NORD/LB
Creating true value.

MON, 11 December 2023 (3pm CET)
Our digital outlook 2024
The ECB and the bond markets in 2024 – supervised detox or cold turkey?

Covered Bond & SSA View

NORD/LB Floor Research

6 December 2023 ♦ 36/2023
Marketing communication (see disclaimer on the last pages)

NORD/LB

Agenda

Floor analysts:

Covered Bonds/Banks

Dr Frederik Kunze
frederik.kunze@nordlb.de

Lukas Kühne
lukas.kuehne@nordlb.de

SSA/Public Issuers

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

Christian Ilchmann
christian.ilchmann@nordlb.de

NORD/LB:
Floor Research

NORD/LB:
Covered Bond Research

NORD/LB:
SSA/Public Issuers Research

Bloomberg:
RESP NRDR <GO>

Market overview Covered Bonds

Authors: Dr Frederik Kunze // Lukas Kühne

Primary market: USD deal from Deutsche Pfandbriefbank in the spotlight

Another week has come and gone and still there is no sign of covered bond issuers appearing on the primary market for EUR benchmarks. The phase of weak activity in our focus segment is certainly not the sole reason why the USD deal from Deutsche Pfandbriefbank (ticker: PBBGR) from the previous trading week attracted a considerable degree of attention. After all, the Pfandbrief segment recently came into focus with regard to signs of stronger spread widening – starting from relatively narrow levels – as well as with regard to the CRE exposure of some banks. Pfandbrief issuers, among others, always switch their attention to refinancing in the USD segment when the expected issue price is so attractive that a swap from EUR into USD is not any more appealing. This applies in particular to PBBGR, which has an original USD funding requirement due to the composition of the cover pool. The deal worth USD 550m (3y; REGS S) was placed at SOFR +100bp (yield at issue: 5.274%). On the basis of the fair value assumptions for the EUR market at the time of the transaction (approximately ms +45bp) and taking into account the market-based conversion factors as well as the current market dynamics in the EUR benchmark segment (new issue premium demands on the part of investors), we believe that the transaction can be described as a success for the issuer. The issuance volume of USD 550m fulfils the requirements when converted into EUR for Level 1 classification in the context of LCR management (minimum volume: EUR 500m). In this regard, the USD benchmark (rating: Aa1) can, from our perspective, be regarded as a Level 1 asset.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
-	-	-	-	-	-	-	-	-

Source: Bloomberg, NORD/LB Floor Research (Rating: Fitch / Moody's / S&P)

Secondary market: low turnover, situation unchanged

On the secondary market for covered bonds in EUR benchmark format, the situation remains pretty much unchanged, with turnover continuing to be exceptionally restrained. Against this backdrop, we are also seeing that fresh supply is performing well overall, which can also be seen as an indication that deals may potentially be benefiting from higher new issue premiums in the secondary market. Owing to this relative distinction between "old" and "new" bonds, curves are widening. However, it remains the case that investors are keen to secure longer terms. Nevertheless, this circumstance is likely being overvalued, as turnover is lower for secondaries. We expect this sedate picture to continue up to the turn of the year, although we do expect new life to be injected into the secondary market during the first trading days of 2024.

Moody's I: A look at the global covered bond market in Q4 2023
A few days ago, the rating agency Moody's presented its latest sector report for the global covered bond market. As part of its quarterly publication, the risk experts regularly focus on the covered bond segment from various perspectives. In addition, the publication provides a detailed overview of the key rating metrics used to evaluate the programmes assessed. This data repository is also the basis of our Covered Bond focus article in the current edition of our weekly publication. With regard to the "Research Highlights", Moody's states, among other things, that mortgage covered bonds continue to appear robust – even in the context of high inflation rates, gloomier economic prospects and the current interest rate environment. However, in the view of the risk experts, the affordability of new housing is not likely to improve. From a regulatory perspective, Moody's also highlights the positive influences of the EU covered bond harmonisation project and a possible equivalence regime for covered bonds from third countries.

Moody's II: focus on the Swedish mortgage market
In another Sector Report, the rating experts at Moody's also looked at the Swedish real estate market. Against the backdrop of weak economic growth projections and persistently high inflation rates over the next 12 to 18 months, Moody's expects higher vacancy rates on the Swedish real estate market. While demand for commercial real estate is unlikely to recover in 2024, there is still strong excess demand in the residential property market, where vacancy rates are low. In combination with rising financing costs, the rating experts expect low transaction volumes and discounted property prices, so that by the middle of next year real estate valuations could fall by as much as 5%-20% in comparison with market prices two years ago. With regard to the covered bond market, no significant deterioration can be observed in the cover pools of Swedish issuers active in the benchmark segment. The proportion of non-performing loans in the cover pools remains low and OC rates are well above the national limits. As such, the result of a change in sentiment would more likely be disproportionate widening of spreads on Swedish covered bonds.

vdp annual reception 2023: Joachim Nagel lives up to his reputation as a hawk
The next regular meeting of the ECB Governing Council, which is responsible for making key interest rate decisions, is scheduled for 14 December. In the run-up to the Council meetings, market participants regularly focus on the statements of high-ranking ECB representatives. At the annual reception of the Association of German Pfandbrief Banks (vdp), Bundesbank President Joachim Nagel presented his view of things and prepared his audience for a rather hawkish view of things to come. From his point of view, it remains "considerably too early" to even think about lowering interest rates. After all, inflation is only expected to return close to its target by 2025 at the earliest, Nagel explained. He also touched upon the minimum reserve requirements in his speech and saw an increase from 1% to 2% as being manageable. Nagel's view hardly comes as a surprise to us, but, by the same token, it is also unlikely to be totally uncontroversial within the ECB Governing Council. We certainly expect a lively debate at the next meeting, although interest rate cuts are unlikely to be a topic of discussion in December. Rather, the focus will be on the topics such as minimum reserves and PEPP reinvestments. In particular, bringing forward the end of full reinvestments of maturities under the PEPP – although not necessarily in December itself – is likely to account for a larger chunk of the talks.

S&P: Danish Covered Bond Market Insights 2023

A few days ago, the risk experts at S&P Global Ratings presented a comprehensive analysis of the Danish covered bond market. In addition to the domestic covered bond market, the authors of "Danish Covered Bond Market Insights 2023" also focused on developments in the mortgage markets and the programme-specific key metrics. According to S&P, the high household asset base and solid financial situation with regard to public budgets has enabled the Danish economy to mitigate inflationary pressures and expected falls in house prices. Looking at the composition of the Danish covered bond market, it is striking that the share of EUR-denominated issues has remained at a lower level for several years now: at a current level of less than 4%, this is a long way from the peak of more than 12% at the end of 2010/start of 2011. Issuance volumes in the EUR benchmark segment have been correspondingly weak in recent years. Looking ahead to future developments, S&P firstly expects economic momentum to weaken (GDP growth forecast for 2023: 0.75% p.a.; average for 2025-2026: 1.50% p.a.) but, secondly, that the labour market will remain robust. On the back of significant setbacks in 2022 and 2023, S&P is of the view that the Danish housing market will first hit an all-time low before reaching a turning point over the course of 2024. With LTVs in the cover pools practically unchanged, the assessment of the credit quality of Danish covered bonds remains stable. Ratings on the Danish covered bond market are likely to remain unchanged even in the event that house prices fall by 20-30% - at least this is the conclusion reached by an S&P scenario analysis. However, systemic risks for banks have arisen on the basis of their exposure to CRE financing. In this context, S&P also refers to statements made by the Danish central bank, which suggest that this could result in significant losses in an extreme case.

Novo Banco launches new covered bond programme

On Friday last week, Novo Banco from Portugal announced that its modified covered bond programme had been approved by the national regulatory authority. The changes impact repayment structures and the liquidity reserve in particular. By switching the repayment structure from Conditional Pass Through (CPT) to soft bullet, Novo Banco is following a sustained trend that has seen an increasing number of covered bond issuers converting their programmes to a soft bullet structure. In addition, as a result of the changes to the covered bond programme, a liquidity reserve of 180 days must be maintained in the cover pool. Nova Banco currently has an outstanding covered bond volume of EUR 5.5bn, although this figure is exclusively made up of retained covered bonds. Mark Bourke, CEO of Novo Banco, announced in a press release that a new covered bond issuance is more likely to happen during the first six months of 2024.

Moody's III: "Credit quality of APAC covered bonds remains strong!"

After we discussed the credit opinion for APAC covered bonds published by Fitch as part of the previous edition of our weekly publication, we now propose to do the same for Moody's assessment of the credit quality of covered bonds in the Asia-Pacific region. For the rating agency's risk experts, the APAC programmes still appear to be highly robust, which can be attributed in particular to the credit quality of the corresponding sovereigns (Australia, New Zealand, Japan, South Korea and Singapore). The cover pools also demonstrate high credit quality - not least because they exclusively contain residential primary coverage. Nevertheless, as a result of the interest rate hikes across the region, negative effects on the residential real estate segment have been in evidence. However, these are mitigated by low unemployment, comfortable loan-to-value ratios and the fact that the issuer is the primary source of bond cash flows.

Focus on COP28: EBA affirms commitment to sustainability

Last week, the European Banking Authority (EBA) issued a statement that affirmed its commitment to taking greater account of sustainability across the EU banking sector. The EBA underlines that environmental, social and governance (ESG) topics are also given high priority from its side and highlights its own commitment to achieving more sustainable development across many of its areas of activity. This applies above all to risk management and bank supervision. In conjunction with other supervisory authorities, the EBA is also involved in conducting climate stress tests, which check the resilience of the financial sector in relation to the 2030 climate targets defined at EU level. From the perspective of the EBA, the transition to climate-neutral, climate-resilient and more sustainable economic growth harbours both opportunities and risks for the banking sector as well. In this respect, the EBA clearly puts the topic of ESG in the context of financial market stability. This is a development that will also affect the covered bond market, with the ESG sub-market in the EUR benchmark segment having recorded dynamic growth once again in 2023 (cf. focus article in the previous edition of our weekly publication). In actual fact, we believe that the covered bond segment could act as a significant driving force when it comes to achieving climate-related and social goals – although this does not mean that there are no obstacles to surmount on the way. For example, there remains a huge need on the part of covered bond issuers to make adjustments.

Market overview
SSA/Public Issuers

Authors: Dr Norman Rudschuck, CIIA // Christian Ilchmann

Coalition committee and the 2024 federal budget: (no) confidence and nothing else

The Vice Chancellor and Federal Minister for Economic Affairs and Climate Action, Robert Habeck (Greens), cancelled his trip to the UN Climate Change Conference in Dubai, as the coalition committee on the "hole in the federal budget" caused by the ruling passed down by the Federal Constitutional Court three weeks ago was so productive. The meeting was a "polite session" on the current situation and offered the chance for helpful political exchange. No specific resolutions were adopted in a businesslike and constructive atmosphere. However, it has emerged from the Ministry for Economic Affairs that good progress has meanwhile been made on measuring the financial hole; this now stands at EUR 17bn for the 2024 budget. And that is just the start of it: the Federal Minister of Finance, Christian Linder (FDP), is not convinced that the preconditions for suspending the debt brake have been met for 2024 either. However, this is what the SPD and the Greens are demanding. And then, late on Sunday evening, it came as a real surprise to learn that the long-planned journey of the Minister for Economic Affairs to Dubai had been cancelled – apparently at the request of the Chancellor. His presence was required in Berlin to make progress in the discussions on the 2024 budget. This was certainly not the case a few days ago, although there has now been a gaping hole in the budget for three weeks. There was, however, time for an appearance on public service broadcasting: on Sunday evening, Habeck appeared "quite optimistic" on a talk show that they were well en route to achieving an agreement. However, he did not express any confidence that agreement would be reached. It is a "difficult" process, as we are told frequently these days. At the same time, the time pressures are enormous, if they want to get the budget for 2024 home and dry this year. The much-quoted principle has applied to date: nothing will be agreed until everything is agreed. That truly does not convey stability in a period of great uncertainty.

