



Fixed Income Special – ESG update

NORD/LB Floor Research

June 2025
Marketing communication (see disclaimer on the last pages)

NORD/LB

Fixed Income Special

ESG update 2025

Authors

Dr Norman Rudschuck, CIIA
Floor analyst, SSA/Public Issuers
Managing Director
norman.rudschuck@nordlb.de

Lukas-Finn Frese
Floor analyst, SSA/Public Issuers
Associate Director
lukas-finn.frese@nordlb.de

Lukas Kühne
Floor analyst, Covered Bonds/Banks
Associate Director
lukas.kuehne@nordlb.de

Contents

| | |
|---|-----------|
| ESG update 2025: An overview | 4 |
| The market for ESG bonds | 5 |
| Greenium and socium+ under scrutiny | 11 |
| Update: EU Taxonomy | 18 |
| Update: EU Green Bond Standard | 23 |
| Update: ICMA Bond Principles | 27 |
| Outlook: Fresh impetus for the ESG segment | 30 |
| Publication overview | 31 |
| Contacts at NORD/LB | 32 |

Floor analysts:

Covered Bonds/Banks

Lukas Kühne
lukas.kuehne@nordlb.de

Alexander Grenner
alexander.grenner@nordlb.de

SSA/Public Issuers

Dr Norman Rudschuck, CIIA
norman.rudschuck@nordlb.de

Lukas-Finn Frese
lukas-finn.frese@nordlb.de

Tobias Cordes, CIIA
tobias.cordes@nordlb.de

NORD/LB:
[Floor Research](#)

NORD/LB:
[Covered Bond Research](#)

NORD/LB:
[SSA/Public Issuers Research](#)

Bloomberg:
[RESP NRDR <GO>](#)

ESG update 2025: An overview

Authors: Dr Norman Rudschuck, CIIA // Lukas-Finn Frese // Lukas Kühne

Fifth edition of our ESG update: Markets and regulatory aspects in a state of flux

As part of our annual ESG update, we summarise the most important developments within the ESG segment in addition to exploring the future opportunities and challenges presented by this part of the debt market. In addition to the global market activities seen over the course of the last year, regulatory developments are again at the forefront of our coverage, including the European Green Bond Standard and amendments to the EU Taxonomy, among other aspects, in what is now the fifth edition in this publication series. In this study, we shall also examine the forms and characteristics of a potential greenium for selected issuers in the covered bonds and SSA segments that we cover. We will also highlight the most important revisions to the established ICMA Bond Principles. Below, we provide an overview of the key topics covered as part of our NORD/LB ESG update 2025.

ESG primary market in 2024: Growth following two years of decline

After two years in which the market had contracted, this trend was reversed last year: in total, the global new issuance volume in 2024 came to EUR 912.4bn, reflecting growth of +5.6% Y/Y. However, developments across our core segments did vary to a considerable extent. While the new issuance volume on the SSA market was again higher than in 2023, issuance activities in the covered bond segment actually declined slightly. In our study, we will again take a look at the market for ESG senior bonds as well. In this context, according to our records issuance activities were far more dynamic in the category for senior non-preferred bonds.

Greenium and socium+: Green and social bonds as core refinancing pillars

For the first time, this year's ESG update empirically examines the potential for a greenium and what we have defined a "socium+" in connection with certain issuers in our coverage. The results show that investors are occasionally forced to accept spread discounts for green bonds from selected issuers in our core segments. However, these discounts vary considerably from issuer to issuer and when it comes to the asset class under consideration. A similarly disparate picture emerges when it comes to social bonds as well.

Initial placements of EU Green Bonds; Omnibus package amends the EU Taxonomy

Issuers were officially given the green light to place bonds carrying the new green label at the end of 2024, with the result that the first public issuers have already started to approach investors with an EuGB. However, we have not yet recorded any covered bonds in this new format. Our view of this situation is essentially that the barriers associated with the underlying EU Taxonomy remain too high for now. However, the European Commission is striving to simplify regulations in the area of sustainability reporting and has already put forward initial proposals grouped under the Omnibus package.

ICMA Bond Principles left largely unchanged

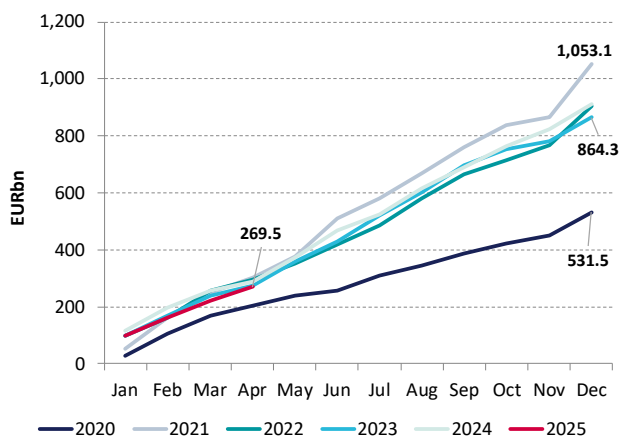
Only minor changes were made to the ICMA Bond Principles last year. For example, guidelines for "Green Enabling Projects" were defined for the first time and the framework for sustainability-linked bonds was extended, among other measures.

The market for ESG bonds

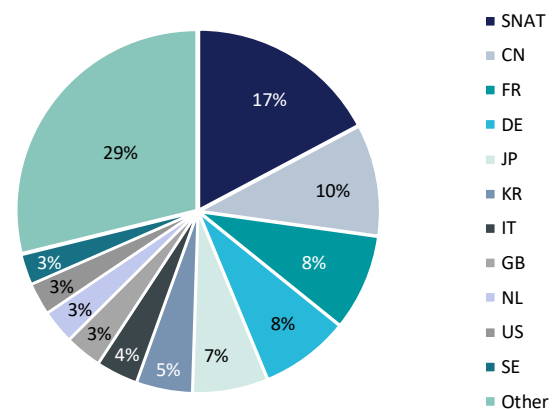
New ESG issuances increase slightly in 2024

The global market for sustainable bonds – by our definition this includes bonds in the green, social, sustainability and sustainability-linked categories – reached another high level last year with a new issue volume equivalent to EUR 912.4bn, so after two years of decline it has now registered an increase again. In comparison with the volume recorded in 2023 of EUR 864.3bn, the value corresponds to growth of +5.6% year on year. While the record volume of just over EUR 1.000bn in 2021 has therefore come a little closer, it is still very much out of reach overall. Nevertheless, the fact remains that a cumulative volume of EUR 4.3tn in sustainable bonds has been issued over the past five years. In terms of the breakdown by jurisdiction, issuers from the supranationals segment once more topped the ranking. In absolute figures, the share of 17% reflected a new issue volume of EUR 157.2bn. China occupies second place in the rankings again, with a volume of EUR 91.0bn, equivalent to a share of 10%. Moreover, in relation to Chinese issuance activities, it should be noted that it was not until an overhaul of the Chinese regulations in mid-2022 that green bonds were required to be 100% aligned with the globally established ICMA Bond Principles (previously it was 70%). Incidentally, the threshold remains at 50% for state-owned enterprises. In this way, large portions of new ESG issues from China cannot be equated with European issuances, for example, due to the fact that the proportion of “non-aligned” bonds (i.e. not aligned with established frameworks) here is barely of significance. With regard to the EU, it has become a major player in the global market for ESG bonds. With the NGEU (NextGenerationEU) stimulus package for a sustainable recovery of the EU, which features a volume of more than EUR 800bn (of which at least EUR 250bn in green bonds), the EU is expected to become the largest green bond issuer worldwide by 2026. Among the Member States themselves, France and Germany both stood out with shares of 8% each in the global ESG issue volume in 2024.

Cumulative global new issues of ESG bonds (EURbn)



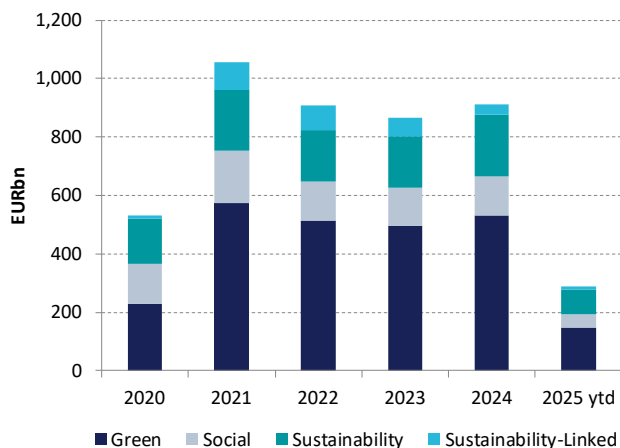
ESG issuances in 2024: Breakdown by jurisdiction



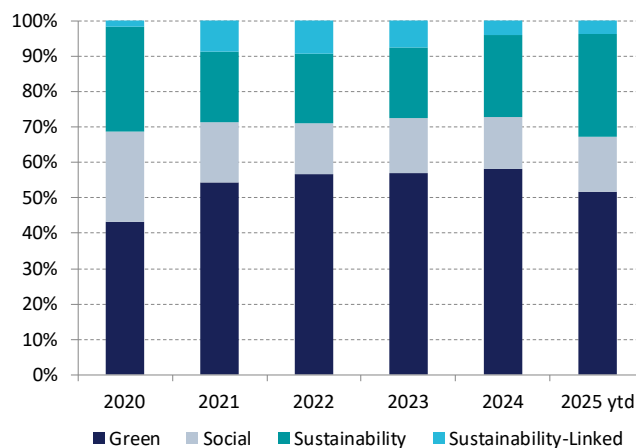
New ESG issuances in 2024: Increase in green and sustainability

The volume of ESG bonds newly placed on the market last year increased again for the first time since 2021. However, this development did not apply to all sub-segments in our definition of the ESG universe. The green bond sub-segment was again the strongest, with a new issue volume of EUR 532.1bn (+8% Y/Y). Sustainability bonds (EUR 211.9bn; +22% Y/Y) followed in second place, with social bonds (EUR 131.8bn; -1% Y/Y) and sustainability-linked bonds (EUR 37.4bn; -42% Y/Y) occupying third and fourth. Once more, the sharp decline in sustainability-linked bonds is certainly eye-catching here. These are instruments suitable for transitional financing that are not linked to the use of proceeds but rather relate to ESG performance indicators defined in advance and are therefore particularly suitable for small issuers. In last year's study, we already reported on the declining momentum of new issue volumes on account of a challenging market environment. This trend was again confirmed in 2024, with growth in sustainability-linked bonds ending up in negative territory at the aforementioned level of -42% year on year. In terms of relative market shares, there has been no real change in the picture compared with 2023: for example, green bonds once again accounted for the majority at 52%, while sustainability bonds were ranked second at 29%, followed by social bonds with a share of 16%. The market share of sustainability-linked bonds also fell as a result of the significant decline in issuance activity and accounted for a share of just 4% in 2024.

ESG bonds: Global new issues (EURbn)



ESG bonds: Relative market shares of new issues

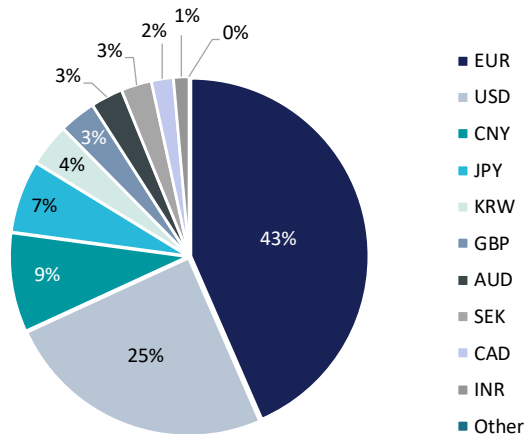


Source: Bloomberg, NORD/LB Floor Research

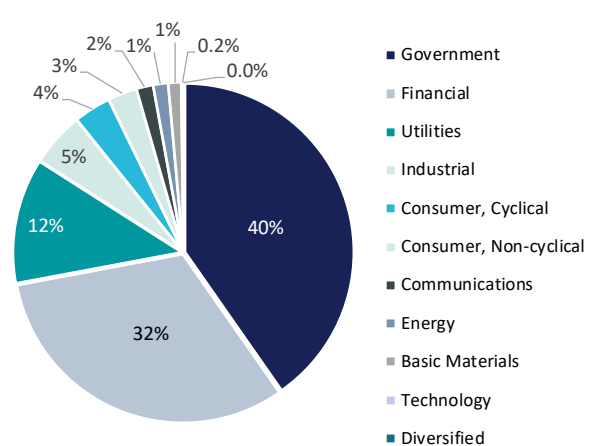
Public Issuers and financials account for the largest new issue volumes worldwide

Around 40% of the green, social, sustainability and sustainability-linked bonds issued in 2024 were attributable to the "government" segment, while the "financials" segment accounts for a share of 32%. Compared with the previous year, the top two have therefore not changed: in 2023, the respective shares stood at 37% (government) and 35% (financials). Public Issuers were able to further extend their lead at the top of the rankings. A look at the industrial sectors shows that utilities continue to play an important role within the sustainability bond universe, although their relevance is trending downwards. In 2024, utilities ranked in third place after accounting for a new issue volume of EUR 109.5bn, which corresponds to a share of 12% (2023: EUR 75.7bn; 9%).

