to 30% of total local government debt. For Germany, loans held in public sector cover pools are equivalent to around 35% of total German local government debt[3].

2 This figure includes both public sector and mixed cover pool exposures.

3 As there are important differences between local public sector and private sector accounting rules, these figures only represent estimations.

> Figure 16: Estimated share of local government debt refinanced via covered bonds (as of 31.12.2025)



Source: Quarterly reporting published by vdp, Compagnie de Financement Foncier, SG SCF, Arkéa SCF, Caffil, Eurostat data

5. Issuance of green and social public sector covered bonds

Loans by public sector covered bond issuers will generally take the form of general-purpose loans financing the overall investment budget of a local authority.

In recent years, a number of issuers have set up frameworks for green and social public sector covered bonds. The main challenge has been to link the lending provided by covered bond issuers to specific green and social projects.

One potential solution is to set up specific loan contracts linked to local authorities' social or green investments. The loan contract will typically contain the necessary information to identify eligible investments, and to collect the appropriate impact reporting data.

An alternative approach for lenders to the local public sector is to provide financing to entities with activities strictly limited to activities with green or social objectives, for example public hospitals, public education facilities or municipal water boards.

Investments by local authorities often have both environmental and social objectives at the same time. As an example, the construction of a new school will be an investment in public education, but at the same time, it may also be considered a green project, if the construction is an energy efficient building. Another example would be the construction of a new tramway line with a focus on providing clean local public transportation, but at the same time providing important social benefits. Sustainable water management is another area where social and environmental objectives are closely linked.

Green and social public sector covered bonds have been issued with financing provided to areas including healthcare, water management, waste management and clean public transportation. However, green and social bond issuance under public sector covered bond format has remained relatively limited compared to issuance of green and social mortgage covered bonds.

Green public sector covered bonds

There are currently two issuers of green benchmark public sector covered bonds with a total of five outstanding benchmark transactions.

The proceeds of these transactions have been allocated to the following project categories:

> Clean transportation

> Sustainable water management

- Waste management
- Renewable energy
- Energy efficiency of construction

In addition, recent green public sector covered bond transactions have also included the financing of green export contracts benefitting from a public guarantee, in addition to green investments by local authorities.

Social public sector covered bonds

There are currently nine outstanding social public sector covered bond benchmark transactions by two issuers.

These transactions have financed social public sector investments across the following categories:

- Essential services including healthcare, education and research
- Social housing
- Public drinking water supply
- Social cohesion, including programmes for urban renewal and rural revitalization, and digital inclusion

In addition, recent social public sector covered bond transactions have been issued to finance social export contracts with social benefits, in addition to social local public sector transactions.

6. Conclusion and perspectives

Local governments in most European countries rely on lending provided by banks to finance new investments. Public sector covered bonds are an attractive tool for banks to provide a large number of small loans to local authorities, and to refinance these loans via the issuance of liquid bonds on international capital markets.

Over 75% of public sector covered bonds have been issued by French and German issuers. In these two countries, a very significant share of local authority investments is financed by public sector covered bond issuers.

Issuance volumes of green and social public sector covered bonds still significantly lag behind issuance of green and social mortgage covered bonds. This can be explained by the fact that lending to local authorities typically finances the overall budget of the local authority. To establish a link to green and social investments, public sector covered bond issuers will need to set up specific loan contracts to limit the financing to green and social projects. An alternative approach is to finance entities with an activity limited to social or environmental missions, for example in the area of water management or healthcare.

Recent green and social public sector covered bond transactions have been issued to finance green and social export contracts in addition to green and social projects by local public sector entities. Looking ahead, this type of issuance could boost overall issuance volumes of green and social public sector covered bonds.