Schleswig-Holstein has to expect far lower tax revenues

The results of the October tax assessment for Schleswig-Holstein (ticker: SCHHOL) were presented in November. They indicated that anticipated revenues for the period from 2023 to 2027 will fall by a further EUR 210m compared with the May tax assessment, which had already been cut by EUR 2.8bn in the spring. According to the current tax assessment, Schleswig-Holstein can expect around EUR 12.5bn in 2023. This figure already contains grants for daycare facilities for children, migration and public health services. The anticipated shortfall in revenue is due to the fact that the Bundesland's financial strength has improved compared with the Laender average. This will lead to a reduction in federal supplementary grants (BEZ) and funds from the federal financial equalisation system. It is expected to lose around EUR 57m in BEZ payments in 2024. Schleswig-Holstein also receives less sales tax revenue, at around EUR 140m, than the average figure for the Laender. A figure of EUR 4.4bn is estimated for the municipalities' original tax revenues in 2023, which equates to a fall of around EUR 65m compared with the May estimate. Schleswig-Holstein's Minister of Finance, Monika Heinold (Greens), commented, "All public sector budgets are faced with enormous challenges. The crisis years have left visible scars. It is more and more difficult to balance income and expenses, we now have to count every euro not twice but three times before we spend it."

KfW: Mandate to promote green bonds concluded successfully

The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and KfW (ticker: KFW) have met the targets for the development of a green bond portfolio enshrined in the 2015 development mandate. What is this all about? The KfW treasury invests in green bonds to finance environmental and climate protection measures on behalf of the BMUV. Since it was given this task, KfW has mobilised a total of EUR 3.4bn across 122 investments in addition to helping 64 issuers from 16 countries to promote green projects. Its investments focus on measures to increase energy efficiency and to develop renewable energies. Across the same period, the outstanding volume on the market for green bonds has increased from well under EUR 100bn to around EUR 2,000bn, while the annual global issuance volume of a few billion in 2015 has grown to around EUR 500bn this year and in the two previous years. KfW has also helped improve the quality of the market by supporting issuers with the development of their green bond issuance programmes and the associated reporting requirements. During its longstanding membership of the Executive Committee of the Green Bond Principles, KfW has actively participated in the development of globally accepted standards and focused on the development of recommendations for impact reporting for green bonds. Transparency and verifiability of investments and their impacts are of critical importance for the credibility of green bonds and therefore also for investors. Stefan Wintels, Chairman of the KfW Executive Board commented, “Through our investment in green bonds, we have raised additional capital for global environmental and climate protection. Green bonds have meanwhile become a widely accepted transparent capital market instrument.” KfW also wishes to make the economic, environmental and social impact of its financing still more transparent for global investors in the future. Along the same lines, KfW is currently working on its Green Bond Framework 4.0 and will provide an introduction to this on Thursday as part of its Global Investor Broadcasts. At least just as importantly, it will use its six-monthly framework to present its funding figures for 2024. We assume they will amount to at least EUR 80-85bn. Besides the green transformation, they also depend in key aspects on the German government’s funding requirement (see above: budget deficit and possible suspension of the debt brake) as well as other pots such as the Economic Stabilisation Fund (ESF). Recent years have also shown that this range may also be adjusted (on several occasions) during the year.

NRW.BANK: ten years of green bonds

EUR 8.0bn for environmental projects and 25m tonnes of CO_2 “saved” – that is the result achieved by NRW.BANK’s green bond programme over the past decade. In 2013, the promotional bank of North Rhine-Westphalia (ticker: NRWBK) became the first regional promotional bank in Europe to start issuing green bonds and has now placed 14 green bonds to date. Michael Stölting, a member of the Managing Board of NRW.BANK, sums up: “Our green bonds have been a real success story from the beginning. With them, we have made a major contribution to making North Rhine-Westphalia climate-neutral. The high levels of transparency offered by the bonds and exacting quality standards have won investors over from the beginning. At the same time, as a pioneer, we could inject dynamism into the market.” With its green bonds, NRW.BANK helps facilitate more climate-friendly projects in NRW that are consistent with the EU taxonomy for sustainable investments. Up to 2021, the volume per bond came to EUR 500m. Since 2022, NRW.BANK has issued two green bonds of EUR 1.0bn each per year.

IBB: Berlin Housing Market Report 2023

Climate protection and demographic change are shaping the Berlin housing market according to the results of the current Housing Market Report produced by Investitionsbank Berlin (ticker: IBB). Yet again, rising rents and too few subsidised apartments are the greatest challenges on the Berlin housing market in 2023. There are particular shortages in the supply of housing in the mid, lower and fixed rental segments, whereas the upper price segment developed in a positive direction, reporting a virtually balanced supply/demand ratio for the first time. Its experts also report signs of an improvement in the market for owner-occupied housing, which was particularly apparent among private homes compared with the previous year. On top of this are the current challenges described by Dr Hinrich Holm, Chairman of the Management Board of Investitionsbank Berlin: "Ongoing climate change and demographic change will profoundly alter the Berlin housing market over the next few years. The major challenges of our time will therefore affect the Berlin housing market, which is already showing signs of strain. It is therefore all the more important to deal with issues such as energy and accessible new buildings together to achieve a sustained turnaround for Berlin." As far as the investment climate is concerned, sentiment deteriorated significantly in both the new construction segment and among existing housing stock. Poor conditions were reported for the construction of new rental apartments, in particular, although trends were more positive in Berlin's eastern districts. IBB experts also reported a downward trend in modernisation measures and the acquisition of existing properties. However, there are signs of a slightly positive change in investment conditions in the future. Nevertheless, substantial construction costs are the most urgent challenge on the rental apartment market. On top of this, lengthy approval processes and high interest rates are constraining market dynamics. Among existing housing, rising net "cold rents" (Kaltmiete; a term that refers to a flat rental fee, with other costs including gas and water utilities, electricity, internet, property tax, recycling, etc, etc, added on top) in particular and high ancillary and operating costs led to problems, as did the reduction in social housing stock. Here, the poor economic situation and higher costs and prices resulting from this again had an impact.

Primary market

Appropriately, given the wintery weather, primary market activity in the SSA market reached freezing point in the last seven days. Having largely achieved their funding targets, many issuers have turned their back on the primary market for this year. Consequently, we have nothing to report today. However, the new year is already casting its shadow: besides KfW, which was mentioned above, the EU (ticker: EU) has already issued invitations to its Global Investor Call on 14 December and will use this opportunity to present, among other information, its funding targets for the first half of 2024. We would not be surprised by a funding target of at least EUR 70bn.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
-	-	-	-	-	-	-	-	-

Source: Bloomberg, NORD/LB Floor Research (Rating: Fitch / Moody's / S&P)

Covered Bonds
The covered bond universe of Moody's: an overview

Authors: Dr Frederik Kunze // Lukas Kühne

Moody's provides ratings for 241 covered bond programmes worldwide

The rating agency Moody's published the latest issue of its Covered Bond Sector Update – Q4 2023 – last week. The data was based on all the covered bonds that Moody's rated in the second quarter of 2023. In total, ratings were affirmed for 241 covered bond programmes from 30 countries, with detailed key figures presented. This means that the rating agency's coverage encompassed a significant share of the total global covered bond universe. In terms of numbers, most of the programmes originated in Germany (40), followed by Austria (24) and Spain (23). Ten countries accounting for eight or more programmes each made up 72.2% (174 programmes) of the total number of programmes. The remaining 27.8% (67 programmes) were distributed across 20 jurisdictions, each accounting for seven or fewer programmes. As expected, mortgage-backed programmes, totalling 200 (83.0%), accounted for the major share of the programmes rated by Moody's. Furthermore, Moody's rated 39 public sector programmes (16.2%) from ten different countries, although in terms of jurisdiction most were concentrated in Germany (12 programmes), Austria (9 programmes), Spain (6 programmes) and France (4 programmes). One ship Pfandbrief programme and one programme in the Other category (both from Germany) completed the 241 ratings in total. As per usual, we present specific key figures in this article of today's issue of our weekly publication.

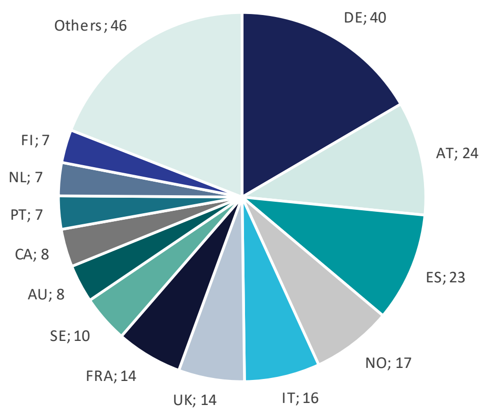
Focus on mortgage programmes from EUR benchmark jurisdictions

With regard to Moody's rating universe, we focus on mortgage programmes. Almost all of these programmes originate from EUR benchmark jurisdictions. Greece (4 programmes), Turkey (2), Hungary (2), Cyprus (1) and Romania (1) currently have no covered bonds outstanding in the EUR benchmark segment. For these reasons, our analysis below focuses on those mortgage-backed programmes that were set up in EUR benchmark jurisdictions. It should be noted that transactions under the programmes considered are not necessarily EUR benchmark bond issues.

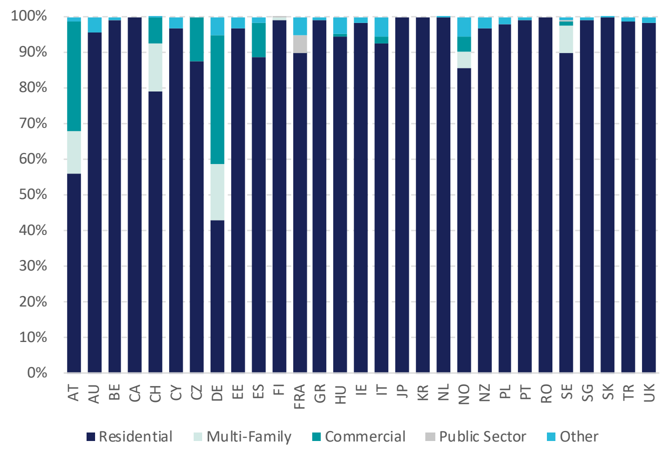
Majority of mortgage programmes with residential character

With regard to Moody's categorisation of cover assets for the various programmes, it can be stated that bond issues on average were covered to 84.5% by residential assets. However, in Germany (36.3%), Austria (30.7%), the Czech Republic (12.4%) and Spain (9.5%), the share of commercial assets was comparatively high. At the same time, Germany (15.9%), Switzerland (13.6%) and Austria (12.2%) as well as Sweden (7.9%) had significant shares of multi-family assets. With the exception of the above-mentioned countries as well as France (89.8%) and Norway (85.6%), the share of residential assets in the cover pools of the programmes from all of the remaining jurisdictions ranged from 92.7% to 100%. Neither of the cover pools for the two programmes from Luxembourg comprised mortgage assets.