ESG bonds: Distribution of globally outstanding volume by currency (year-end 2024)



ESG bonds: Distribution of globally outstanding volume by sector (year-end 2024)



Source: Bloomberg, NORD/LB Floor Research

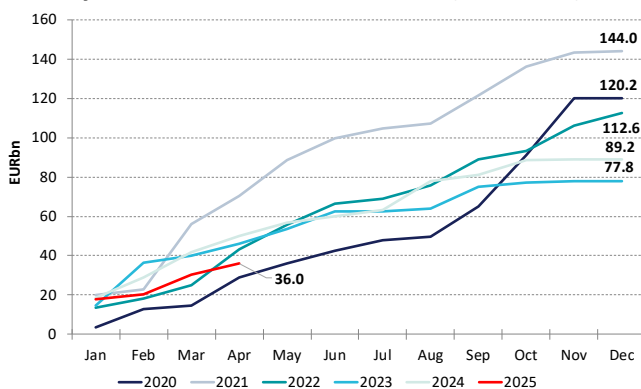
EUR and USD remain most significant currencies and gain shares

As before, the vast majority of the global outstanding bond volume in our definition of the ESG market is denominated in EUR (43%; previous year: 40%). The European single currency therefore asserted its leading position and gained market shares. The USD accounts for one-quarter (25%) of the overall volume, which means that the greenback's share has increased year on year. In terms of currencies on the Asian market, CNY (9%), JPY (7%) and KRW (4%) continued to assert their dominance, accounting for a combined market share of 20%. Looking at Europe, the most commonly used currencies aside from the EUR were GBP (3%; previous year: 3%) and SEK (3%; previous year: 2%). In our opinion, the regulatory impetus on the part of the European Commission in the area of sustainability and accompanying special programmes such as the NGEU should ensure that the EUR continues to dominate proceedings in the future. However, the USA is also aiming to halve greenhouse gas emissions by 2030 compared with the level in 2005, for which a funding programme amounting to USD 369bn has been put in place. Nevertheless, it remains to be seen exactly how Donald Trump's second presidency will affect this endeavour. Immediately after taking office, his administration announced that it would withdraw from the Paris Climate Agreement again. Furthermore, Trump intends to usher in a new era of oil extraction in the USA with his campaign slogan "Drill, baby, drill", which threatens negative consequences for the climate footprint and CO₂ emissions. The new US Administration has also taken several actions against ESG: for example, the US Securities and Exchange Commission (SEC) announced that publicly traded companies are no longer required to document and publish the climate risks of their operations. With regard to China, President Xi Jinping reiterated his nation's ambition to become climate neutral by 2060 at the United Nations General Assembly in September 2021. However, the world's largest emitter of CO₂ has since come under pressure to deliver results soon, after China's cumulative carbon emissions in absolute terms actually exceeded those of the European Union at year-end 2023. Annual growth does seem to be gradually weakening: in 2024, an increase of just 0.8% was recorded for China's CO₂ emissions, which continue to be strongly attributable to the combustion of coal.

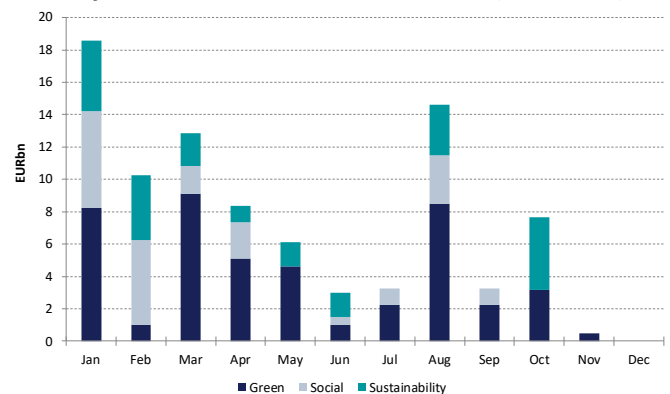
SSA ESG year 2024: increased issue volume, but no new records

While the previous section focused on the global ESG market, we will now turn our attention to an also busy [ESG market in 2024 for our definition of SSA issuers](#) (i.e. excluding sovereigns). As at the reference date of 31 December 2024, we recorded a new issue volume for EUR-denominated benchmarks of EUR 89.2bn across the green, social and sustainability formats. Compared with the issuance trends of recent years, this value is significantly lower than those seen between 2020 and 2022, but higher than it had been in 2023. The decisive factor for the record year of 2021 was that the European Union issued a total of EUR 46.1bn in social bonds as part of the SURE programme between February and May alone. With the help of SURE, Member States were afforded financial support to mitigate the social and societal consequences of the COVID-19 pandemic (e.g. in the form of government aid such as short-time work programmes). With the introduction of the SURE agenda, social bonds now by no means play second fiddle to green bonds. Looking at issuances throughout the year in 2024, January set a very high bar for new issues in particular: at EUR 18.6bn, the ESG issue volume was EUR 4.0bn up on the second strongest month of August, when a volume of EUR 14.6bn was recorded. Overall, a total of 68 new ESG issues from 47 different issuers were placed over the last year. At EUR 7.0bn, the largest transaction in terms of volume was carried out by the EU and generated a remarkable order book of EUR 86.5bn. In terms of the distribution of the new issue volume across the ESG sub-segments, green bonds were well ahead at 66%, followed by social bonds at 19% and sustainability bonds at 15%.

Primary market: SSA ESG issue trend (EUR BMK)



Primary market: SSA ESG issues in 2024 (EUR BMK)



Source: Bloomberg, NORD/LB Floor Research; data as of 30 April 2025

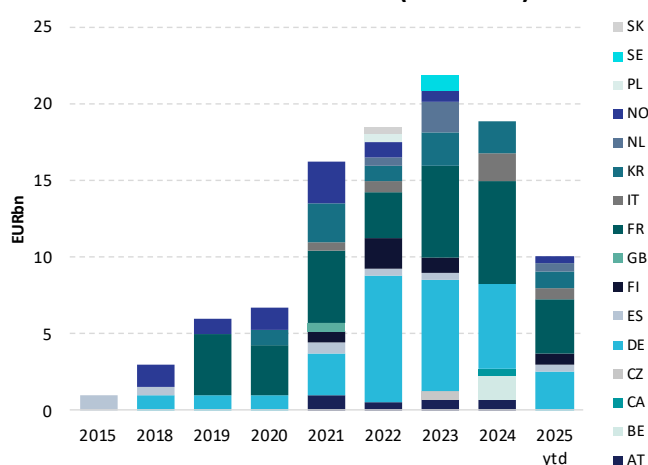
The EU as a mega issuer in the green and social bond segments

We would like to focus on the EU separately as an ESG issuer. Under the SURE programme, which featured a maximum volume of EUR 100bn, social bonds amounting to EUR 98.4bn were issued up to the end of the programme in 2022. The picture is somewhat different for the NGEU programme: the bloc is planning for an average annual funding target of EUR 160bn through to 2026, with the total programme volume being capped at more than EUR 800bn (at current prices). In this context, the intention is to raise up to 30% of the funding by way of [green bonds](#). As a result, the EU would become the world's largest issuer of green bonds. For further information on the bloc's role as a mega issuer, please refer to our [weekly publication dated 29 May 2024](#) and our [NORD/LB Issuer Guide – European Supranationals](#).

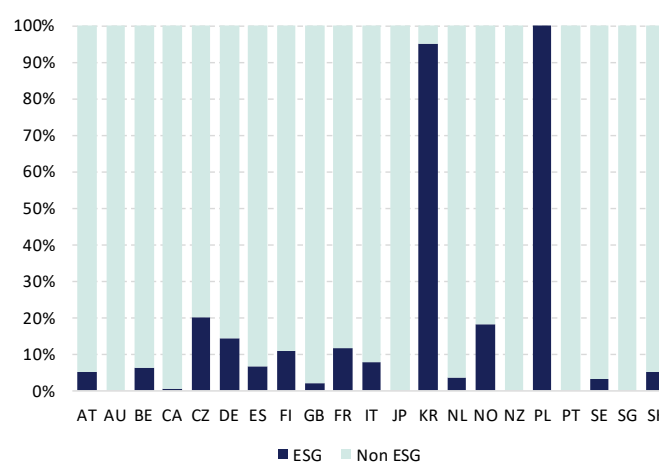
Market for ESG covered bonds remains on growth path

Despite the sustained high issue volume, 2024 was not another record year for the ESG sub-market in the EUR benchmark segment for covered bonds. Last year, covered bonds amounting to EUR 18.9bn overall, distributed over 29 separate deals, were placed in the sustainable formats (green, social and sustainability). The new issue volume in this sub-market was therefore down EUR 3bn on the level recorded in the prior year (EUR 21.9bn). The low issue volume in ESG formats can not least be explained by the reduced issuing activity in the EUR benchmark segment when compared with the previous year. A total of EUR 10.8bn was attributable to the green segment (2023: EUR 14.9bn), while the social category accounted for EUR 7.7bn (2023: EUR 7.1bn) and the sustainability segment for EUR 500m. Continued generic growth in ESG EUR benchmarks is further reflected in the number of newcomers to the market in 2024. Last year, we recorded three inaugural EUR benchmark issues in both the green format and the social format. The first ESG bond from a Canadian issuer in the benchmark segment is worth mentioning as a particular highlight. In April 2024, Equitable Bank approached investors with its first social covered bond, ultimately placing a total of EUR 500m on the market. The other inaugural ESG benchmark issues came from the jurisdictions of Germany, Italy, South Korea and Belgium, which hints at a certain degree of geographical diversification. From our perspective, the current year is also displaying a similar dynamic for new issuances as to what we saw in 2024. In 2025, the new issue volume as at the end of April stood at EUR 10.1bn. In terms of volume, deals from France (EUR 3.5bn) account for the largest share, followed by Germany (EUR 2.5bn) and South Korea (EUR 1.1bn). For the coming months, we expect further market appearances by covered bond issuers in green and social formats. Looking at the market growth of ESG covered bonds, there is a greater focus on the significant maturities of EUR 11.2bn (2024: EUR 1bn) in this market segment for the first time this year. Nonetheless, a positive figure in the net new issue volume should also be recorded for 2025. Overall, we forecast continued growth on the market for covered bonds in sustainable format.

Covered bonds: ESG issue volume (EUR BMK)



Covered bonds: ESG shares in overall market

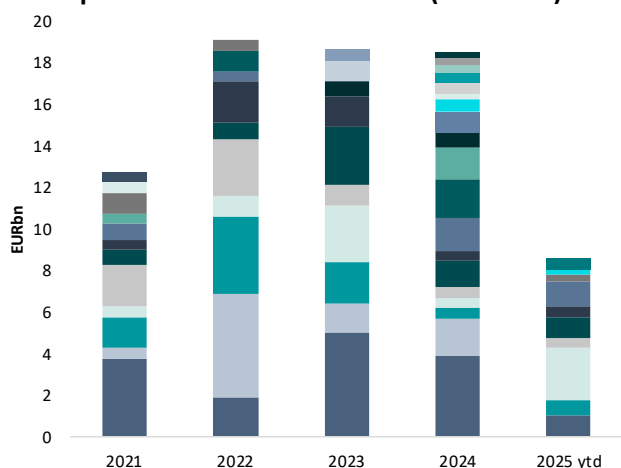


Source: Bloomberg, NORD/LB Floor Research; data as of 30 April 2025

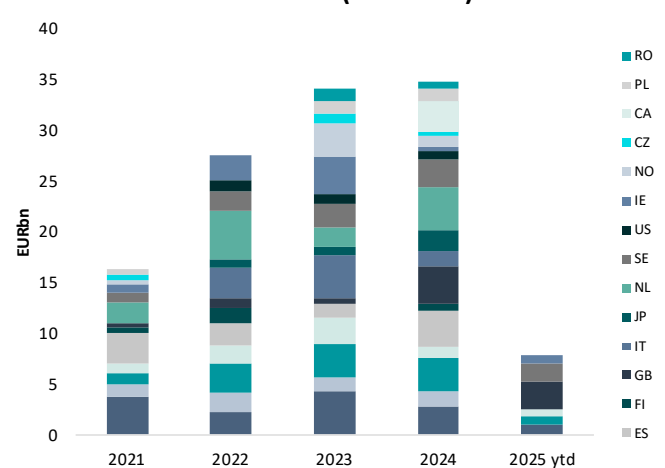
ESG bonds: Senior preferred and senior non-preferred

There has also been increasing momentum in relation to ESG deals on the market for publicly placed deals in the senior segment over the past years. For example, new ESG issuances in a senior preferred format amounted to EUR 18.6bn in 2024, with the largest volumes in terms of jurisdiction accounted for by Italy (EUR 3.9bn), Austria (EUR 1.9bn), Spain (EUR 1.8bn) and the Netherlands (EUR 1.6bn). In terms of issuance type, the green format was again dominant at EUR 17.2bn, with the social category accounting for EUR 1.4bn. In the sub-segment of senior non-preferred (SNP) bonds, the primary market was far livelier in terms of the volume, with a total of EUR 34.9bn successfully placed. Issuers from the Netherlands (EUR 4.3bn), the UK (EUR 3.8bn), Spain (EUR 3.5bn), Germany (EUR 3.4bn) and Canada (EUR 3bn) were the main drivers of this development. SNP bonds in a green format again dominated proceedings here (2024: EUR 29.4bn). In the current year, too, issuers from the financials segment are again regularly making use of green senior deals. As such, a volume of EUR 7.3bn has been placed with investors in the preferred format, while a total of EUR 5.8bn has been brought to market in the SNP segment. At this point, we should emphasise that the respective dynamics are not necessarily replicated year on year. While the choice of ESG format often depends on the business model or the client base of the institution, the choice between preferred or non-preferred or even the covered format comes down to a number of additional factors. In the course of a changing geopolitical environment, it cannot be ruled out that there will be a greater scarcity of available and eligible green assets. However, this does not mean that growth in unsecured ESG deals will come to a standstill over the course of the year.