Number of programmes rated by Moody's



Cover pool structure (mortgage programmes)



Source: Moody's, NORD/LB Floor Research

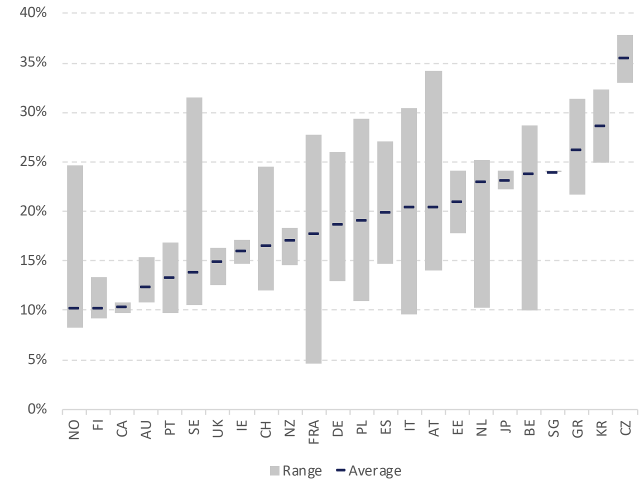
The collateral score as an indicator of cover pool quality

In our view, the collateral score represents a key indicator in Moody's covered bond universe. The rating agency uses it to assess the quality of cover assets, with a low value indicating that the quality of the cover pool is high. The collateral score measures the deterioration in credit quality of assets included in the cover pool in connection with the theoretical highest possible rating in the relevant country. In principle, we consider it appropriate to compare collateral scores across both programmes and jurisdictions. Nevertheless, some specific features must be taken into account. For example, Moody's provides for 5.0% as the lower limit for the collateral scores of most mortgage-based programmes. Yet, in Australia and the UK, some collateral scores were as low as 4.0%, while in Japan they are set at 0.0% due to the RMBS structure of the relevant programmes. With the Netherlands, Canada and Singapore, three jurisdictions exclusively recorded scores of 5.0%. The range of collateral scores was also very narrow in New Zealand (maximum of 5.1%), Portugal (maximum of 5.4%) and Australia (maximum of 5.8%). Issuers in Austria (11.5%), Germany (12.0%), Greece (20.0%) and Cyprus (27.0%) had the highest average collateral scores. At the same time, a wide range of scores was recorded in Germany and Norway (23.2 and 13.2 percentage points respectively). As outlined above, issuers from Germany and Austria feature a comparatively high share of commercial assets in their respective cover pools. Evidently, a high share of commercial cover assets is associated with a higher collateral score.

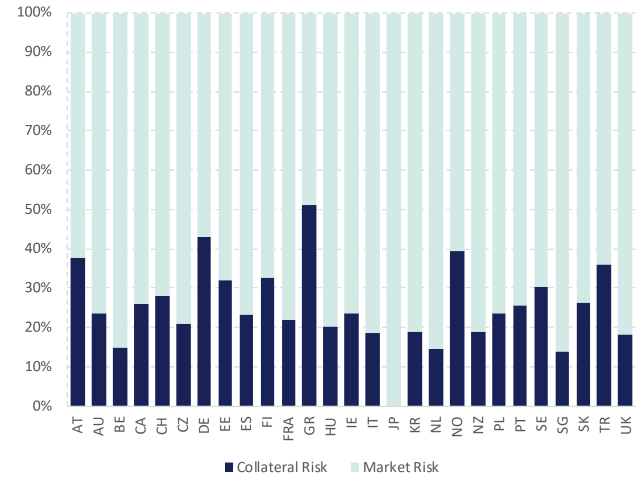
Cover pool losses – an indicator for expected losses

Moody's uses cover pool losses (CPL) as an indicator to reflect the losses expected in the cover pool following issuer default (covered bond anchor event). The risk comprises two components, market risk (cover pool losses as a result of funding, interest rate and currency risks) and collateral risk (cover pool losses resulting from a deterioration in the credit quality of cover assets). Similar to the collateral score, a high degree of heterogeneity was evident in this respect in a global comparison. This is true of both average cover pool losses and the national range in each case. For example, potential cover pool losses are particularly low in Norway, Finland, Canada and Australia, whereas they are relatively high in the Czech Republic.

Cover pool losses by country (mortgage programmes)



CPL market and collateral risk components by country (mortgage programmes)

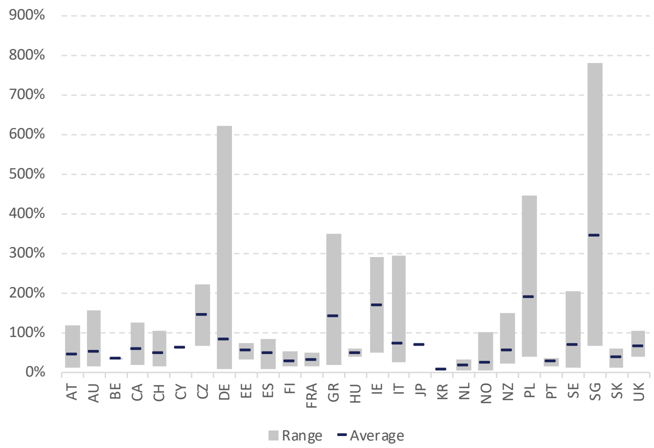


Source: Moody's, NORD/LB Floor Research

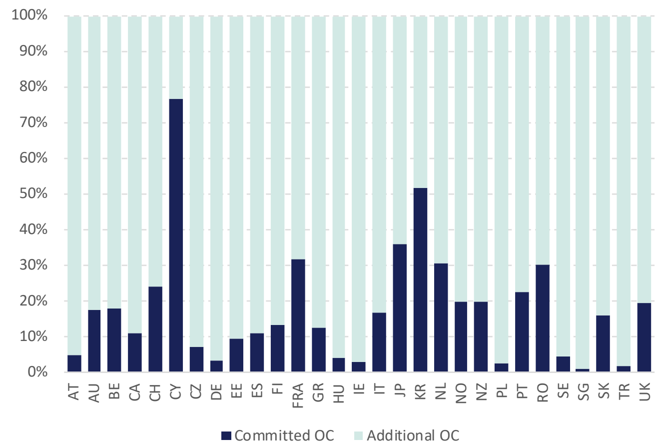
Funding, interest rate and currency risk determine expected losses

The chart above on the right illustrates that the contribution of the two components (collateral risk and market risk) varied considerably at national level. The two programmes from Japan again had a separate role: in view of their cover pool structure (exclusively RMBS transactions used as cover assets), there is no collateral risk. In principle, it is possible to derive that the majority of cover pool losses are impacted by the market risk, i.e. losses in the event of issuer insolvency can be ascribed to the categories of funding risk, interest rate risk and currency risk rather than resulting from the quality of cover assets.

Overcollateralisation by country (mortgage programmes)



Composition of overcollateralisation (mortgage programmes)



Source: Moody's, NORD/LB Floor Research

Wide range of overcollateralisation levels

With regard to the overcollateralisation levels of the programmes that Moody's rates, unsurprisingly, there are significant differences in an international comparison. High average overcollateralisation ratios were evident in the comparatively small covered bond jurisdictions of Poland, Switzerland, Ireland, Greece and Singapore. At the same time, a wide range of levels was recorded for Singapore, Poland and Greece as well as Germany. Narrower ranges are often due to a smaller number of issuers in the relevant jurisdiction.

Committed OC as the lower overcollateralisation limit

Overcollateralisation (OC) can also be divided into sub-components. OC may have been committed vis-à-vis the rating agency, in order to maintain a specific rating, or it may be based on legal requirements. Committed OC may therefore be understood to be a kind of lower limit for overcollateralisation, where the programme cannot readily fall below this limit, or where falling below this limit is not permitted at all. In contrast, actual overcollateralisation is only temporary in certain circumstances and may be subject to a certain level of volatility as a result of new bond issues or maturities. Overall, it can be stated that the higher share of overcollateralisation is made available by issuers on a voluntary basis, although this could certainly be due to low levels of committed OC. Furthermore, a high share of committed OC by no means also results in high overcollateralisation.

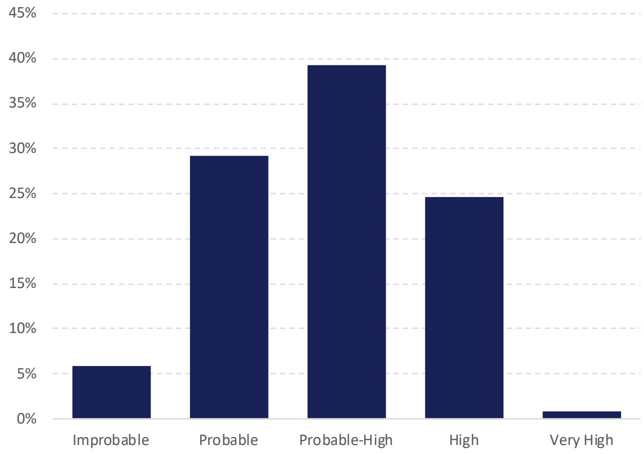
TPI restricts potential rating upgrade of covered bonds in relation to issuer rating

TPI rules restrict the potential covered bond rating to a specific number of notches above the issuer rating. The timely payment indicator (TPI) is a key figure Moody's makes available. This provides information about the probability of timely servicing of payment obligations following issuer default. It is differentiated in six levels, ranging from very high to very improbable. At 68.6%, the bulk of the mortgage programmes rated by Moody's are in the "probable" or "probable-high" categories. In contrast, the outer limits are less represented, with shares of 5.9% (improbable) and 0.8% (very high) respectively. In a total of five EUR benchmark jurisdictions, there are programmes that all have one and the same timely payment indicator (chart: TPI by country). Italy and Portugal each have one programme with a TPI of very high. In Germany (38 of 40 programmes) and Norway (10 of 17 programmes), the majority of the programmes rated are allocated to the category "high".

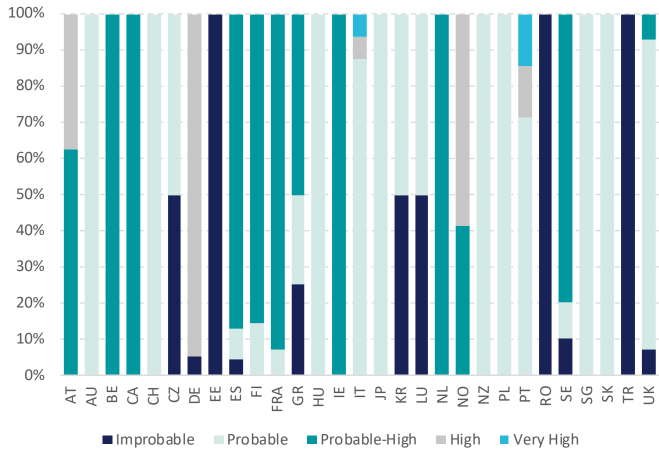
Buffer sufficient with regard to downgrades

In addition to the TPI, the TPI leeway indicates the number of notches by which the relevant covered bond anchor point can be downgraded without this entailing a downgrade of the rating for the covered bond programme, as laid down in the TPI framework. Accordingly, a total of six (2.9%) of the covered bond programmes rated by Moody's had no such buffer. This means that in the event of the covered bond anchor being downgraded, the direct consequence would be the downgrading of the programme. The highest incidence was a TPI leeway of four notches (54 programmes, or 25.7%). Six programmes (2.9%) had a buffer of seven notches, with Germany accounting for five of these (2.4%) and Norway for one. Six of the ten programmes in total with a TPI leeway of six notches were also based in Germany.

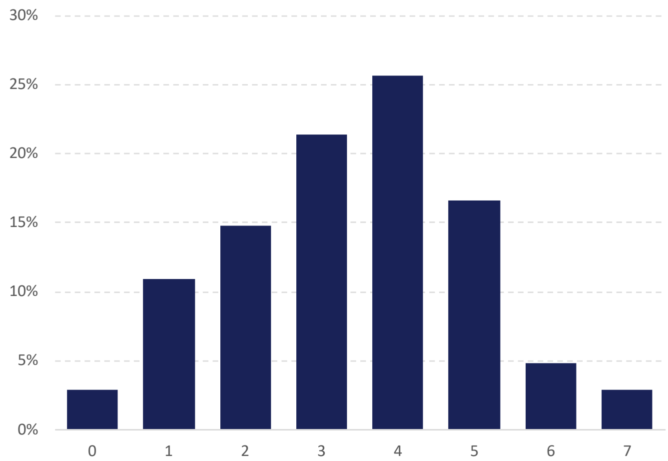
Timely payment indicator (TPI) (mortgage programmes)



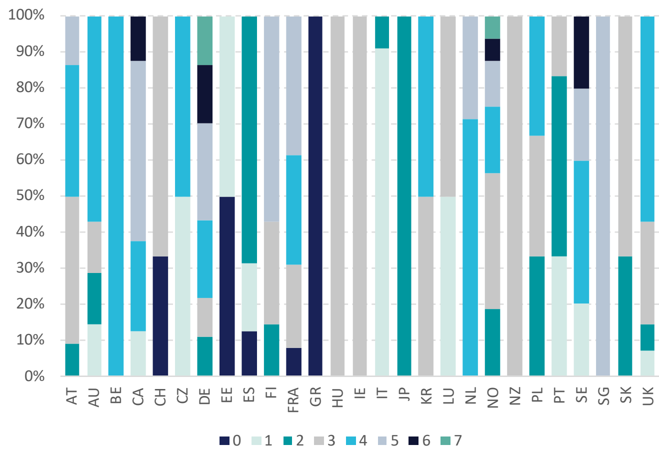
TPI by country (mortgage programmes)



TPI leeway in notches (mortgage programmes)



TPI leeway in notches by country (mortgage programmes)



Source: Moody's, NORD/LB Floor Research

Conclusion

Moody's current Sector Report as well as the data on which it is based reflect the heterogeneity that exists in the covered bond market at jurisdiction level. For several years now, Moody's aggregated parameters have delivered important insights into the relevant countries, particularly regarding the occurrence of a credit event on the issuer side. However, differentiation within each jurisdiction is also necessary, as the case of Germany highlights. At the same time, other factors that play a part in determining covered bond ratings but which are not included in this dataset are also highly relevant when assessing what potentially influences spreads. For Spain, Portugal and Italy, for example, a sovereign downgrade would also have implications for the covered bond ratings of some issuers. With regard to deriving risk weighting and the LCR level, this may in turn result in a reassessment, depending on the availability of ratings from other rating agencies, that then causes a change in the rating.

NORD/LB

SSA/Public Issuers
Teaser: Issuer Guide – Nordic Agencies 2023

Authors: Dr Norman Rudschuck, CIIA // Christian Ilchmann // assisted by Lukas-Finn Frese

Banks for local authorities dominate the Nordic agency market

In today's teaser, we shall look briefly at the Nordic agencies. With outstanding bonds totalling the equivalent of EUR 216.8bn overall, split across a total of 1,477 bonds issued by the six agencies covered in this publication, the Nordic agency market is medium-sized in a European comparison. The players in this market are very similar in many respects. Institutions whose mission is to finance local authorities play a particularly key role. Kommunalbanken (KBN) from Norway, Kommuninvest i Sverige from Sweden, Denmark's KommuneKredit and the Finnish organisation Municipality Finance (MuniFin) account for a large portion of the bonds issued by Nordic agencies that are currently in circulation. Given that they lend to municipalities, municipal associations, regions and public sector companies, there is a constant funding requirement that is largely covered through capital market activities. Sweden's Kommuninvest i Sverige is the largest Nordic agency as measured in terms of total assets, while KBN from Norway is the second-largest institute. Unlike the other agencies from Nordic countries covered here, the mandate of Svensk Exportkredit (SEK) is to manage Sweden's export financing scheme in. In this case, too, specialised export financing leads to a funding requirement that is heavily influenced by the demand for export credit and, consequently, by growth in the Swedish export industry. The Finnish agency Finnvera, which is involved in financing small and medium size Finnish enterprises in addition to export development activities, has a similar mandate. It became active in the EUR benchmark segment for the first time in 2014 and has been gradually building up a benchmark curve in EUR since then.

Nordic agencies – an overview

Institution	Type	Owner(s)	Guarantee	Risk weight
Kommunalbanken (KBN; Norway)	Municipal bank	100% Norway	Maintenance obligation	20%
Svensk Exportkredit (SEK; Sweden)	Export financier	100% Sweden	-	20%
Kommuninvest i Sverige (Kommuninvest; Sweden)	Municipal bank	100% Kommuninvest Cooperative Society	Joint and several guarantee	0%
Municipality Finance (MuniFin; Finland)	Municipal bank	53% municipalities, municipal associations and companies in municipality ownership; 31% municipal pension institutions; 16% Finland	Joint and several guarantee	0%
KommuneKredit (Denmark)	Municipal bank	100% all Danish municipalities and regions	Joint and several guarantee	0%
Finnvera (Finland)	Export financier	100% Finland	Explicit guarantee	0%

Source: Issuers, NORD/LB Floor Research

Joint and several liability

Local authorities bear liability for three of the four municipal banks (Kommuninvest, KommuneKredit, MuniFin). This means that each individual local authority must assume responsibility for all of the liabilities of the respective municipal bank. If a liability event occurs, the creditors may demand performance or satisfaction of the claim from the entirety of the guarantors. The guarantors are obliged to service the overall claim even if one of the guarantors is unable to make the necessary payments. The respective liability quotas of the local authorities result from internal regulations in the internal relationship, although in theexternal relationship there is always an entitlement to full satisfaction of the claims.

Maintenance obligation

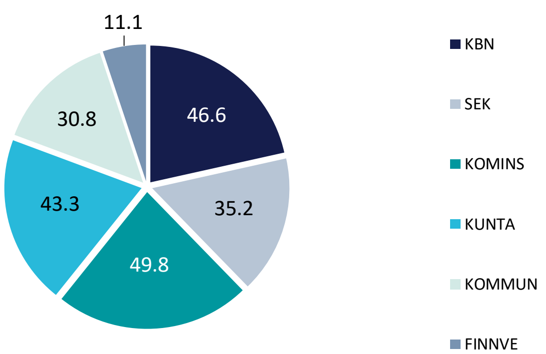
A maintenance obligation exists for Norway's KBN. This requires the Norwegian state to provide KBN with the funding necessary for its functioning, as defined in a Letter of Support. The state therefore has a duty to ensure that KBN's finances are managed in such a way that proper business operations are maintained and KBN's liabilities are serviced. The maintenance obligation therefore requires the guarantor to ensure solvency. De facto, this arrangement with the Norwegian state corresponds to an implicit guarantee.

Nordic agencies – an overview (EURbn/EUR equivalent)

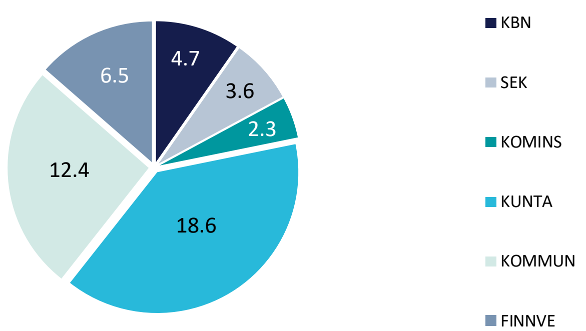
Name	Ticker	Rating (Fitch/Moody's/S&P)	Outstanding Volume	EUR volume	Funding target 2023	Maturities 2023	Net Supply 2023	Number of ESG bonds	ESG volume
KBN	KBN	-/Aaa/AAA	46.6	5.1	7.5	7.5	0.0	12	3.4
SEK	SEK	-/Aa1/AA+	35.2	4.8	12.5	10.1	2.4	10	2.0
Kommuninvest	KOMINS	-/Aaa/AAA	49.8	2.4	12.0	13.4	-1.4	10	6.4
MuniFin	KUNTA	-/Aa1/AA+	43.3	22.4	9.5	5.9	3.6	9	4.5
KommuneKredit	KOMMUN	-/Aaa/AAA	30.8	13.4	5.0	4.8	0.2	8	3.8
Finnvera	FINNVE	AA+/Aa1/-	11.1	6.5	1.5	0.9	0.6	0	0.0
Total			**216.8**	**54.6**	**48.0**	**42.6**	**5.4**	**49**	**20.1**

Foreign currencies are converted into EUR at rates as at 30 November 2023.
On account of the issuer's individual funding mix, the values for "funding target" and "net supply" in particular may deviate from reality.
Source: Bloomberg, issuers, NORD/LB Floor Research

Outstanding bond volumes (EURbn)

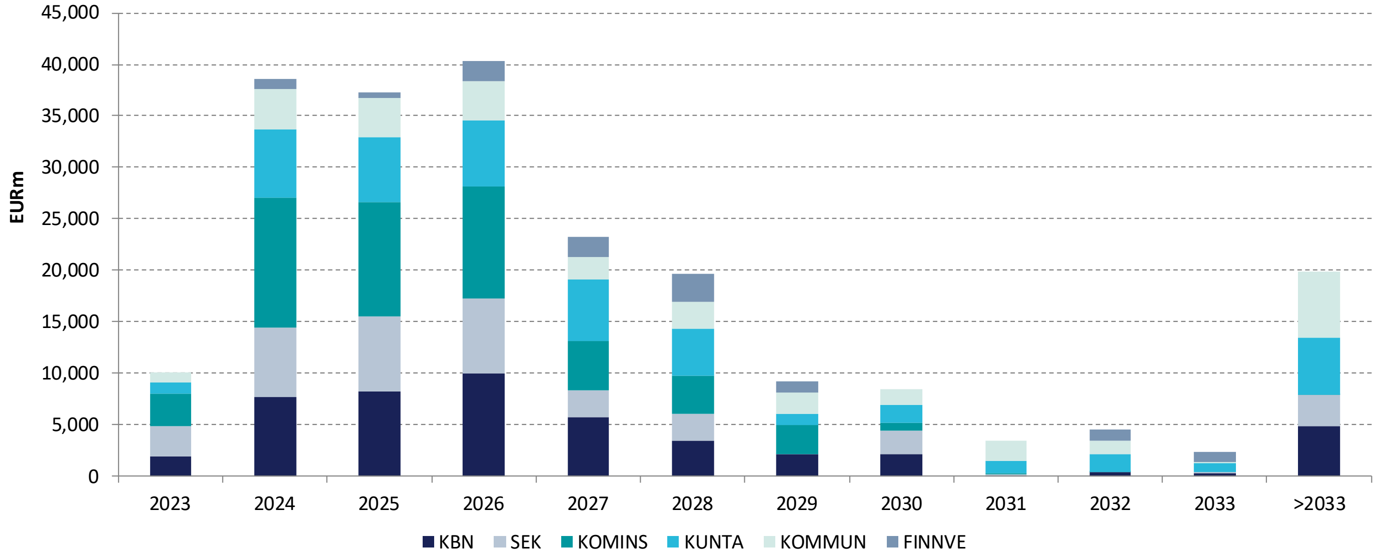


Outstanding EUR benchmarks (EURbn)