Senior preferred: ESG issue volume (EUR BMK)



Senior NP: ESG issue volume (EUR BMK)



Source: Bloomberg, NORD/LB Floor Research; data as of 30 April 2025

Greenium and socium+ under scrutiny

Introduction

With both issuers and investors increasingly focused on sustainability criteria over recent years and the associated strong growth in the issuance volume of ESG bonds, there has naturally been greater interest in the yield aspects of this bond category. In the context of green securities in particular, numerous empirical studies have been published exploring whether green bonds are associated with a systemic yield disadvantage for investors or with more favourable refinancing conditions on the issuer side – this situation forms the basis of the term “greenium”. In this study – as is the case for the majority of the literature published on this topic – positive greenium values are defined by the yield on green bonds being lower than that for conventional securities. From an issuer perspective, the greenium can be interpreted as compensation for accepting the additional effort required by additional reporting obligations in relation to the use of proceeds, as well as the supplementary costs incurred for added reporting or certification obligations. However, for investors it represents an acceptable yield discount or premium that they are willing to accept to acquire a green bond rather than a more conventional alternative security. This is associated, for example, with sustainable investment guidelines that require investors to include a certain proportion of ESG bonds in their portfolios, which in turn generates higher demand for these bonds. It is crucial that, when directly comparing the two bond types, securities that are as similar as possible in terms of key bond characteristics are considered. Our study seeks to place individual issuers from our respective core markets under the microscope regarding the existence of such greeniums, in addition to extending our analysis to investigate potential premiums for social bonds.

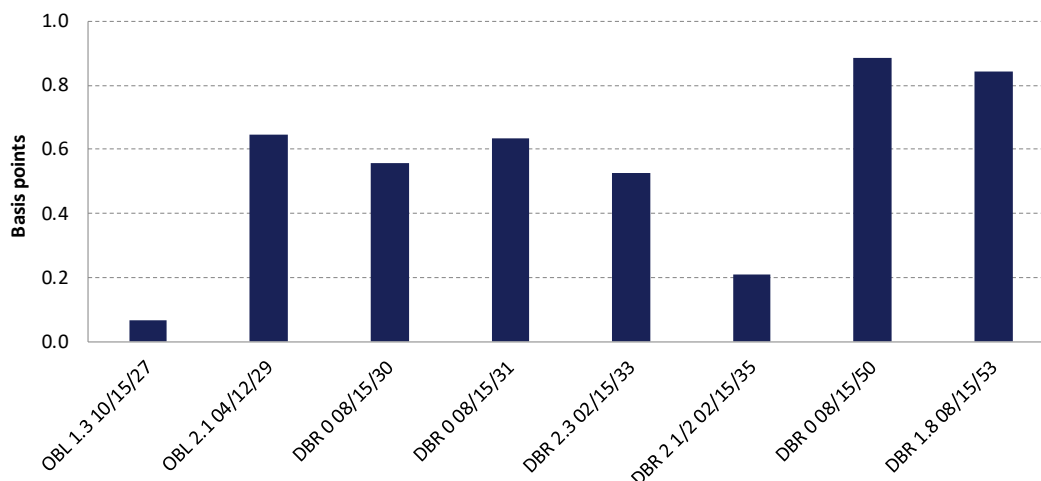
Methodology

Scientific studies have settled on two methodologies to determine greeniums: the first is a “matching” process, in which green bonds are compared against their most similar conventional counterparts. The second approach looks at all of the conventional bonds placed by an issuer within a defined framework and calculates a corresponding spread curve on the basis of this data. Thereafter, the distances to the maturity-congruent curve value of the issuer are determined for the spreads of the green bonds and the greenium is calculated from this. This is the approach we have settled on for our study. Our analysis only includes benchmark bonds (outstanding volume: EUR ≥500m) with maturities of between 12 months and 30 years from selected issuers that we consider to be suitable on account of their size and issuance activities in both conventional (vanilla) and green formats. The construction of the issuer curve is based on the Z-spreads of the corresponding bonds. After calculating the green bond distances to the maturity-congruent curve point, we determine the issuer-specific premiums using the median value in order to minimise the influence of statistical outliers.

Sidenote: Ideal comparative calculation based on German twin bonds

The [twin bonds](#) issued by the Federal Republic of Germany since 2020 offer an ideal example for a comparative calculation. In this context, the German federal government places a [green bond](#) that is identical to an existing conventional bond in respect of aspects such as term to maturity and coupon. At the same time, the volume of the vanilla bond is increased. In this way, it is not actually the case that two new securities are issued. The bonds also feature different volumes: conventional “Bunds”, as securities issued by the German government are known, are generally far larger in volume than their green twins. With this concept, the aim is to offer investors more profound insights into the structures and conditions of the market. Furthermore, it facilitates a direct yield comparison between the two bond variants. The chart below depicts the spread differences between the German twin bonds outstanding as at 30 April 2025 with a residual term to maturity of at least one year. As can be seen from the chart, all green bonds have lower Z-spreads than their conventional twins and therefore offer lower yields. The median calculated greenium for the green Bunds stands at 0.54bp, with the values varying between 0.13bp for the 2027 bond and 0.91bp for the green bond maturing in 2050. As the concept of twin bonds is not used in this way by any issuer in our coverage, in the following we have decided to apply the spread curve calculation method outlined on the previous page.

Respective greenium of outstanding German government twin bonds



Source: Bloomberg, NORD/LB Floor Research

Additional limitations: The problem with calculating greeniums for sub-sovereigns

When compiling our data, we discovered that the guidelines we established and the criteria derived from academic texts are, in our opinion, only insufficiently applicable to the sub-sovereign segment. For example, the Spanish region of Madrid (ticker: MADRID) has a high outstanding volume of green EUR benchmarks, but hardly any conventional bonds to form a corresponding comparative spread curve. In contrast, North Rhine-Westphalia exclusively issues sustainability bonds. For these and other similar reasons, we have opted not to include sub-sovereigns in our analysis that follows. Nevertheless, we assume that the data basis will facilitate both qualitative and quantitative analysis in this segment in the future.

Overview: Sample and respective calculated greenium

| Segment | Issuer | Bloomberg ticker | Number of bonds (vanilla) | Number of green bonds | Greenium (median; in bp) |
|--------------------|-------------------------------|------------------|---------------------------|-----------------------|--------------------------|
| Covered bonds | Berlin Hyp | BHH | 10 | 8 | 0.97 |
| | BPCE SFH | BPCECB | 32 | 5 | 2.97 |
| | Credit Agricole Home Loan SFH | ACACB | 22 | 3 | 0.98 |
| | DZ HYP | DZHYP | 31 | 5 | 4.55 |
| SSA/Public Issuers | EU | EU | 43 | 5 | 0.04 |
| | EIB | EIB | 48 | 17 | 0.42 |
| | KfW | KFW | 40 | 12 | -0.06 |
| | NRW.BANK | NRWBK | 24 | 13 | -0.97 |
| | Bpifrance | BPIFRA | 18 | 4 | 2.88 |
| | ADIF Alta Velocidad | ADIFAL | 5 | 7 | 3.04 |

Source: Bloomberg, NORD/LB Floor Research

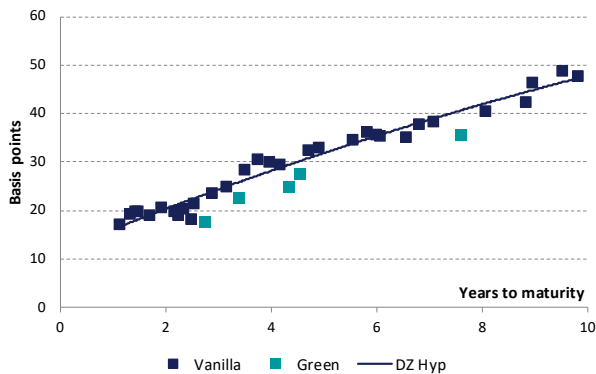
Differing results between – and within – our segments

The table above summarises our study's key findings for the respective segments and issuers. At this juncture, we should also emphasise that our analysis did not take into account market-specific factors such as liquidity and maturity differences, or the general interest rate environment at the time that the new issue was placed. Our analysis of covered bonds encompasses a total of 95 conventional covered bonds and 21 green covered bonds placed by four issuers – two each from France and Germany. These two jurisdictions combined feature both the highest issuance volume in the EUR benchmark segment and the highest volume of green covered bonds. In our view, the varying spread levels between Pfandbriefe and French covered bonds renders a combined analysis of the green bond market across both jurisdictions obsolete with the potential for incorrect conclusions to be drawn. A separate analysis of the covered bonds in the sample according to their respective jurisdiction produces a median greenium for Germany of 2.78bp and 2.22bp for France. This suggests that investors are willing to accept a spread discount of between two and three basis points to hold green covered bonds from Germany and France. However, the green SSA segment is represented by six of the most active issuers in this market, which regularly issue both green and conventional bonds. In turn, this provides sufficient data points for our analysis. In total, the sample for public issuers comprises 58 green bonds. It should be noted here that the EU, EIB and KfW are weighted heavily in our study, with almost three-quarters of the green securities evaluated being attributable to this trio of issuers. Across the entire SSA sample, the overall greenium amounts to 2.16bp. As a result, the current (secondary) market data suggests that investors are willing to accept a yield discount of nearly 2bp to acquire a green bond rather than a conventional bond of the same maturity. This is of course an aggregated view, with the respective greenium varying considerably between the individual issuers. Naturally, there is a wide range of issuer-specific factors that should always be taken into consideration. For example, while the greenium for the heavyweights in the supranational segment – i.e. EU and EIB – is only marginally into positive territory, it is actually negative for German agency issuers such as KfW and NRW.BK. Meanwhile, the greenium for BPIFRA from France and the Spanish issuer ADIFAL stands at approximately 3bp in each case.

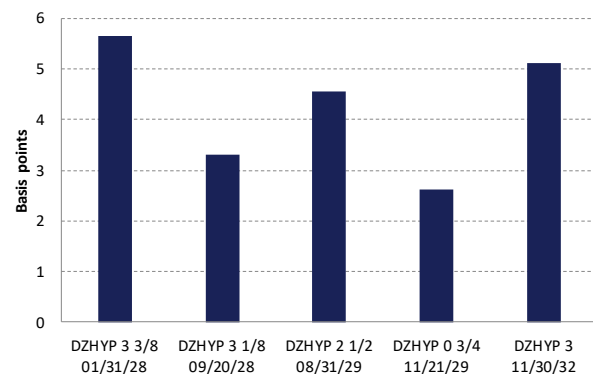
Disparate picture for greeniums on covered bonds

In our analysis, we looked at four of the most prominent issuers of green covered bonds in the EUR benchmark segment: Berlin Hyp, BPCE SFH, Credit Agricole Home Loan SFH, and DZ HYP. Based on secondary market prices as at 30 April 2025, the median greenium for these four issuers is 0.97bp to 4.55bp. However, this median analysis should not obscure the fact that the respective premiums or greeniums of individual bonds can vary to a significant extent. Taking the green bonds of BPCE SFH (FR; ticker: BPCECB) as an example, we can clearly see the divergent forms of greenium for a single issuer. At the time of our analysis, two of the issuer's five green covered bonds are above the maturity-congruent curve points and therefore do not feature a greenium, with one green bond (remaining term: 9.1 years) issued by BPCE SFH actually trading more than eight basis points below the calculated spread curve. Particularly in the context of the small number of comparable bonds in this maturity segment, this apparently high greenium of 8bp should not be over-estimated. In total, BPCE SFH has only five other outstanding conventional covered bonds (i.e. not ESG-related) with a maturity of more than eight years that could be used to model the spread curve. Conversely, the greenium for DZ HYP is far more consistent based on secondary market prices. All of the issuer's green Pfandbriefe offer a greenium of between 2.61bp and 5.66bp, from which conclusions can be drawn with regard to the attractiveness of the issuer's green bonds.