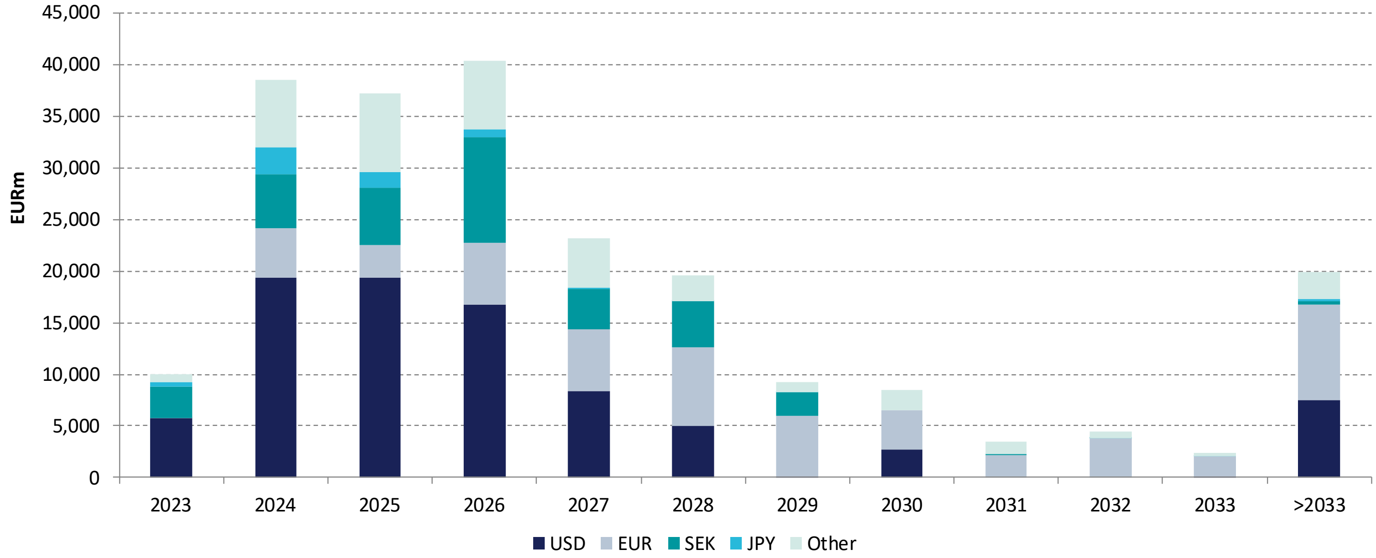


NB: Benchmarks are defined as bonds with a minimum volume of EUR 0.5bn.
Foreign currencies are converted into EUR at rates as at 30 November 2023.
Source: Bloomberg, NORD/LB Floor Research

Nordic agencies: outstanding bonds by issuer



Nordic agencies: outstanding bonds by currency



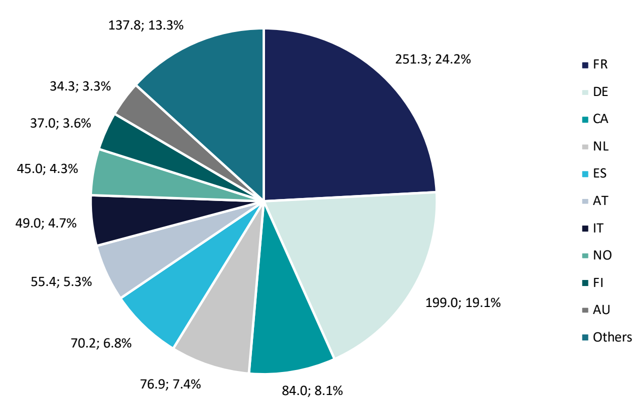
NB: Foreign currencies are converted into EUR at rates as at 30 November 2023.
Source: Bloomberg, NORD/LB Floor Research

Conclusion and comment

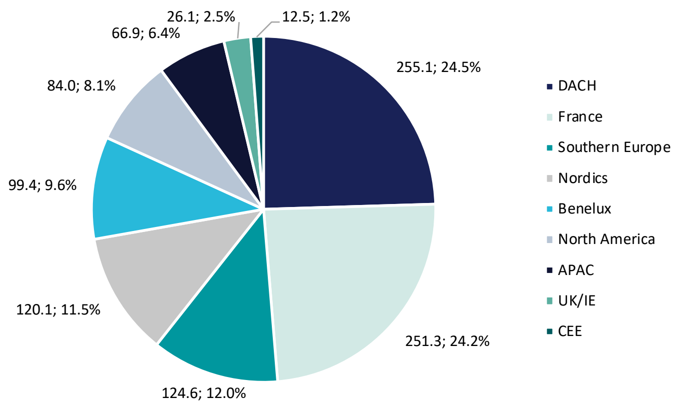
The Nordic agency market is a significant player when compared with other European markets, especially with regard to foreign currency bonds. New issues are also at a high level, producing a broad supply in a range of foreign currencies. However, the EUR supply is relatively constrained. We would expect state support to be forthcoming in the event that any of the institutes covered here were to encounter financial difficulties. Theoretically speaking, the importance of the respective institutes for their owners or states is too great for them not to take action should the banks face problems. It should be noted that since no explicit guarantees are in place, KBN and SEK bonds are assigned a risk weight of 20% under CRR/Basel III.

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



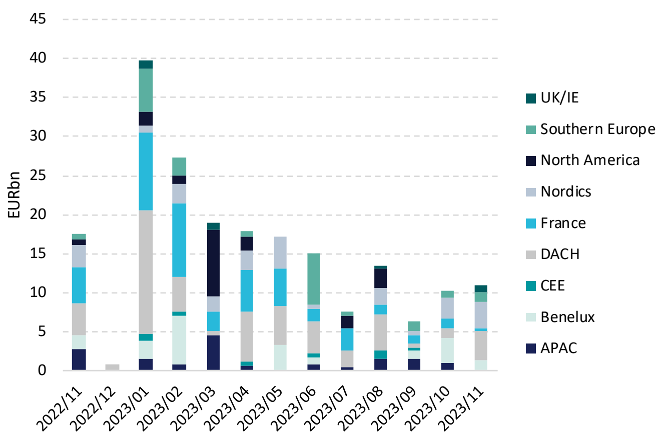
EUR benchmark volume by region (in EURbn)



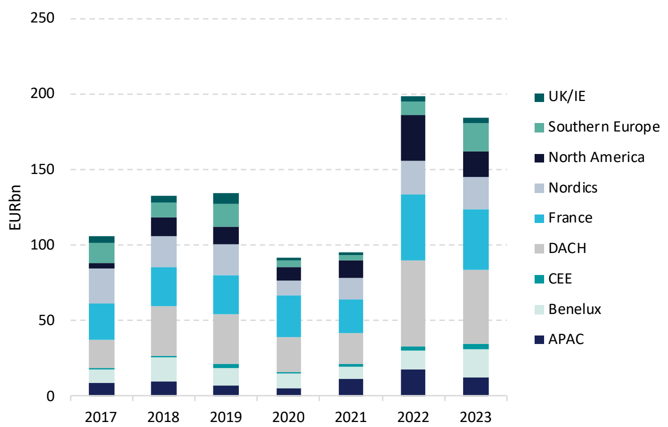
Top-10 jurisdictions

Rank	Country	Amount outst. (EURbn)	No. of BMKs	There of ESG BMKs	Avg. issue size (EURbn)	Avg. initial maturity (in years)	Avg. mod. Duration (in years)	Avg. coupon (in %)
1	FR	251.3	243	22	0.96	9.4	4.9	1.26
2	DE	199.0	282	36	0.65	7.9	4.1	1.20
3	CA	84.0	62	0	1.33	5.5	2.8	1.12
4	NL	76.9	78	3	0.92	10.5	6.2	1.16
5	ES	70.2	55	5	1.16	11.1	3.4	2.03
6	AT	55.4	94	4	0.58	8.2	4.7	1.37
7	IT	49.0	59	2	0.80	8.7	3.6	1.60
8	NO	45.0	55	12	0.82	7.3	3.7	0.78
9	FI	37.0	41	4	0.89	6.9	3.7	1.49
10	AU	34.3	33	0	1.04	7.2	3.5	1.56

EUR benchmark issue volume by month

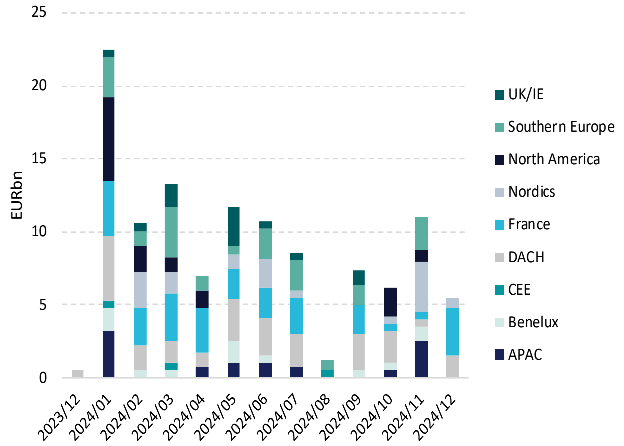


EUR benchmark issue volume by year

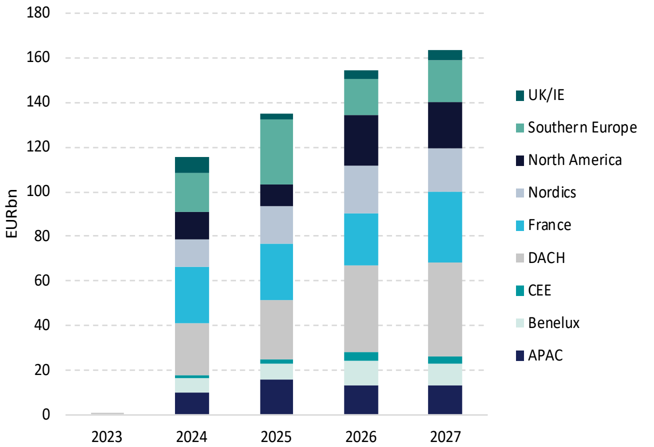


Source: market data, Bloomberg, NORD/LB Floor Research

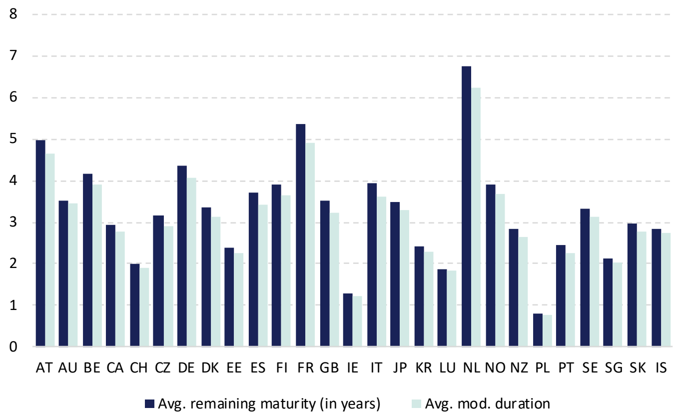
EUR benchmark maturities by month



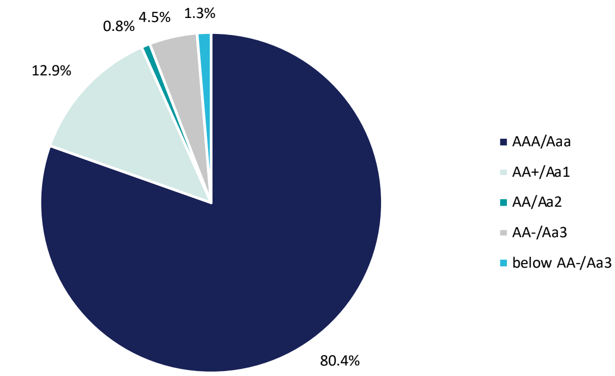
EUR benchmark maturities by year



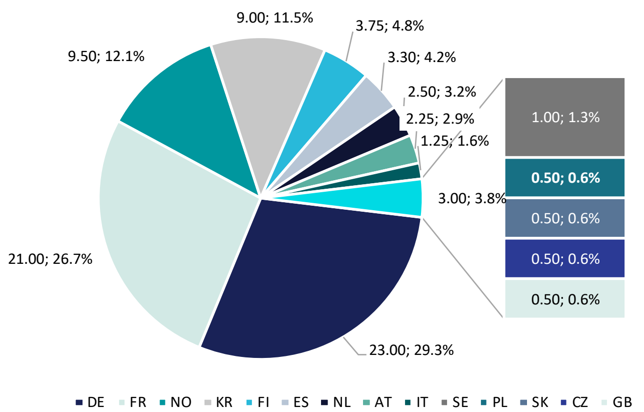
Modified duration and time to maturity by country



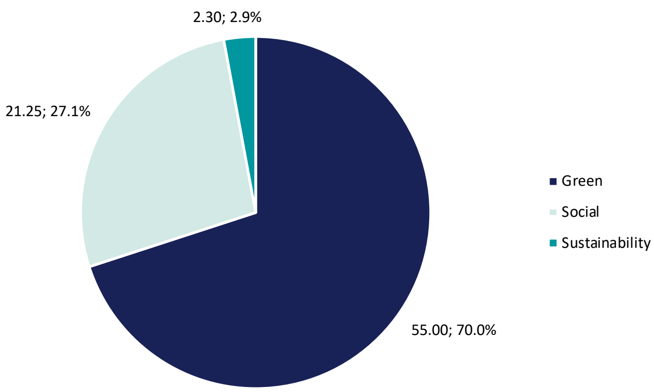
Rating distribution (volume weighted)



EUR benchmark volume (ESG) by country (in EURbn)

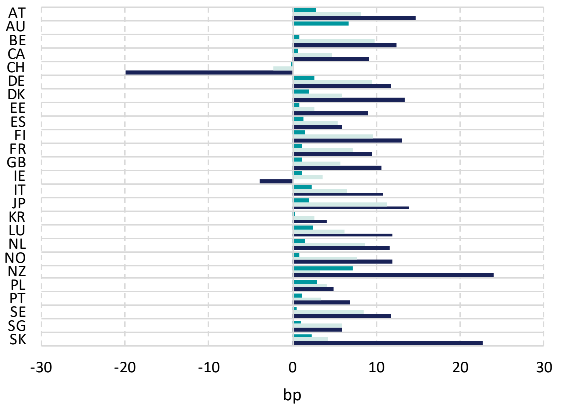


EUR benchmark volume (ESG) by type (in EURbn)

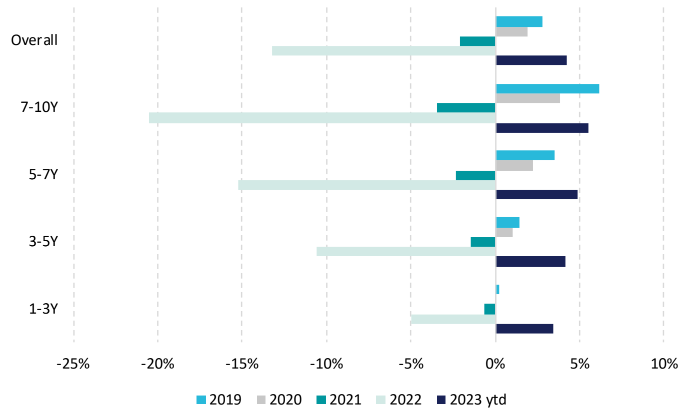


Source: market data, Bloomberg, NORD/LB Floor Research

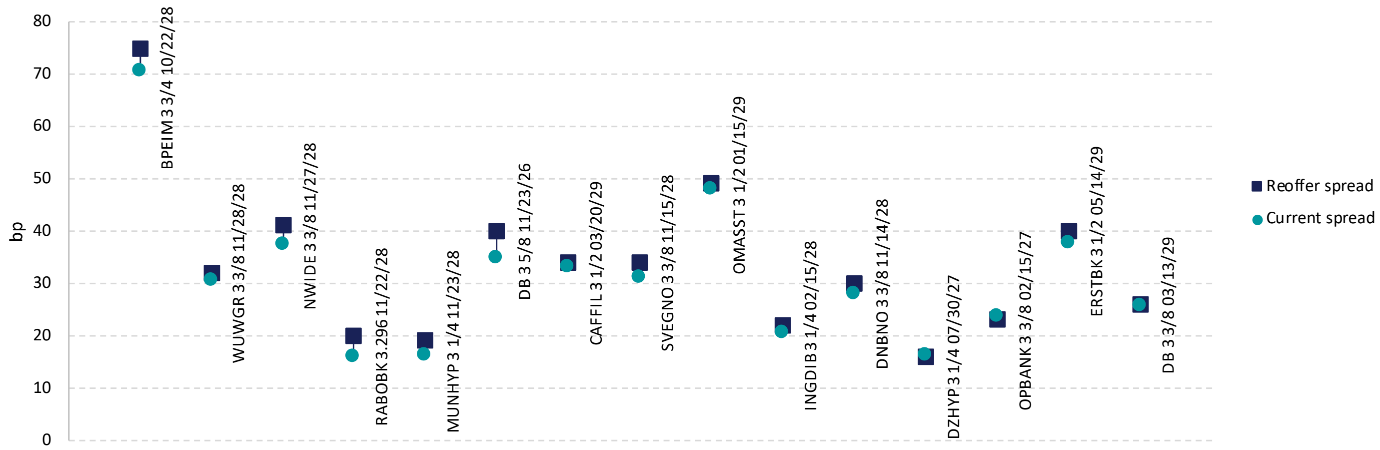
Spread development by country



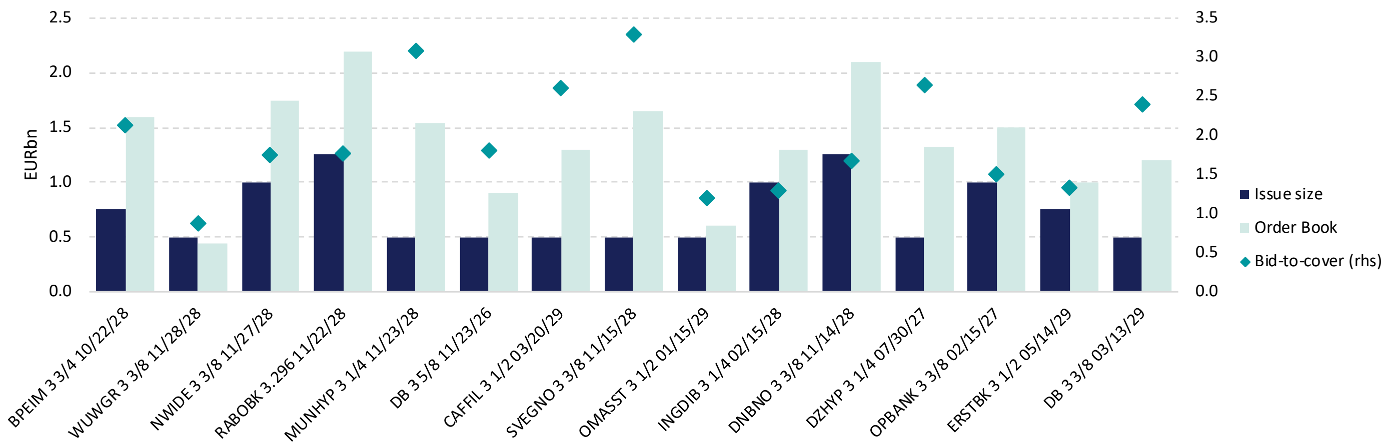
Covered bond performance (Total return)



Spread development (last 15 issues)



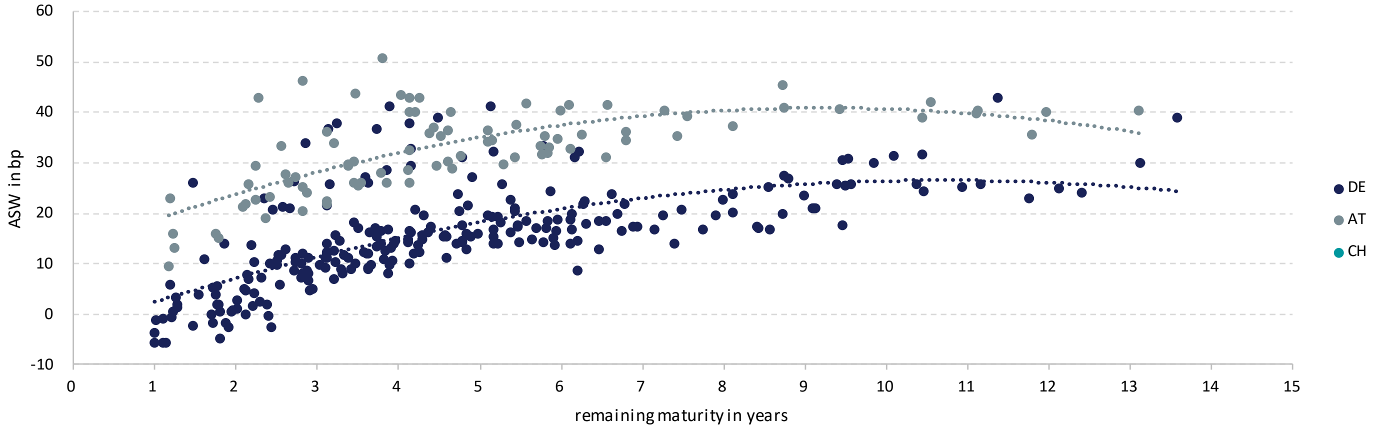
Order books (last 15 issues)



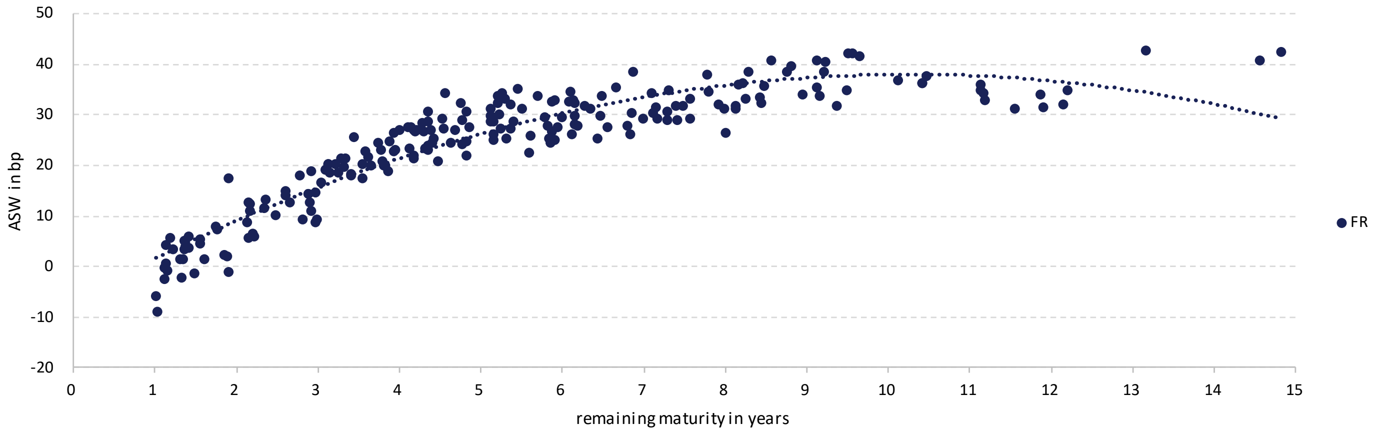
Source: market data, Bloomberg, NORD/LB Floor Research

Spread overview[1]