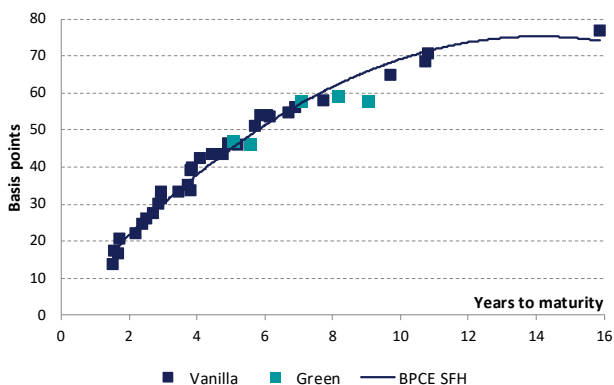
DZ HYP spread curve (Z-spreads)



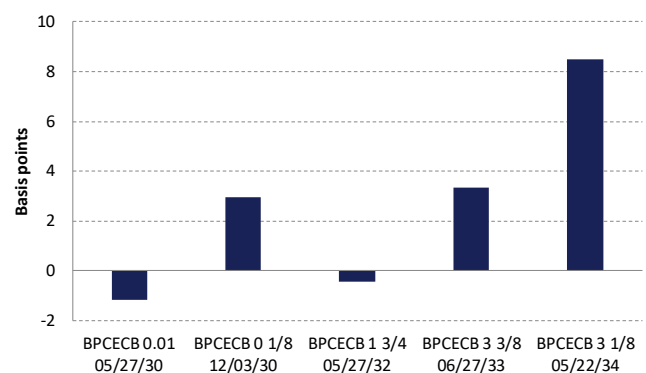
Greenium: DZ Hyp



BPCE SFH spread curve (Z-spreads)



Greenium: BPCE SFH

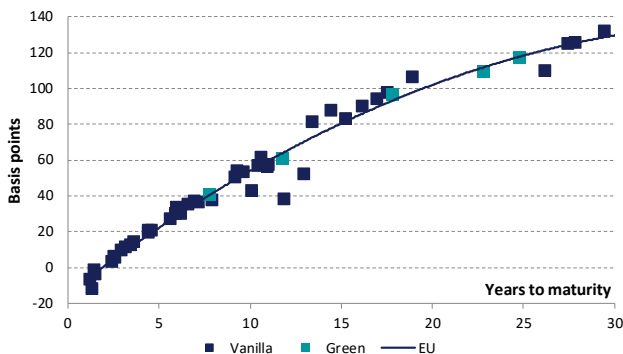


Source: Bloomberg, NORD/LB Floor Research

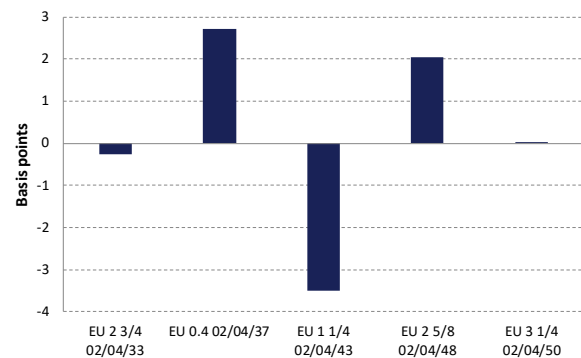
Greeniums in the SSA segment

For our SSA sample of six issuers, we have included a series of charts below, two each for the EU and KfW. The left-hand charts show the issuer curve and the corresponding green bonds, while the right-hand charts depict the bond-specific greenium. Across the five [EU green bonds](#) analysed, we determine a marginally positive median greenium of 0.04bp. We calculated the highest greenium of 2.72bp for the 2037 bond. Among the EU bonds, the 2043 bond stands out in particular, which is trading with a higher spread level (3.51bp wider) compared with both the maturity-congruent curve point and the nearest conventional bond. With regard to the 12 [Green Bonds – Made by KfW](#) that we have analysed, we determined greenium values of between -2.61bp to 1.72bp. As at the reporting date, the median value was in slightly negative territory at -0.06bp. This correlates with our calculations for NRW.BK: the current margin results in another negative greenium of -0.97bp for the agency from North Rhine-Westphalia. This implies that investors are currently compensated for acquiring [NRW.BANK.Green Bonds](#) with a higher yield of just under 1bp. The picture for the French issuer [BPIFRA](#) and [ADIFAL](#) from Spain is diametrically opposed: looking at all of the green bonds issued by both institutes, we calculated a greenium of nearly 3bp. In this context, however, it should be noted that both issuers have a significantly lower number of “active” green bonds and the outstanding volume is also lower. Nevertheless, these results clearly demonstrate the extent to which greeniums are – or can be – different from one SSA issuer to another.

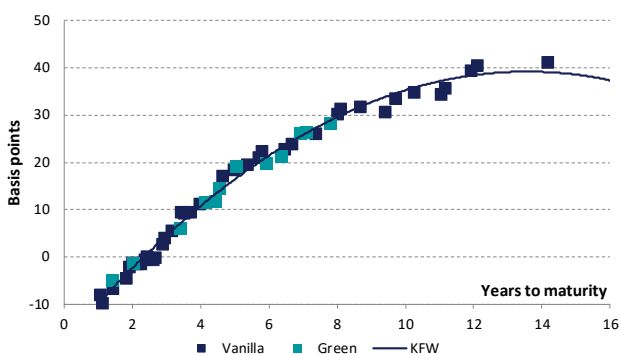
EU spread curve (Z-spreads)



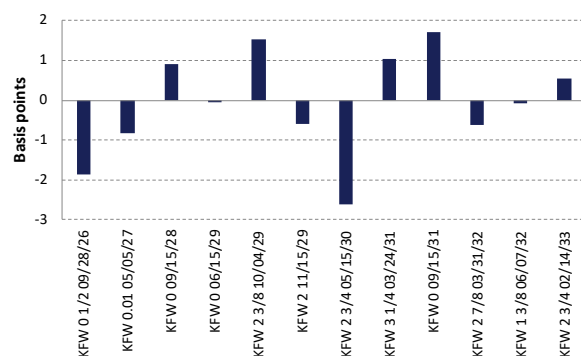
Greenium: EU



KfW spread curve (Z-spreads)



Greenium: KfW



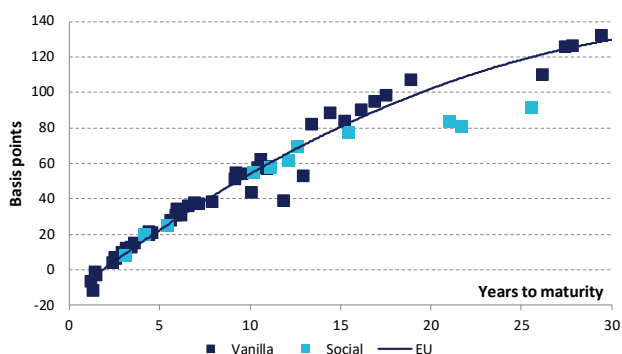
“Socium+” – a portmanteau for social bond premium

In addition to bonds issued in the green format, social bonds represent a commonly used refinancing tool for ESG issuers in both our SSA and covered bond universe. There is no obvious portmanteau to be made from the words “social” and “premium”. For this reason, we came up with the term “socium+”. Derived from “socius”, a Latin term for companion or comrade, among other meanings, this seemed an obvious starting point.

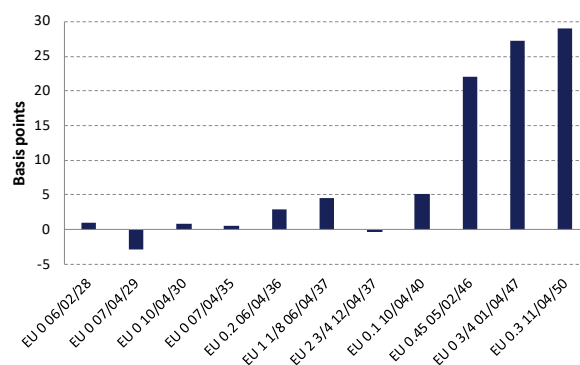
Socium+ for selected issuers in our SSA coverage...

Given that some of the issuers mentioned on previous pages, the EU for example, have both outstanding green and social bonds, we have expanded our analysis for these market players to include the segment of social securities and slightly widened the spectrum of issuers. In terms of the SSA universe, the EU is again a significant player in the social bond segment, despite not issuing any bonds with this label since 2022. The outstanding social volume is entirely attributable to issuances under the SURE programme. We have calculated a median socium+ of 2.99bp for the eleven [SURE Social Bonds](#). Just two of the bonds are above the interpolated spread curve. A very high yield discount for EU social bonds is in evidence, especially in the ultra-long maturity segment (>20y). It is also worth mentioning that the [NRW.BANK.Social Bonds](#) are currently trading with a premium of 2.54bp. As such, the pricing of social bonds can occasionally deviate quite significantly from that of green bonds.

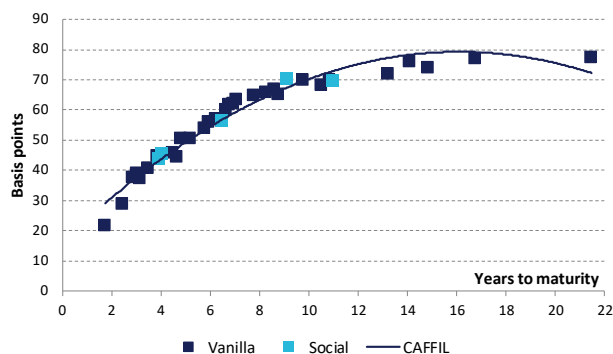
EU spread curve (Z-spreads)



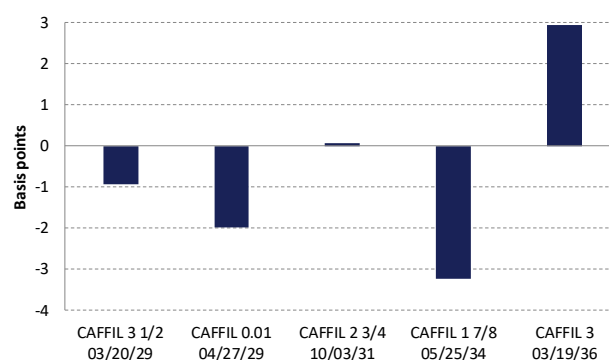
Socium+: EU



CAFFIL spread curve (Z-spreads)



Socium+: CAFFIL



Source: Bloomberg, NORD/LB Floor Research

...and for covered bonds

For the covered bond segment, we expanded the spectrum of issuers studied with the addition of Caisse Française de Financement Local (CAFFIL) and Deutsche Kreditbank (DKB), which are among the most active issuers of covered bonds in social format. While we determined a median premium for the green bond deals of all covered bond issuers included in this study, this picture is reversed in part when considering a potential socium+. In this instance, only the two German issuers, DKB and BHH, show a premium of 0.28bp and 2.37bp respectively. In contrast, only one social covered bond, from CAFFIL, is trading significantly below the issuer's interpolated spread curve, resulting in a median premium of -0.94bp for CAFFIL. Overall, socium+ in the covered bond segment are far lower than those for covered bonds in green format. At the same time, our data suggests that socium+ differ between Germany and France. While admittedly our study only looks at a few issuers, and the number of covered bonds placed in social format is not excessively high, we were unable to identify a social premium for any of the French issuers. However, this was not the case for German Pfandbrief issuers.

Conclusion

The results of our empirical analysis show that investors on the secondary market are occasionally forced to accept spread discounts that vary significantly in size on green bonds from selected issuers in our core segments of SSA/Public Issuers and covered bonds. We looked at four issuers in the covered bond segment and calculated a median greenium of 0.97bp to 4.55bp as at 30 April 2025. However, the median analysis should not obscure the fact that the greenium characteristics of individual bonds can occasionally vary to a significant extent, with aspects such as country of origin, number of outstanding green bonds and distribution of bonds across the maturity spectrum all playing a significant role in this regard. For example, we recorded a higher greenium for green Pfandbriefe than is the case for green covered bonds from France. Conversely, the SSA segment throws up totally contrasting findings. For example, the green bonds issued by the two promotional banks KfW and NRW.BANK currently come with negative premiums of -0.06bp and -0.97bp respectively, while we calculated a greenium of 2.88bp for the French BPIFRA. Across all the public issuers evaluated, the greenium amounted to 2.16bp. The values for the two heavyweights in the supras segment – EU and EIB – are only just into positive territory. With social bonds also representing a widespread refinancing tool for the issuers in our coverage in addition to green bonds, we have expanded our analysis to include this sub-segment. The results here indicate that social covered bond premiums are lower than is the case for green covered bonds. More specifically, we were unable to identify a median socium+ for the French covered bond issuers examined for this study. In contrast, the yield discount for social bonds from selected public issuers is markedly higher. For example, current (secondary) market prices would appear to suggest that investors are willing to accept a spread that is almost 3 basis points lower for corresponding social securities issued by the EU and NRW.BANK. Irrespective of a potential premium for green and social bonds, we remain steadfast in our view that both types of bond are essential components in the refinancing strategies of the issuers that form part of our coverage.

Update: EU Taxonomy

The EU Taxonomy – an overview

Within the framework of the [European Green Deal](#) and the [Paris Agreement](#) on climate protection goals, the European Commission introduced a uniform market standard for the financing of sustainable economic activities in the form of the EU Taxonomy. This is a central component of the [Action Plan](#) published by the European Commission in March 2018 for financing sustainable growth. In essence, the EU Taxonomy is a classification system designed to channel capital flows into environmentally sustainable activities. The creation of a uniform market standard for sustainable financing and investment should also serve to counteract the fragmentation of the investment landscape in the ESG space in addition to curbing “greenwashing”. Alongside the EU Taxonomy, which in its current configuration focuses more on ecological aspects, a working group set up by the European Commission presented its first recommendations for an [extension of the Taxonomy to include social aspects](#) in February 2022. Accordingly, in its current form, the EU Taxonomy can be seen as a framework to which adjustments and revisions are regularly made. A relatively intuitive [EU Taxonomy Navigator](#), which is designed to help users better understand the EU Taxonomy in a simple and practical manner, has been provided by the European Commission since the entry into force of the first Delegated act in June 2021 and is updated on an ad hoc basis. Following on from our most recent publication in this series ([Fixed Income Special – ESG update 2024](#)), we now propose to take another look at the current status quo of the framework and to shed light on the potential implications for sustainable bonds on the European market.