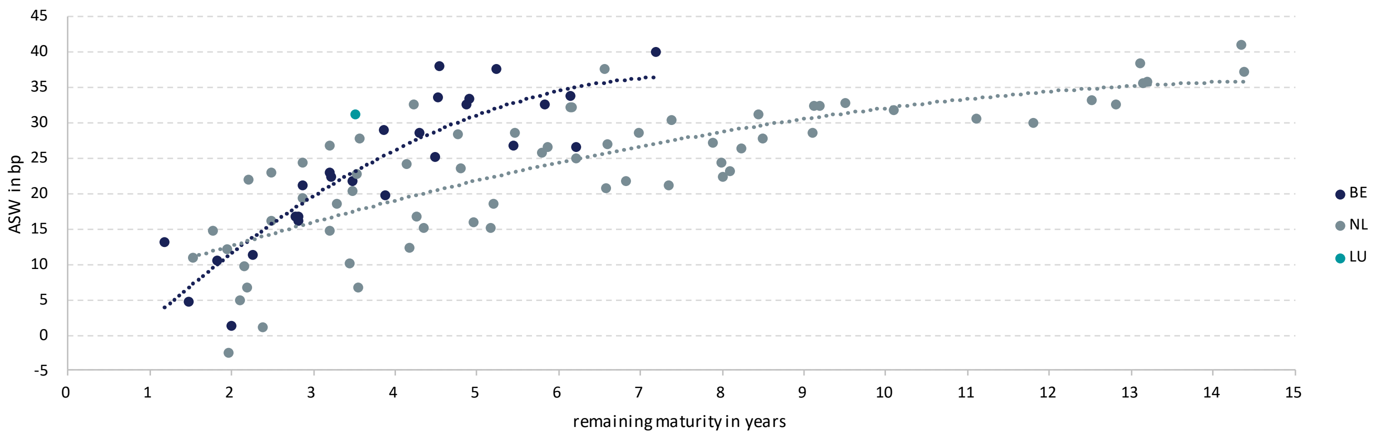
DACH



France

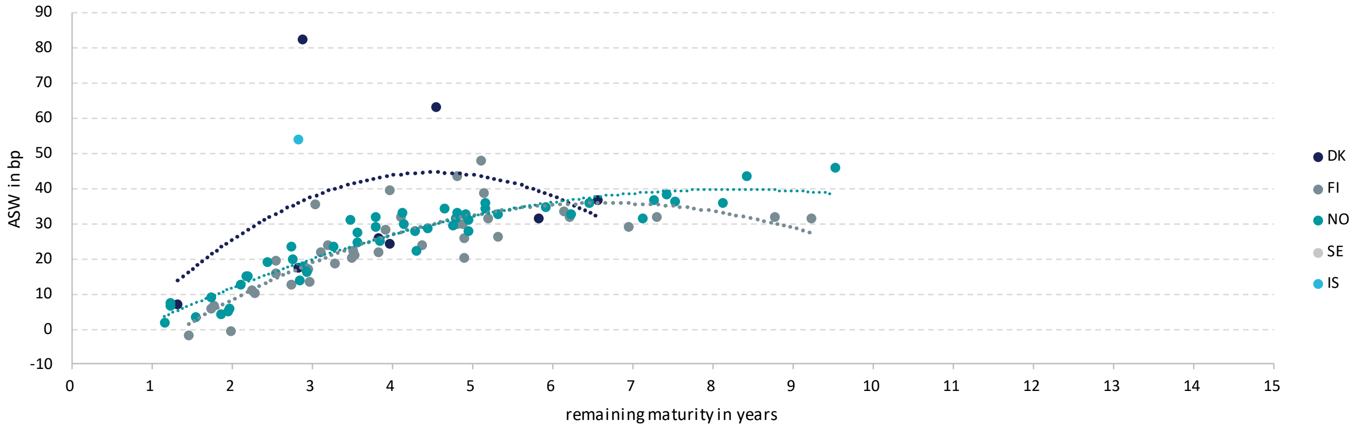


Benelux

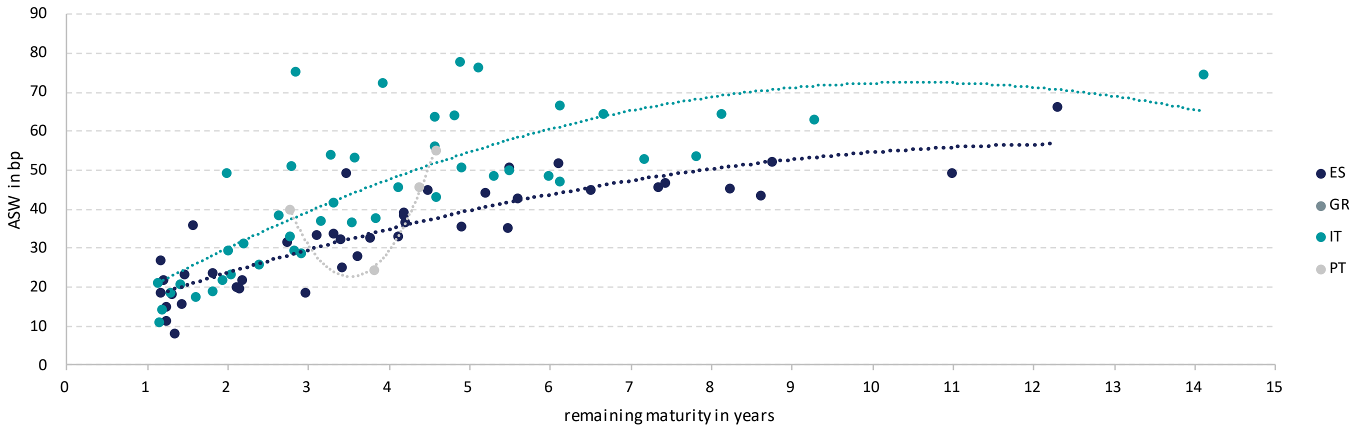


Source: market data, Bloomberg, NORD/LB Floor Research [1]Time to maturity 1 ≤ y ≤ 15