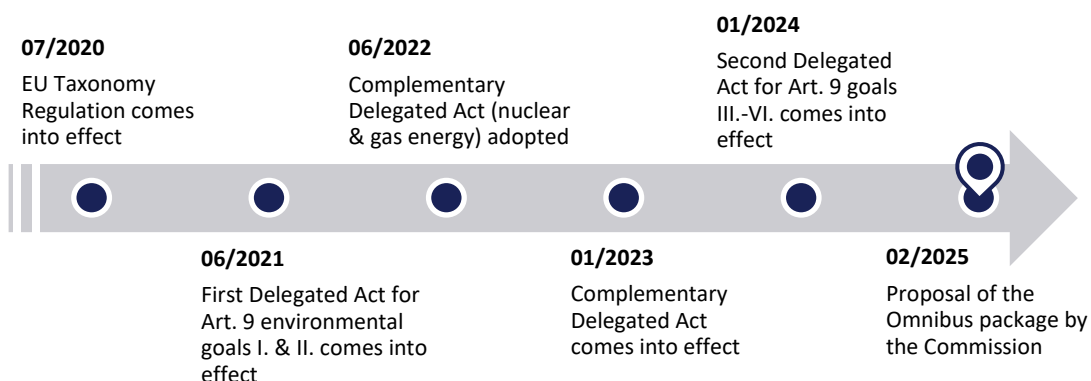
Requirement profile for sustainable activities under the EU Taxonomy

In its current configuration, the EU Taxonomy comprises the framework codified in [Regulation \(EU\) 2020/852](#) as well as two Delegated acts. While the regulation forms the basis for classifying sustainable activities, the Delegated acts define technical screening criteria (TSC) used to assess economic activities in terms of their contribution to achieving one of six environmental objectives. The six objectives defined in the EU Taxonomy are as follows: I. Climate change mitigation, II. Climate change adaptation, III. Sustainable use and protection of water and marine resources, IV. Transition to a circular economy, V. Pollution prevention and control, and VI. Protection and restoration of biodiversity and ecosystems. For an economic activity to be considered “Taxonomy-eligible”, it must satisfy all four of the following conditions. First, the activity must make a substantial contribution to at least one of the six environmental objectives, and second, it must not significantly violate any of the other objectives. Third, both conditions must also be in line with the technical screening criteria defined in the Delegated acts. Fourth, the economic activity must not violate the “minimum safeguard” requirements. The minimum safeguard provisions cover international human rights standards in particular, although other regulations such as workers’ rights, protection against corruption and fair competition are also included. An economic activity that meets all conditions is considered to be sustainable within the meaning of the EU Taxonomy.

Delegated Acts presented for all six environmental goals

The EU Taxonomy provides a framework that is supplemented by targeted Delegated legal acts that define selection criteria for economic activities that comply with the EU Taxonomy. In total, the European Commission has adopted two Delegated Acts since the EU Taxonomy entered into force, both of which include specific selection criteria that apply to the six environmental objectives. These have been revised and adjusted at regular intervals in recent years. In June 2021, the first Delegated Act, or more specifically the [Climate Delegated Act](#), which defines the technical screening criteria (TSC) for climate change mitigation and climate change adaptation, entered into force. It addresses the activities of around 40% of all listed companies in Europe that are active in sectors that account for roughly 80% of greenhouse gas emissions in Europe. Of relevance here are the energy, forestry, manufacturing, transport and building sectors in particular. With the first amendment to the Climate Delegated Act in July 2022, the list of economic activities covered by the EU Taxonomy was expanded to include nuclear and gas energy. Although this decision was certainly controversial in some quarters, according to the EU, it is intended to accelerate the transition to a climate-neutral future. In March 2022, the “Platform on Sustainable Finance” (PSF) presented its [final report](#) on the TSC of the EU Taxonomy Environmental Targets III. to VI. Based on the recommendations of the expert group, the European Commission then published a first draft of the second Delegated Act of the EU Taxonomy in April 2023, which was eventually [adopted](#) in June of the same year. This set out the technical selection criteria for economic activities in manufacturing industries, water supply, wastewater disposal, transport, waste management, renovation and housing, as well as information and communication technology, among others. Overall, the new selection criteria of the Climate Delegated Act cover 35 activities from eight economic sectors. The majority of the economic activities addressed by the selection criteria are grouped under the fourth environmental objective of the EU Taxonomy (transition to a circular economy).

Development of the EU Taxonomy over time



Source: European Commission, NORD/LB Floor Research

ESG reporting in the financial sector: First consultation report on SFDR rules

The standardised classification of economic activities as “sustainable” under the EU Taxonomy forms the basis for a comparable disclosure standard within the EU. The Sustainable Finance Disclosure Regulation ([SFDR](#)) stipulates mandatory reporting obligations for non-financial companies as well as producers of financial products and financial consulting firms. The SFDR aims to increase the market transparency of sustainable financial instruments, curb greenwashing and increase market growth within this segment. Since 01 January 2024, financial market players must also comply with these disclosure obligations. Until 31 December 2023, individuals, organisations and industry participants had the opportunity to comment on the SFDR regulations as part of a public consultation process organised by the European Commission. A [summary of the consultation](#) were published in May 2024, indicating broad support for the general aims of the SFDR. However, there is a split when it comes to the extent to which these objectives were actually achieved in the first year of implementation. For example, more than 75% of respondents highlighted the significant limitations of the SFDR, referring in particular to a lack of legal certainty regarding key terms and issues in connection with the availability of data. Respondents also viewed the interactions between the SFDR and the EU Taxonomy as particularly problematic. In this context, the participants called for measures aimed at improving the overall coherence between the various sustainability regulations. Regarding the standardised disclosure of financial products, the respondents were not on the same page. The majority (56%) support a standardised approach of this kind due to increased comparability and fairness, while the minority are opposed on account of the additional costs and potential irrelevance of the disclosures. In contrast, voluntary EU product categorisation, which promises greater transparency, greater reliability and protection against greenwashing, enjoyed a high level of approval among respondents.

Topic: EU approves regulation of ESG ratings

Although ESG ratings are not a direct part of the EU Taxonomy, they are still another important element that should not be overlooked within the context of this sustainability classification system. The aim of the ESG ratings is to increase trust on the part of investors in the sustainability of the products and businesses by evaluating the exposure to sustainability risks and their impact on society and the environment. Following an agreement between the European Commission and European Parliament on a preliminary draft aimed at standardising ESG ratings, the [bill](#) was formally adopted in November 2024. The new regulations are intended to improve the reliability and comparability of the ratings by, for example, requiring rating agencies to publish the methodologies, models and baseline assumptions underlying their respective ESG rating approaches. In this way, the transparency and integrity of ESG rating providers should be improved and potential conflicts of interest can be avoided. To this end, ESG rating providers must be approved by ESMA, which also acts as their supervisory body. In addition, the EU proposal defines more precisely the circumstances under which ESG ratings would fall within the scope of the regulation. Overall, we are of the view that this regulation should make a further contribution to enhancing the transparency and comparability of ESG ratings.

PSF presents first report on technical screening criteria...

The Platform on Sustainable Finance (PSF) was commissioned by the European Commission to review and, if necessary, revise the Technical Screening Criteria (TSC) for economic activities, which were anchored in the Climate Delegated Act adopted in 2021. In this context, the focus is on economic activities essential to advancing the transition towards a climate-neutral economy. Owing to their relevance, the TSC are subject to review every three years in order to ensure the credibility of the transformation process. At the start of April 2025, the PSF presented its first [audit report](#) and also suggested new TSC for additional economic activities. The suggested amendments to the EU Taxonomy from more than 600 stakeholders, submitted via the [Stakeholder Request Mechanism](#) tool, were also included in the PSF's report. The TSC for economic activities assigned to the two environmental objectives of climate change mitigation and climate change adaptation were reviewed. Given the depth of the detail related to the individual amendment proposals, we will highlight only two of the PSF's proposed changes as examples in our ESG update. For example, an energy generation project must not exceed a defined threshold (measured in CO₂/kWh) in order to be consistent with the EU's 2050 net-zero target. The PSF argues that the current limit of 100g CO₂/kWh would have to be drastically reduced to achieve the defined target. For the same climate protection target, the PSF also proposes amendments relating to the construction and real estate sectors. In addition to specific adjustments to individual TSC, the PSF proposes a further review of the "Do No Significant Harm" (DNSH) principle and streamlining of reporting requirements, for example through building certifications.

...and formulates suggested improvements for the application of the EU Taxonomy

Shortly before the European Commission presented the first concrete measures aimed at simplifying sustainability reporting as part of the Omnibus packages, the PSF also published its [proposals for the improvement and practical application of the EU Taxonomy](#). In its report, the PSF highlights urgent recommendations for action to simplify sustainability reporting under the EU Taxonomy. For example, greater clarity is required in the evaluation and reporting requirements of the DNSH criterion in order to make the audit process more straightforward. In particular, a clearer distinction should be made between the type of company (financial institutions vs. non-financials), intended use (revenue and investments) and geographical location (EU Member State vs. non-EU state). Furthermore, the PSF recommends the introduction of a materiality threshold for certain KPIs so that it is no longer mandatory for non-financial companies to disclose immaterial business activities as part of their reporting. Specific guidelines for the use of data estimators and proxies defined under the EU Taxonomy should also be introduced to ensure data comparability, among other aspects. With regard to the Green Asset Ratio (GAR) and the Green Investment Ratio (GIR), the PSF proposes to allow the use of proxies and estimated data across all asset classes. Moreover, for the calculation of the GAR, only those asset classes for which the EU Taxonomy is applicable and quantifiable should be taken into account. As a final key adjustment, the PSF advocates the development of streamlined, voluntary reporting standards for SMEs, banks and investors alike. Some of the PSF's proposals have already been incorporated into the Omnibus packages recently presented by the European Commission, which we shall cover on the following page.

European Commission presents plan to simplify the CSRD and EU Taxonomy

In February 2025, the European Commission presented its first concrete proposals to simplify requirements in the area of sustainability reporting as part of a broad strategy aimed at reducing red tape. The specific proposals for legal changes are grouped together within the Omnibus package ([Omnibus 1](#) and [Omnibus 2](#)). In order to streamline sustainability reporting and increase the efficiency of the process, the European Commission has proposed amendments to the Corporate Sustainability Reporting Directive (CSRD) and the EU Taxonomy, particularly under Omnibus 1. Essentially, the circle of companies obliged to comply with sustainability reporting requirements is to be significantly scaled back. From now on, this will only include large corporations that employ an average of more than 1,000 people with either total assets more than EUR 25m or net sales amounting to more than EUR 50m. According to the European Commission, this should reduce the number of companies to which the disclosure requirements apply by around 80%. Furthermore, all companies that are required to report under the CSRD for the first time from 2026 or 2027 onwards will be granted a period of two years' grace. In addition, a minimum financial threshold for reporting is to be introduced, which would mean that immaterial economic activities would no longer need to be reported. The European Commission anticipates that the number of disclosure forms submitted will be reduced by approximately 70% through this measure. In terms of the EU Taxonomy, the European Commission also plans to simplify the DNSH criteria – particularly with regard to environmental pollution and the use of chemicals. A revision of all DNSH criteria is planned following the Omnibus package. The GAR, which serves as a KPI for banks under the EU Taxonomy, will also be adjusted as part of the Omnibus package. In this way, when it comes to calculating the GAR, banks would be able to exclude risk positions in the denominator relating to companies that will no longer fall under the future scope of the CSRD. In addition to simplifications to the CSRD and EU Taxonomy, the European Commission is also planning to implement revisions to the European Supply Chain Act (Corporate Sustainability Due Diligence Directive, CS3D) and the European Carbon Border Adjustment Mechanism (CBAM). The proposed amendments were submitted to the European Parliament and European Council alongside a request to prioritise the Omnibus package and postpone both certain disclosure requirements under the CSRD and the implementation deadline for the CS3D, which the two EU bodies agreed to. On 14 April 2025, the implementation deadline for the CSRD and the CS3D was subsequently extended by two years.

Update: EU Green Bond Standard

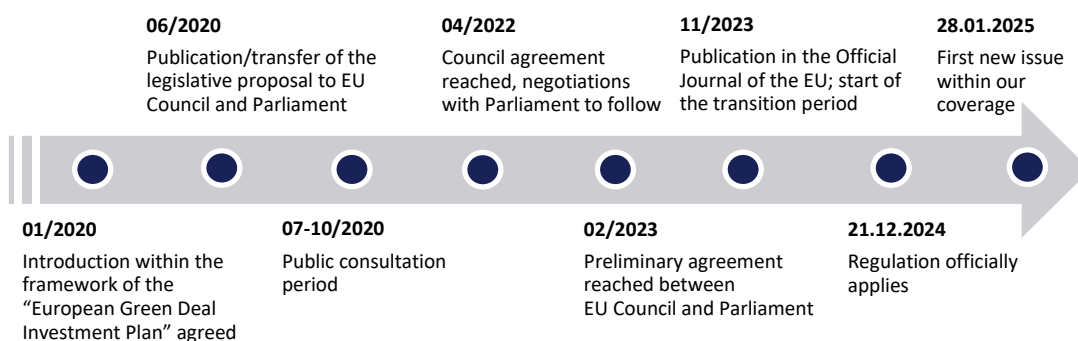
Introduction

It is some time now since 06 July 2021 when the European Commission published a legislative proposal for a voluntary European Green Bond Standard (EUGBS) as part of its new [Sustainable Finance Strategy](#). This proposal followed the “gold standard” for European green bonds that was recommended by a high-level expert group on sustainable finance and builds on the [Action Plan: Financing Sustainable Growth](#) first presented in 2018. The EUGBS was specifically created to establish a global label for the green bond market. After a [provisional agreement](#) on the creation of European Green Bonds (EU Green Bonds, EuGBs) was reached between the European Parliament and the Council at the end of February 2023, the EUGBS was published in the Official Journal of the European Union as [Regulation \(EU\) 2023/2631](#) at the end of November of the same year, before entering into force 20 days later. The 12-month transitional period began at this point, ending on 21 December 2024. Since this date, issuers wishing to satisfy extensive conditions linked to sustainability standards have been able to do so by placing bonds under this label in conformity with the Regulation. Comprehensive reporting requirements and checks by a credible external reviewer ensure a high degree of integrity for EuGBs and seek to effectively reduce the risk of greenwashing.

First European Green Bonds get the go-ahead

In the end, it did not take long for the first issuer from our coverage in the Covered Bonds and SSA/Public Issuers asset classes to approach investors with an EuGB – in fact, it came just over a month after the Regulation officially entered into force. Admittedly, we were caught slightly by surprise by the name of the first issuer: with Île-de-France Mobilités (ticker: IDFMOB), an issuer from the SSA universe appeared on our screens with a mandate for a EUR benchmark using the [green label](#) on 22 January. The mandate was followed two days later by a Global Investor Call as well as numerous investor meetings, during which IDFMOB promoted its inaugural EuGB. According to information from the issuer, it had already met the requirements of the EU Taxonomy before the EUGBS came into force and was therefore in a position to issue an EuGB benchmark after further months of planning. For 2025, IDFMOB is planning to raise a total volume of EUR 2.2bn on the capital market exclusively in green format. The Parisian public transport authority has calculated significantly higher annual funding targets for the coming years. In the end, the IDFMOB transaction at the end of January came with an issuance volume of EUR 1bn and featured a term to maturity of slightly in excess of 20 years. The deal was ultimately priced at OAT +19bp (corresponds to around ms +128bp at the time of issuance). The final order book amounted to EUR 5.9bn. The European Investment Bank (ticker: EIB) then raised a significantly higher amount at the start of April: after the supranational issuer initially announced the possibility of an imminent EuGB placement in the form of its own [Climate Awareness Bond](#) format during a webinar on 31 March, the second European green bond in our coverage then appeared on screens on 02 April. The EIB sought to raise EUR 3bn as part of a 12y deal at ms +53bp, with the final order book coming to EUR 40bn. While public issuers have started to test the waters in this market and gained initial experiences with EuGBs, covered bond issuers have so far remained on the sidelines.

Development of the EU Green Bond Standard over time



Source: European Commission, NORD/LB Floor Research

How will the SSA market react over the further course of the year?

The new issues placed by IDFMOB and the EIB have shown that the new green label is equally of relevance to both agencies and supranationals. While IDFMOB is an established issuer of green bonds on the SSA primary market, the corresponding transactions have never stood out in terms of volume. It is therefore all the more surprising that the first highlight was provided by a "second tier" public issuer. Thereafter, the EIB became the first heavyweight to enter the scene and in so doing set an important price point for the market. Nevertheless, in our baseline scenario we continue to work on the assumption that only a very modest number of issuers from the SSA segment will decide to place EuGBs. In specific terms, we believe that players already dominating the green bond segment at present are most likely to opt for the new label. These include large supras such as the European Union (ticker: EU) and the EIB, which has now already been active in this segment, as well as Kreditanstalt für Wiederaufbau (ticker: KfW) and the Société des Grands Projets (ticker: SOGRPR) in the agency segment. In all likelihood, the vast majority of SSA issuers will initially continue to issue green bonds in accordance with the ICMA Principles without applying the new EUGBS, although we should point out that EuGBs are also invariably ICMA-compliant. In the future, much will depend on how the first EuGBs develop on the market. In the event that issuers recognise that EuGBs can enable them to demonstrably and systemically achieve more favourable funding conditions than is the case with "conventional" green securities, other issuers will undoubtedly follow suit. However, the more favourable interest rates would, over the long term, need to make up for the exorbitant costs associated with the required reporting obligations. In particular, the latter aspect is, from our perspective, the most significant hurdle to be overcome for the vast majority of SSA issuers. Appointing external reviewers to compile various pre- and post-issuance reports is likely to be significantly more expensive than simply obtaining a second-party opinion, as required in line with the ICMA Principles. The associated level of complexity will be many times bigger than for previous green bonds. As such, small institutions in particular are likely to be put off, meaning that many of them will initially opt to remain on the sidelines. If we dare to gaze into our crystal ball for a second, we would predict a new issue volume of EUR 10-15bn overall for benchmark-size EuGBs in the current year as part of our SSA coverage. However, once enough time has passed for the EUGBS to become established on the market, we expect this amount to increase significantly next year.

Will the EU Taxonomy slow down the issuance of covered bonds in EuGB format?

With a volume of EUR 70.6bn in the EUR benchmark segment, green covered bonds represent by far the largest share of covered bonds placed in one of the ESG formats (green, social, sustainability). Looking at the most important jurisdictions, issuers from Germany (issue volume: EUR 24.9bn), France (EUR 19bn) and Norway (EUR 9bn) dominate the market. While the first bonds in EuGB format have been successfully placed in the SSA segment, it is not yet possible to say with any degree of certainty when we might welcome the first covered bond in this new ESG format to the market. The fact that the EUGBS stipulates that at least 85% of the issuance proceeds must be invested in activities aligned with the EU Taxonomy requirements represents a real challenge in the context of covered bonds. In particular, the “do no significant harm” (DNSH) principle is perceived as an obstacle by issuers. For covered bonds collateralised by real estate assets, the challenge is the (non-)existence of real estate-specific data that meets all the verification requirements of the criterion. Even in the case of new loan agreements, it is not easy to prove non-violation of the DNSH criterion as it is difficult to ensure the requisite data and level of detail necessary. In the real estate sector, for example, it must be demonstrated that water consumption by sanitary facilities does not exceed a maximum value. While data availability is certainly likely to improve over time, it is safe to assume that this process is more of a marathon than a sprint. Depending on the jurisdiction and issuer, the availability of data on property financing differs considerably in some cases.

EuGBs are not in a position to replace established market standards in the near future

Given the hurdles outlined above concerning the application of the new EuGB format, we expect that the majority of issuers will continue to rely solely on the ICMA Principles for issuing green covered bonds, with placements in line with the new EUGBS considered only to a very limited extent. As a rule, covered bonds newly issued under the ICMA Principles already make a significant contribution to one of the six climate protection targets defined by the EU and therefore meet the first requirement of the EU Taxonomy, but fall short of the DNSH principle. With this in mind, simplifying this criterion would potentially be a way of making covered bond deals in EuGB format much more attractive for issuers. While it is not outside the realms of possibility that the odd covered bond issuer may take it upon themselves to comply with the stringent standards governing the placement of EuGBs, it is nevertheless likely that, for the time being, such issuers will prove to be the exception to the rule in this market. In addition to EuGBs, there are other market initiatives allowing for “classic” green covered bonds to be brought more in line with the requirements of the EU Taxonomy. The [Minimum Standards](#) for Green Pfandbriefe developed by the Association of German Pfandbrief Banks (vdp) are one such example. Since 01 January 2025, these have stipulated that new construction financing is only permissible if the property will have a primary energy requirement of at least 10% below the national standard for nearly zero energy buildings. The vdp emphasises that there are no plans in the foreseeable future to fully align the Minimum Standards for Green Pfandbriefe with the requirements of the EU Taxonomy due to the complexity, lack of practicality and insufficient transformation concept of the EU Taxonomy criteria. In our view, the vdp’s position once again succinctly demonstrates the challenges of the EU Taxonomy in terms of practical implementation.

ABN Amro successfully issues first senior bond in EuGB format

In contrast to the covered bond segment, we saw the first senior transaction in EuGB format as early as February 2025. In this context, ABN Amro (ticker: ABNANV) approached investors on 18 February with a dual tranche deal, which included a 6.0y EuGB. The bond placed in this new format started out in the marketing phase with guidance of ms +95bp area and was met with huge investor interest. As a result, the spread was reduced by 27bp. In the end, the EU Green Bond was placed with investors in the amount of EUR 750m with a spread of ms +68bp. Looking at the investor breakdown, asset managers claimed around 70% of the allocated volume and were therefore the largest investor group for this deal. The issuance proceeds are to be used exclusively to finance plants for the production of renewable energies (wind and solar) and green buildings. As such, for its first EuGB deal, ABN Amro has opted not to make use of the 15% flexibility framework for financing that is not compliant with the aims of the EU Taxonomy.

Outside of our coverage: Italy claims gold medal

At last year's Summer Olympics in Paris, Italy ranked below the host country France on the medal table. Now, however, the Italians have been able to exact a measure of revenge, albeit not in any sporting sense. A few days before IDFMOB placed its inaugural EuGB, an issuer from Italy beat them to the punch and snatched the gold medal from under the noses of the French, so to speak: on 23 January, A2A (ticker: AEMSPA), an Italian utility company active in the corporate bond segment with its headquarters in Brescia, issued the first ever EuGB. It sought to raise EUR 500m across a ten-year maturity, which ultimately went through at ms +125bp (guidance: ms +165bp area). The order book came to a final total of EUR 2.2bn at the end of the marketing phase, meaning the deal was more than 4.0x oversubscribed.

Conclusion

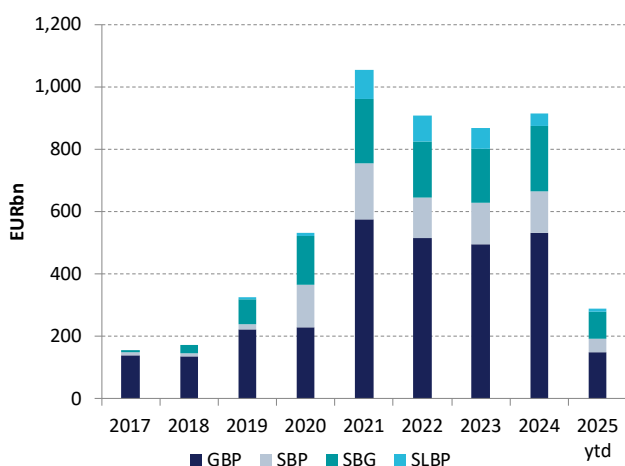
With the first couple of EuGB deals having now been successfully placed, IDFMOB and the EIB have laid down important markers in the segments we cover. It will be interesting to see how the new format is received by both European and international investors in the future. The first two transactions were subject to significant demand, as reflected in the strong order books. Since we assume, as far as the SSA segment is concerned, that the label will primarily be used by established issuers (which are characterised by high oversubscription ratios for both conventional fresh supply and ESG-related new deals), we are of the view that this trend will continue. At present, it is still too early to predict whether and when an inability to issue EuGBs might turn into a disadvantage for some issuers. In our view, the issuance of green bonds based on the less restrictive ICMA Principles will remain the market standard for the time being. Especially in the case of covered bonds, no significant movement towards the new standard is in evidence at the moment; in actual fact, the exacting requirement profile of the EU Taxonomy would appear, from our point of view, to be more of an obstacle to covered bond deals in EuGB format. While it is possible that the odd EuGB deal will appear on our screens, we feel that the majority of covered bond issuers will be unable to comply with the stricter criteria of the EUGBS for the foreseeable future. On the whole, there are therefore a variety of assessments on the prospective use of EuGBs in both the SSA and covered bond segments.

Update: ICMA Bond Principles

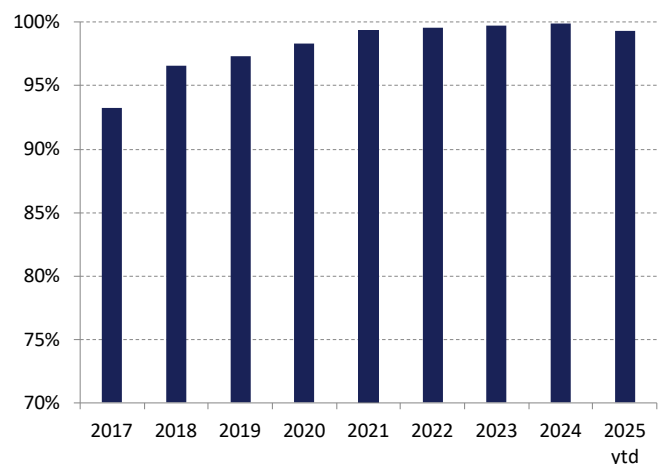
ICMA Bond Principles and Guidelines: Continuity over evolution

Having reported only marginal changes to the relevant frameworks of the International Capital Markets Association (ICMA) over the course of 2023 in this section of [last year's study](#), the situation was similarly low-key in 2024. The industry association evidently sees little need at present to make adjustments to the Green Bond Principles (GBP), Social Bond Principles (SBP), Sustainability Bond Guidelines (SBG) as well as Sustainability-Linked Bond Principles (SLBP), with which our readers are by now presumably well acquainted. In 2024, the ICMA focused more on the classification of non-green projects that advance a green venture, as well as on sustainability-linked loans. The GBP are an internationally established voluntary standard for green bonds. The issuance proceeds may only be used for the purpose of (re)financing projects with (green) environmental benefits pursuant to the GBP. The core structure is divided into four areas: I. Use of proceeds, II. Process for project evaluation and selection, III. Management of proceeds, and IV. Reporting. In general, the basic structure of the SBP is identical to the GBP, not least because of in their early formative stages the SBP were listed merely as recommendations within the GBP. Since 2017, they have been listed as an independent member of the ICMA Principles family. In the same year, the SBG were also launched for the first time, which allow for mixed forms of green or social benefits in terms of project selection. In contrast, the SLBP can be used for general corporate purposes aligned with individual sustainability KPIs and corporate goals. This sub-category is therefore particularly popular in the field of transformation finance and is geared towards issuers unable to issue green or social bonds due to their size or business activities. Taking the GBP as an example, the ICMA Principles and Guidelines have become much more relevant in recent years. In 2015, more than 70% of the new green bonds issued on a global basis were already aligned with the GBP. Since then, however, the market has made substantial progress, and the equivalent share now stands at more than 90%.

Annual global new issues based on ICMA Principles and Guidelines (EURbn)



Shares of ICMA-oriented global new issues of green bonds



First-time definition of guidance for “Green Enabling Projects”

For the first time, the new publications last year included guidance for projects that are of central importance to the value chain of green projects but are not themselves classified as green. The [publication](#) defines guidelines for “Green Enabling Projects” (GEP), covering both the amount of induced and avoided emissions and the management of the associated ecological and social risks. The guidance also includes the role that GEPs play as catalysts and benchmarks for the transition to a low-carbon economy in line with the Paris Climate Agreement, taking into account the complexity of value chains and the challenges linked to multiple end uses. To be considered eligible in this context, a GEP must meet certain criteria. For example, the project must be an essential part of the overall value chain without causing significant carbon sequestration relative to other possible and feasible technologies. Moreover, predefined transparency requirements must be satisfied for an eligible project to be considered as offering environmental benefits. The guidance was developed by the ICMA Executive Committee on the basis of recommendations developed by a dedicated working group. The aim here was threefold: shape market practices based on existing definitions, promote transparency among issuers and safeguard the integrity of the market. The document therefore takes official and market-standard guidelines on “enabling activities” into consideration, which include, among other aspects, art. 16 of the EU Taxonomy.

Sustainability-linked loans in the spotlight

The ICMA Principles for sustainability bonds and sustainability-linked bonds have now become an established set of frameworks on the global market for sustainable bond issuances. However, the ICMA was not satisfied that each facet of this segment was not covered in full. As such, it published its Sustainability-Linked Loans financing Bonds Guidelines ([SLLBG](#)) for the first time back in June last year. Developed in close collaboration with the Loan Market Association (LMA), these guidelines define a special funding instrument for issuers seeking to finance a portfolio of eligible sustainability-linked loans (SLLs) that aligns with the corresponding LMA Principles. According to the ICMA, Sustainability-Linked Loans financing Bonds (SLLBs) can serve as an incentive to enhance the robustness of sustainability-linked loan structures in the market over the long term. The guidelines outline four core elements of alignment: I. Use of proceeds, II. Process for evaluation and selection of sustainability-linked loans, III. Management of proceeds, and IV. Reporting. Issuers are also encouraged to demonstrate their alignment with the SLLBG in a corresponding framework, which should be made available to potential investors in an easily accessible format. The ICMA recommends further that external audit service providers disclose their credentials and communicate the scope of the reviews conducted in a transparent manner, while issuers should publish external assessments on their websites or through other publicly accessible channels. The ICMA explicitly underlines that SLLBs should be considered as a separate category and should not be grouped under one of the four established principles, despite the fact that there are several overlapping similarities.

Minor adjustments in connection with sustainability-linked bonds

In addition to the two new publications mentioned on the previous page, the ICMA has made further updates and revisions to existing guidelines. For example, the [Sustainability-Linked Bond \(SLB\) Principles](#) were updated, among others: the updated version provides clarifications on key performance indicators (KPIs) and ensures that these are aligned with the issuer's specific sustainability strategy. Issuers must also use the KPI Register to select KPIs, while guidance pertaining to core and secondary KPIs is provided as well. The update also includes new glossary definitions and an adjusted checklist for disclosing SLB data. Moreover, the KPI Register mentioned above has been expanded to include additional indicators with links to environmental aspects, including biodiversity, the circular economy and water management, for example, as well as additional KPIs for sub-sovereign issuers. Last but not least, the ICMA has published a new appendix to the Impact Reporting Handbook, which addresses potential environmental and social risks associated with eligible project categories for green bonds. In addition to the revisions made as part of the June updates, the industry association also presented a revised version of the [Guidance Handbook](#) on 04 November. The updated edition includes three new questions in relation to SLBs. In particular, it aims to provide guidance on how SLBs are to be treated in the context of sustainable finance disclosure and labelling systems and whether SLBs should be consistent with the updated targets and disclosures of a company's sustainability strategy. It also provides guidance on selecting KPIs to qualify for an SLBP adjustment.

Conclusion: ICMA Bond Principles and Guidelines

In our view, the further development of the global market for sustainability-related bonds is also reflected in the regular updates and expansions of the ICMA Principles and Guidelines. We also take a positive overall view of the fact that the ICMA frameworks boast a long track record and have been making a significant contribution to the harmonisation of the market for sustainable bonds for several years on the back of their global success. While around 75% of global issuance activities in this ESG sub-segment was already ICMA-oriented in 2015 (one year after the initial launch of the ICMA Green Bond Principles), this figure had risen to just under 100% last year. Moreover, according to our definition, the figure has not been below the 90% mark since 2017. High levels of conformity can also be seen in the other sub-segments: for example, 95% of all newly issued social bonds and 92% of all sustainability bonds were based on the corresponding ICMA Bond Principles in 2024. As far as sustainability-linked bonds are concerned, we recorded alignment of 96% with the relevant framework last year. In this context, it should be noted that, as outlined in the previous chapter, the new issuance volume of sustainability-linked bonds fell sharply in 2024.

Outlook: Fresh impetus for the ESG segment

Omnibus package aims to ease the Taxonomy straitjacket

This year, several regulators once again played a key role in setting the tone for the ESG bond market or laid the groundwork to do so. In particular, the EU Taxonomy and the associated adjustments to sustainability reporting remain the focus of legislators. In February 2025, the European Commission proposed extensive simplifications of the EU Taxonomy and reporting requirements through what it has called the Omnibus package. This comes as part of the European Commission's comprehensive strategy aimed at cutting red tape. Among other aspects, the Omnibus package seeks to introduce a minimum financial threshold for sustainability reporting, which would exempt non-material economic activities from EU Taxonomy reporting obligations. The proposed Omnibus package is still pending approval from the European Parliament and European Council. As part of the consultation process, several Member States have already commented on the proposed Omnibus package, signalling their general support in the process. However, there is a degree of contention in relation to the employee and revenue thresholds above which the CSRD reporting obligations should apply in particular. As such, this is far from a closed chapter: developments in connection with the Omnibus package will remain relevant across the final six months of this year at least.

Can the EUGBS become a growth driver for the ESG segment?

One legislative initiative successfully implemented last year is the newly created EUGBS. Issuers have been able to use the EUGBS for new deals since 21 December 2024. Île-de-France Mobilités, an issuer from the SSA universe, sounded the starting pistol here by issuing the first European Green Bond in the segments that we monitor as part of our coverage in January 2025, with the EIB then following suit in April. Our baseline scenario works on the assumption that the number of EuGBs placed in the SSA universe is likely to be strictly limited to issuers that already dominate proceedings across the green bond segment. In terms of our SSA coverage, we are projecting an overall new issuance volume for benchmark format EuGBs of EUR 10-15bn in the current year. However, once the EUGBS becomes more established on the market, we would expect this figure to increase significantly next year. While the EUGBS already appears to have landed in the SSA market, no deals in this format have yet been placed on the covered bond market. Although it is not beyond the realms of possibility that a covered bond issuer might potentially succeed in complying with the high standards linked to an EuGB in the future, issues in this segment are likely to constitute the exception rather than the rule. In particular, the requirements related to the DNSH criterion are proving to be an obstacle. As such, we do not expect to see any new covered bonds placed under the new label for the foreseeable future. The situation is slightly different in the financials segment, where ABN Amro successfully placed its first EUGB in February 2025. We would therefore expect further new issues in due course. In terms of the global volume of new ESG deals, in 2024 there was growth on the market for sustainable bonds for the first time in two years. Moving forwards, we will continue to keep you in the loop regarding developments across the ESG segment!

Appendix

Publication overview

Covered Bonds:

[Issuer Guide – Covered Bonds 2024](#)

[Risk weights and LCR levels of covered bonds](#) (updated semi-annually)

[Transparency requirements §28 PfandBG Q1/2025](#) (quarterly update)

[Transparency requirements §28 PfandBG Q1/2025 Sparkassen](#) (quarterly update)

[Covered bonds as eligible collateral for central banks](#)

SSA/Public Issuers:

[Issuer Guide – German Laender 2024](#)

[Issuer Guide – Canadian Provinces & Territories 2024](#)

[Issuer Guide – Down Under 2024](#)

[Issuer Guide – European Supranationals 2024](#)

[Issuer Guide – Non-European Supranationals \(MDBs\) 2025](#)

[Issuer Guide – German Agencies 2024](#)

[Issuer Guide – French Agencies 2024](#)

[Issuer Guide – Nordic Agencies 2025](#)

[Issuer Guide – Dutch Agencies 2025](#)

[Issuer Guide – Austrian Agencies 2024](#)

[Beyond Bundeslaender: Belgium](#)

[Beyond Bundeslaender: Greater Paris \(IDF/VDP\)](#)

[Beyond Bundeslaender: Spanish regions](#)

Fixed Income Specials:

[ESG-Update 2024](#)

[ECB Council meeting: Last round in the interest rate cut carousel?](#)

Appendix

Contacts at NORD/LB

Floor Research



Lukas Kühne

Covered Bonds/Banks

+49 176 152 90932

lukas.kuehne@nordlb.de



Alexander Grenner

Covered Bonds/Banks

+49 157 851 65070

alexander.grenner@nordlb.de



Dr Norman Rudschuck, CIIA

SSA/Public Issuers

+49 152 090 24094

norman.rudschuck@nordlb.de



Lukas-Finn Frese

SSA/Public Issuers

+49 176 152 89759

lukas-finn.frese@nordlb.de



Tobias Cordes, CIIA

SSA/Public Issuers

+49 162 760 6673

tobias.cordes@nordlb.de

Sales

| | |
|---|-------------------|
| Institutional Sales | +49 511 9818-9440 |
| Sales Sparkassen & Regionalbanken | +49 511 9818-9400 |
| Institutional Sales MM/FX | +49 511 9818-9460 |
| Fixed Income Relationship Management Europe | +352 452211-515 |

Origination & Syndicate

| | |
|------------------------|-------------------|
| Origination FI | +49 511 9818-6600 |
| Origination Corporates | +49 511 361-2911 |

Treasury

| | |
|----------------------------|--|
| Liquidity Management/Repos | +49 511 9818-9620 +49 511 9818-9650 |
|----------------------------|--|

Trading

| | |
|------------------|-------------------|
| Covereds/SSA | +49 511 9818-8040 |
| Financials | +49 511 9818-9490 |
| Governments | +49 511 9818-9660 |
| Länder/Regionen | +49 511 9818-9660 |
| Frequent Issuers | +49 511 9818-9640 |

Sales Wholesale Customers

| | |
|---------------|------------------|
| Firmenkunden | +49 511 361-4003 |
| Asset Finance | +49 511 361-8150 |

Relationship Management

| | |
|------------------------|--|
| Institutionelle Kunden | rm-vs@nordlb.de |
| Öffentliche Kunden | rm-oek@nordlb.de |

Disclaimer

The present report (hereinafter referred to as “information”) was drawn up by NORDDEUTSCHE LANDESBANK GIROZENTRALE (NORD/LB). The supervisory authorities responsible for NORD/LB are the European Central Bank (ECB), Sonnemannstraße 20, D-60314 Frankfurt am Main, and the Federal Financial Supervisory Authority in Germany (Bundesanstalt für Finanzdienstleistungsaufsicht; BaFin), Graurheindorfer Str. 108, D-53117 Bonn and Marie-Curie-Str. 24-28, D-60439 Frankfurt am Main. The present report and the products and services described herein have not been reviewed or approved by the relevant supervisory authority.

The present information is addressed exclusively to Recipients in Austria, Belgium, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Indonesia, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Poland, Portugal, Singapore, Portugal, Spain, Sweden, Switzerland, the Republic of China (Taiwan), Thailand, the United Kingdom and Vietnam (hereinafter referred to as “Relevant Persons” or “Recipients”). The contents of the information are disclosed to the Recipients on a strictly confidential basis and, by accepting such information, the Recipients shall agree that they will not forward it to third parties, copy and/or reproduce this information without the prior written consent of NORD/LB. The present information is addressed solely to the Relevant Persons and any parties other than the Relevant Persons shall not rely on the information contained herein. In particular, neither this information nor any copy thereof shall be forwarded or transmitted to the United States of America or its territories or possessions, or distributed to any employees or affiliates of Recipients resident in these jurisdictions.

The present information does not constitute financial analysis within the meaning of Art. 36 (1) of the Delegate Regulation (EU) 2017/565, but rather represents a marketing communication for your general information within the meaning of Art. 36 (2) of this Regulation. Against this background, NORD/LB expressly points out that this information has not been prepared in accordance with legal provisions promoting the independence of investment research and is not subject to any prohibition of trading following the dissemination of investment research. Likewise, this information does not constitute an investment recommendation or investment strategy recommendation within the meaning of the Market Abuse Regulation (EU) No. 596/2014.

This report and the information contained herein have been compiled and are provided exclusively for information purposes. The present information is not intended as an investment incentive. It is provided for the Recipient’s personal information, subject to the express understanding, which shall be acknowledged by the Recipient, that it does not constitute any direct or indirect offer, recommendation, solicitation to purchase, hold or sell or to subscribe for or acquire any securities or other financial instruments nor any measure by which financial instruments might be offered or sold.

All actual details, information and statements contained herein were derived from sources considered reliable by NORD/LB. For the preparation of this information, NORD/LB uses issuer-specific financial data providers, own estimates, company information and public media. However, since these sources are not verified independently, NORD/LB cannot give any assurance as to or assume responsibility for the accuracy and completeness of the information contained herein. The opinions and prognoses given herein on the basis of these sources constitute a non-binding evaluation of the employees of the Floor Research division of NORD/ LB. Any changes in the underlying premises may have a material impact on the developments described herein. Neither NORD/LB nor its governing bodies or employees can give any assurances as to or assume any responsibility or liability for the accuracy, appropriateness and completeness of this information or for any loss of return, any indirect, consequential or other damage which may be suffered by persons relying on the information or any statements or opinions set forth in the present Report (irrespective of whether such losses are incurred due to any negligence on the part of these persons or otherwise).

Past performance is not a reliable indicator of future performance. Exchange rates, price fluctuations of the financial instruments and similar factors may have a negative impact on the value and price of and return on the financial instruments referred to herein or any instruments linked thereto. Fees and commissions apply in relation to securities (purchase, sell, custody), which reduce the return on investment. An evaluation made on the basis of the historical performance of any security does not necessarily provide an indication of its future performance.

The present information neither constitutes any investment, legal, accounting or tax advice nor any assurance that an investment or strategy is suitable or appropriate in the light of the Recipient’s individual circumstances, and nothing in this information constitutes a personal recommendation to the Recipient thereof. The securities or other financial instruments referred to herein may not be suitable for the Recipient’s personal investment strategies and objectives, financial situation or individual needs.

Moreover, the present report in whole or in part is not a sales or other prospectus. Accordingly, the information contained herein merely constitutes an overview and does not form the basis for any potential decision to buy or sell on the part of an investor. A full description of the details relating to the financial instruments or transactions which may relate to the subject matter of this report is given in the relevant (financing) documentation. To the extent that the financial instruments described herein are NORD/LB’s own issues and subject to the requirement to publish a prospectus, the conditions of issue applicable to any individual financial instrument and the relevant prospectus published with respect thereto as well NORD/LB’s relevant registration form, all of which are available for download at www.nordlb.de and may be obtained free of charge from NORD/LB, Georgsplatz 1, 30159 Hanover, shall be solely binding. Furthermore, any potential investment decision should be made exclusively on the basis of such (financing) documentation. The present information cannot replace personal advice. Before making an investment decision, each Recipient should consult an independent investment adviser for individual investment advice with respect to the appropriateness of an investment in financial instruments or investment strategies subject to this information as well as for other and more recent information on certain investment opportunities.

Each of the financial instruments referred to herein may involve substantial risks, including capital, interest, index, currency and credit risks in addition to political, fair value, commodity and market risks. The financial instruments could experience a sudden and substantial deterioration in value, including a total loss of the capital invested. Each transaction should only be entered into on the basis of the relevant investor’s assessment of his or her individual financial situation as well as of the suitability and risks of the investment.

NORD/LB and its affiliated companies may participate in transactions involving the financial instruments described in the present information or their underlying basis values for their own account or for the account of third parties, may issue other financial instruments with the same or similar features as those of the financial instruments presented in this information and may conduct hedging transactions to hedge positions. These measures may affect the price of the financial instruments described in the present information.

If the financial instruments presented in this information are derivatives, they may, depending on their structure, have an initial negative market value from the customer's perspective at the time the transaction is concluded. NORD/LB further reserves the right to transfer its economic risk from a derivative concluded with it to a third party on the market by means of a mirror-image counter transaction.

More detailed information on any commission payments which may be included in the selling price can be found in the "Customer Information on Securities Business" brochure, which is available to download at www.nordlb.de.

The information contained in the present report replaces all previous versions of corresponding information and refers exclusively to the time of preparation of the information. Future versions of this information will replace this version. NORD/LB is under no obligation to update and/or regularly review the data contained in such information. No guarantee can therefore be given that the information is up-to-date and continues to be correct.

By making use of this information, the Recipient shall accept the terms and conditions outlined above.

NORD/LB is a member of the protection scheme of Deutsche Sparkassen-Finanzgruppe. Further information for the Recipient is indicated in clause 28 of the General Terms and Conditions of NORD/LB or at www.dsgv.de/sicherungssystem.

Additional information for Recipients in Australia:

NORD/LB IS NOT A BANK OR DEPOSIT TAKING INSTITUTION AUTHORISED UNDER THE 1959 BANKING ACT OF AUSTRALIA. IT IS NOT SUPERVISED BY THE AUSTRALIAN PRUDENTIAL REGULATION AUTHORITY. NORD/LB does not provide personal advice with this information and does not take into account the objectives, financial situation or needs of the Recipient (other than for the purpose of combating money laundering).

Additional information for Recipients in Austria:

None of the information contained herein constitutes a solicitation or offer by NORD/LB or its affiliates to buy or sell any securities, futures, options or other financial instruments or to participate in any other strategy. Only the published prospectus pursuant to the Austrian Capital Market Act should be the basis for any investment decision of the Recipient. For regulatory reasons, products mentioned herein may not be on offer in Austria and therefore not available to investors in Austria. Therefore, NORD/LB may not be able to sell or issue these products, nor shall it accept any request to sell or issue these products to investors located in Austria or to intermediaries acting on behalf of any such investors.

Additional information for Recipients in Belgium:

Evaluations of individual financial instruments on the basis of past performance are not necessarily indicative of future results. It should be noted that the reported figures relate to past years.

Additional information for Recipients in Canada:

This report has been prepared solely for information purposes in connection with the products it describes and should not, under any circumstances, be construed as a public offer or any other offer (direct or indirect) to buy or sell securities in any province or territory of Canada. No financial market authority or similar regulatory body in Canada has made any assessment of these securities or reviewed this information and any statement to the contrary constitutes an offence. Potential selling restrictions may be included in the prospectus or other documentation relating to the relevant product.

Additional information for Recipients in Cyprus:

This information constitutes an analysis within the meaning of the section on definitions of the Cyprus Directive D1444-2007-01 (No. 426/07). Furthermore, this information is provided for information and promotional purposes only and does not constitute an individual invitation or offer to sell, buy or subscribe to any investment product.

Additional information for Recipients in the Czech Republic:

There is no guarantee that the invested amount will be recouped. Past returns are no guarantee of future results. The value of the investments may rise or fall. The information contained herein is provided on a non-binding basis only and the author does not guarantee the accuracy of the content.

Additional information for Recipients in Denmark:

This Information does not constitute a prospectus under Danish securities law and consequently is not required to be, nor has been filed with or approved by the Danish Financial Supervisory Authority, as this Information either (i) has not been prepared in the context of a public offering of securities in Denmark or the admission of securities to trading on a regulated market within the meaning of the Danish Securities Trading Act or any executive orders issued pursuant thereto, or (ii) has been prepared in the context of a public offering of securities in Denmark or the admission of securities to trading on a regulated market in reliance on one or more of the exemptions from the requirement to prepare and publish a prospectus in the Danish Securities Trading Act or any executive orders issued pursuant thereto.

Additional information for Recipients in Estonia:

It is advisable to closely examine all the terms and conditions of the services provided by NORD/LB. If necessary, Recipients of this information should consult an expert.

Additional information for Recipients in Finland:

The financial products described herein may not be offered or sold, directly or indirectly, to any resident of the Republic of Finland or in the Republic of Finland, except pursuant to applicable Finnish laws and regulations. Specifically, in the case of shares, such shares may not be offered or sold, directly or indirectly, to the public in the Republic of Finland as defined in the Finnish Securities Market Act (746/2012, as amended). The value of investments may go up or down. There is no guarantee of recouping the amount invested. Past performance is no guarantee of future results.

Additional information for Recipients in France:

NORD/LB is partially regulated by the “Autorité des Marchés Financiers” for the conduct of French business. Details concerning the extent of our regulation by the respective authorities are available from us on request. The present information does not constitute an analysis within the meaning of Article 24 (1) Directive 2006/73/EC, Article L.544-1 and R.621-30-1 of the French Monetary and Financial Code, but does represent a marketing communication and does qualify as a recommendation pursuant to Directive 2003/6/EC and Directive 2003/125/EC.

Additional information for Recipients in Greece:

The information contained herein gives the view of the author at the time of publication and may not be used by its Recipient without first having confirmed that it remains accurate and up to date at the time of its use. Past performance, simulations or forecasts are therefore not a reliable indicator of future results. Investment funds have no guaranteed performance and past returns do not guarantee future performance.

Additional information for Recipients in Indonesia:

This report contains generic information and has not been tailored to the circumstances of any individual or specific Recipient. This information is part of NORD/LB's marketing material.

Additional information for Recipients in the Republic of Ireland:

This information has not been prepared in accordance with Directive (EU) 2017/1129 (as amended) on prospectuses (the “Prospectus Directive”) or any measures made under the Prospectus Directive or the laws of any Member State or EEA treaty adherent state that implement the Prospectus Directive or such measures and therefore may not contain all the information required for a document prepared in accordance with the Prospectus Directive or the laws.

Additional information for Recipients in Japan:

This information is provided to you for information purposes only and does not constitute an offer or solicitation of an offer to enter into securities transactions or commodity futures transactions. Although the actual data and information contained herein has been obtained from sources which we believe to be reliable and trustworthy, we are unable to vouch for the accuracy and completeness of this actual data and information.

Additional information for Recipients in South Korea:

This information has been provided to you free of charge for information purposes only. The information contained herein is factual and does not reflect any opinion or judgement of NORD/LB. The information contained herein should not be construed as an offer, marketing, solicitation to submit an offer or investment advice with respect to the financial investment products described herein.

Additional information for Recipients in Luxembourg:

Under no circumstances shall the present information constitute an offer to purchase or issue or the solicitation to submit an offer to buy or subscribe for financial instruments and financial services in Luxembourg.

Additional information for Recipients in New Zealand:

NORD/LB is not a bank registered in New Zealand. This information is for general information only. It does not take into account the Recipient's financial situation or objectives and is not a personalised financial advisory service under the 2008 Financial Advisers Act.

Additional information for Recipients in the Netherlands:

The value of your investment may fluctuate. Past performance is no guarantee for the future.

Additional information for Recipients in Poland:

This information does not constitute a recommendation within the meaning of the Regulation of the Polish Minister of Finance Regarding Information Constituting Recommendations Concerning Financial Instruments or Issuers thereof dated 19 October 2005.

Additional information for Recipients in Portugal:

This information is intended only for institutional clients and may not be (i) used by, (ii) copied by any means or (iii) distributed to any other kind of investor, in particular not to retail clients. The present information does not constitute or form part of an offer to buy or sell any of the securities covered by the report, nor should it be understood as a request to buy or sell securities where that practice may be deemed unlawful. The information contained herein is based on information obtained from sources which we believe to be reliable, but is not guaranteed as to accuracy or completeness. Unless otherwise stated, all views contained herein relate solely to our research and analysis and are subject to change without notice.

Additional information for Recipients in Sweden:

This information does not constitute (or form part of) a prospectus, offering memorandum, any other offer or solicitation to acquire, sell, subscribe for or otherwise trade in shares, subscription rights or other securities, nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever. The present information has not been approved by any regulatory authority. Any offer of securities will only be made pursuant to an applicable prospectus exemption under the EC Prospectus Directive (Directive (EU) 2017/1129), and no offer of securities is being directed to any person or investor in any jurisdiction where such action is wholly or partially subject to legal restrictions or where such action would require additional prospectuses, other offer documentation, registrations or other actions.

Additional information for Recipients in Switzerland:

This information has not been approved by the Federal Banking Commission (merged into the Swiss Financial Market Supervisory Authority (FINMA) on 1 January 2009). NORD/LB will comply with the Directives of the Swiss Bankers Association on the Independence of Financial Research (as amended). The present information does not constitute an issuing prospectus pursuant to article 652a or article 1156 of the Swiss Code of Obligations. The information is published solely for the purpose of information on the products mentioned herein. The products do not qualify as units of a collective investment scheme pursuant to the Federal Act on Collective Investment Schemes (CISA) and are therefore not subject to supervision by FINMA.

Additional information for Recipients in the Republic of China (Taiwan):

This information is provided for general information only and does not take into account the individual interests or requirements, financial status and investment objectives of any specific investor. Nothing herein should be construed as a recommendation or advice for you to subscribe to a particular investment product. You should not rely solely on the information provided herein when making your investment decisions. When considering any investment, you should endeavour to make your own independent assessment and determination on whether the investment is suitable for your needs and seek your own professional financial and legal advice. NORD/LB has taken all reasonable care in producing this report and trusts that the information is reliable and suitable for your situation at the date of publication or delivery. However, no guarantee of accuracy or completeness is given. To the extent that NORD/LB has exercised the due care of a good administrator, we accept no responsibility for any errors, omissions, or misstatements in the information given. NORD/LB does not guarantee any investment results and does not guarantee that the strategies employed will improve investment performance or achieve your investment objectives.

Information for Recipients in the United Kingdom:

NORD/LB is subject to partial regulation by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA). Details of the scope of regulation by the FCA and the PRA are available from NORD/LB on request. The present information is "financial promotion". Recipients in the United Kingdom should contact the London office of NORD/LB, Investment Banking Department, telephone: 0044 / 2079725400, in the event of any queries. An investment in financial instruments referred to herein may expose the investor to a significant risk of losing all the capital invested.

Time of going to press: 02 June 2025 (12:30)