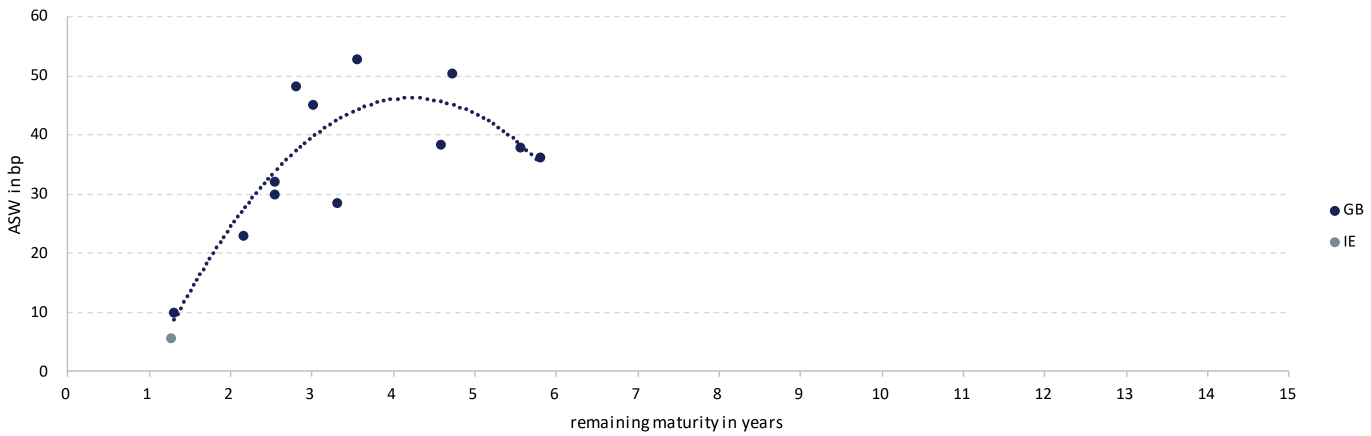
Nordics



Southern Europe

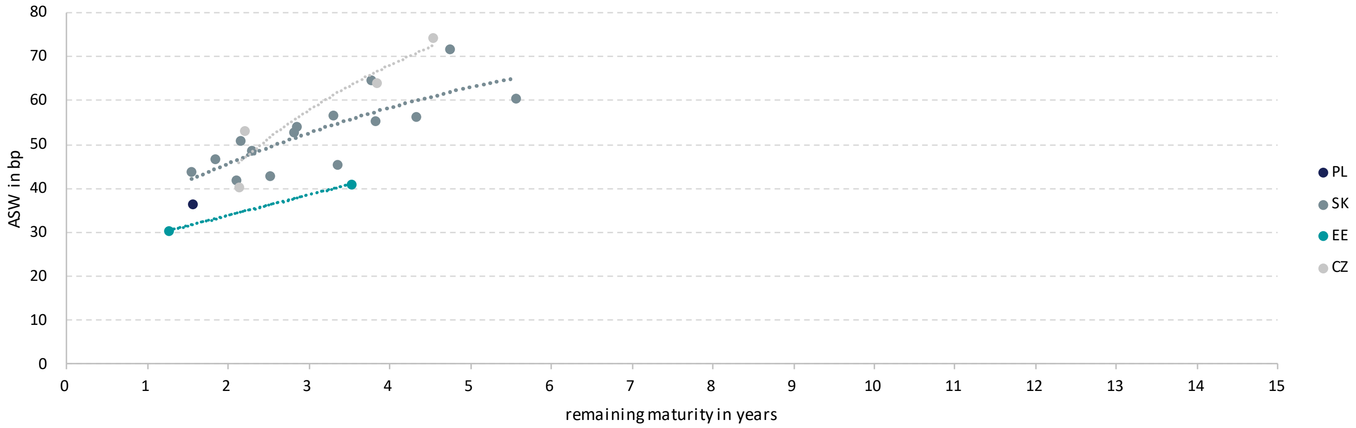


UK/IE

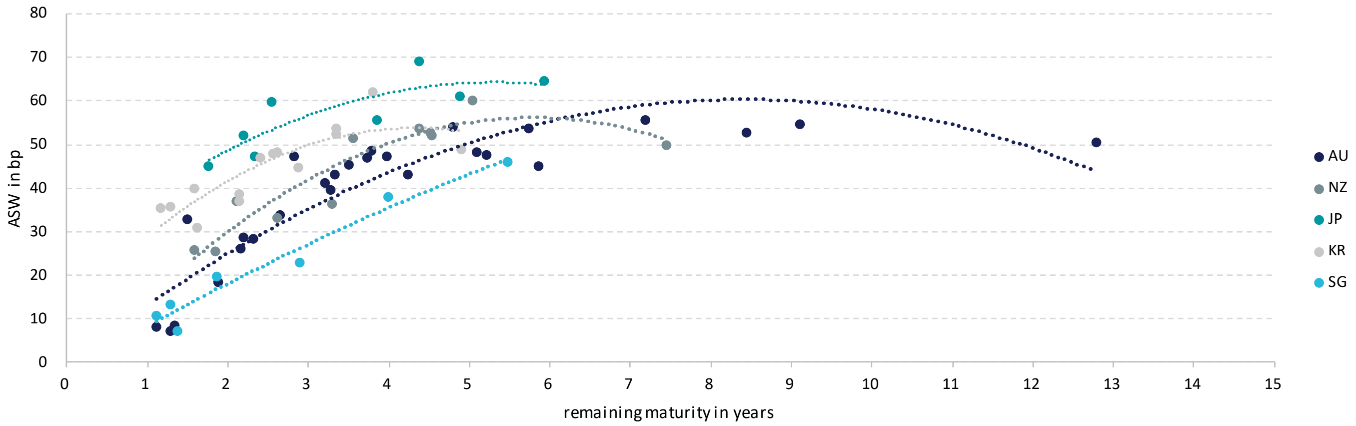


Source: market data, Bloomberg, NORD/LB Floor Research

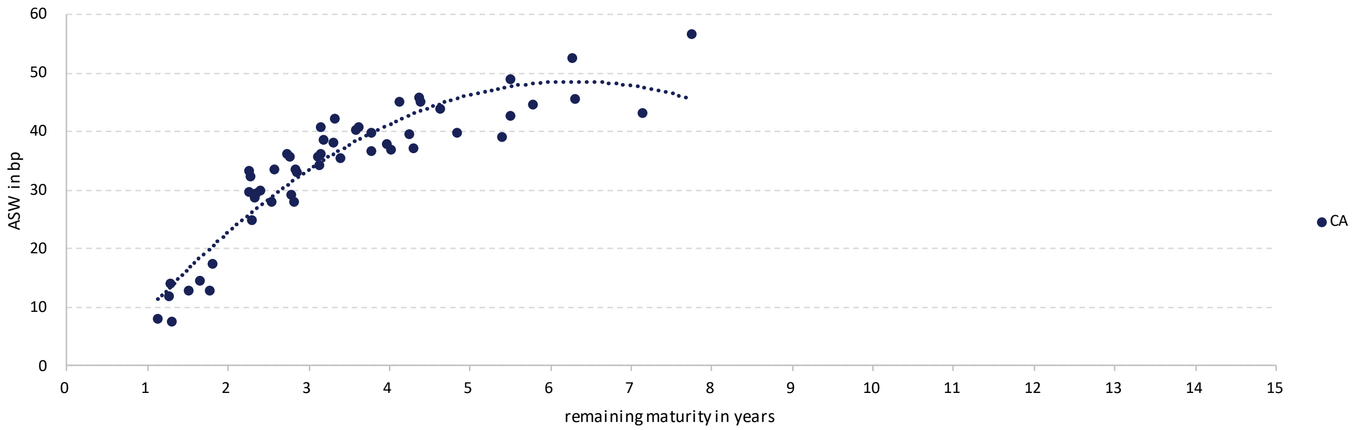
CEE



APAC



North America

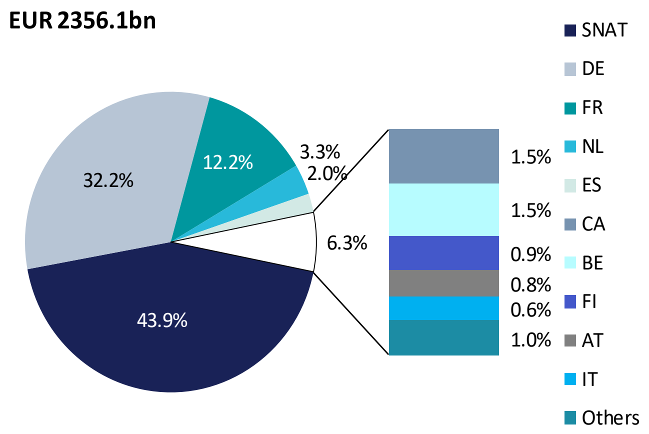


Source: market data, Bloomberg, NORD/LB Floor Research

NORD/LB

Charts & Figures
SSA/Public Issuers

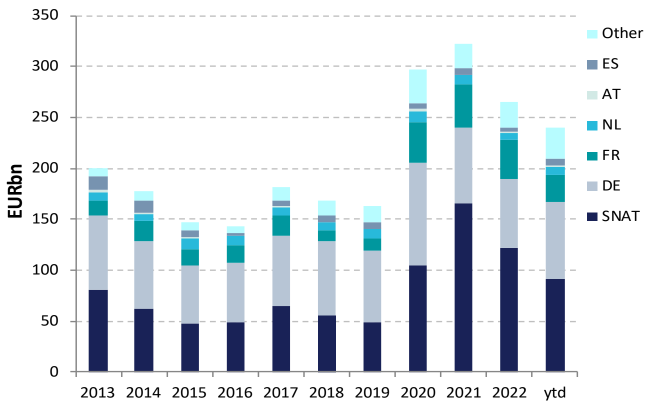
Outstanding volume (bmk)



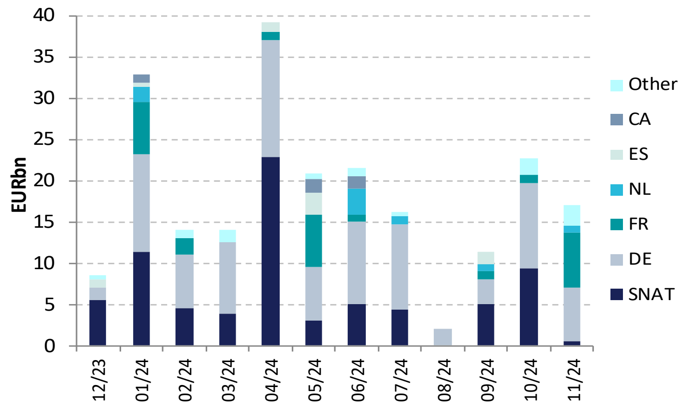
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	1,035.1	229	4.5	8.0
DE	758.8	566	1.3	6.2
FR	287.4	196	1.5	6.0
NL	77.3	67	1.2	6.6
ES	48.0	65	0.7	4.6
CA	35.9	25	1.4	4.3
BE	35.2	38	0.9	10.7
FI	22.4	24	0.9	4.7
AT	17.8	22	0.8	4.5
IT	15.0	19	0.8	4.6

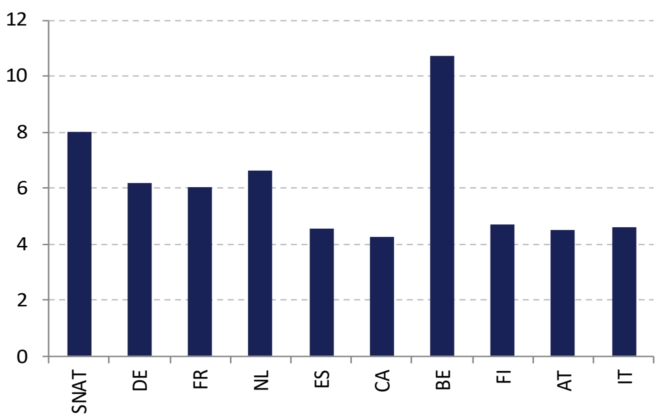
Issue volume by year (bmk)



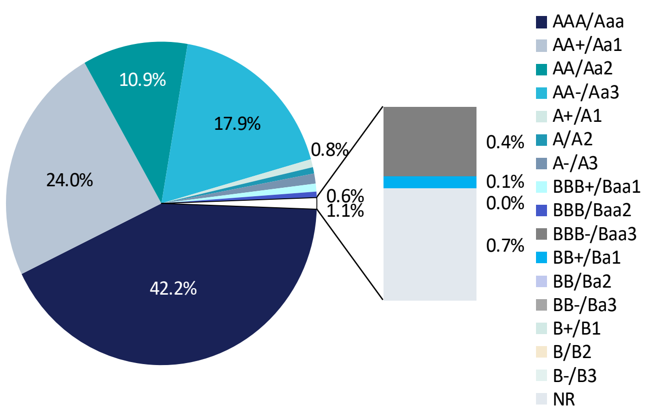
Maturities next 12 months (bmk)



Avg. mod. duration by country (vol. weighted)

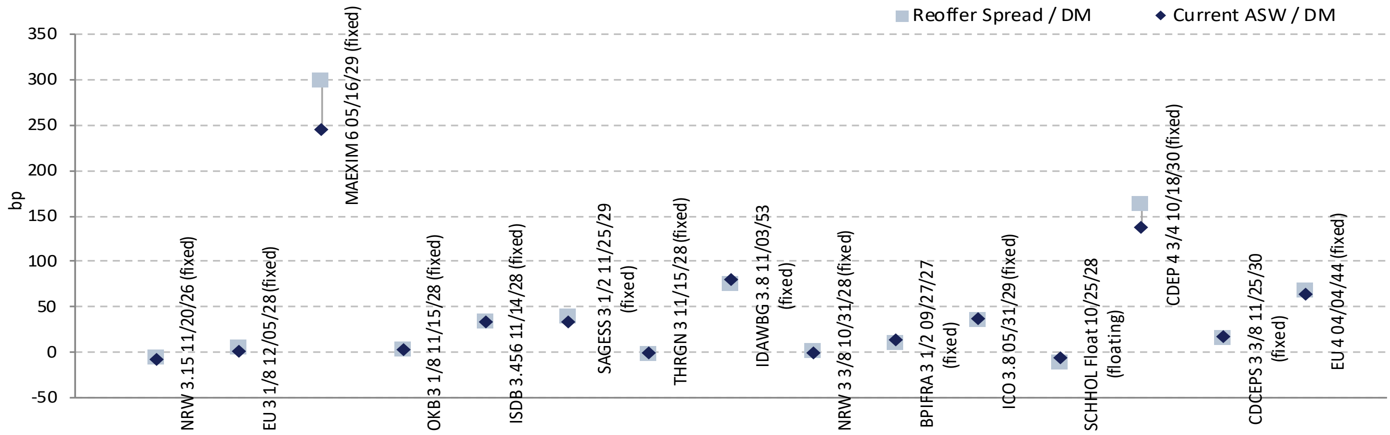


Rating distribution (vol. weighted)

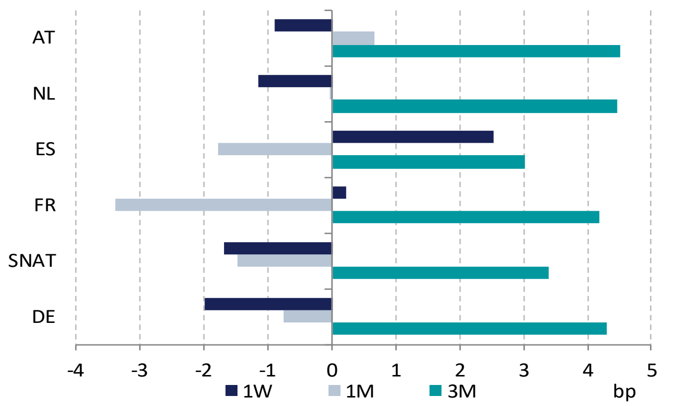


Source: Bloomberg, NORD/LB Floor Research

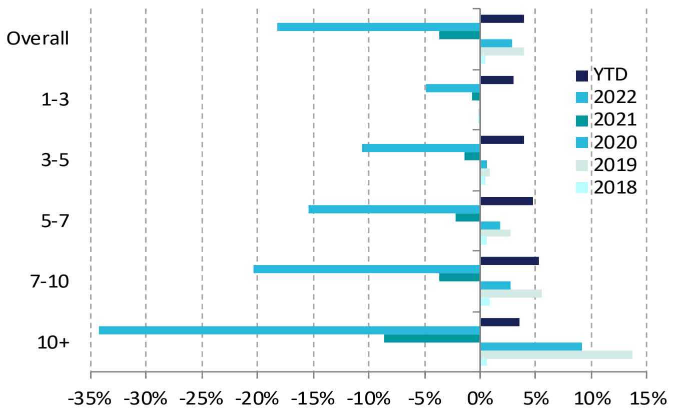
Spread development (last 15 issues)



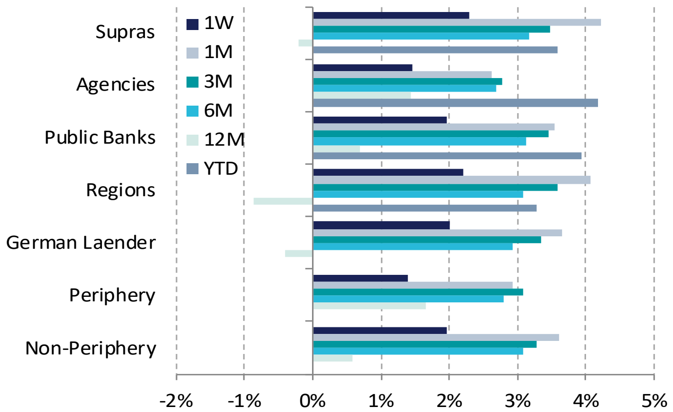
Spread development by country



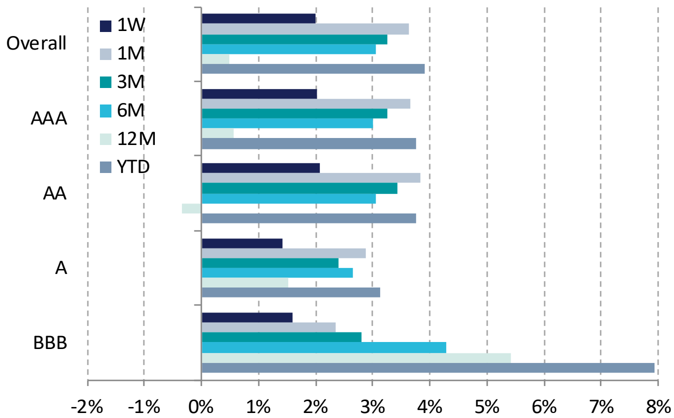
Performance (total return)



Performance (total return) by segments



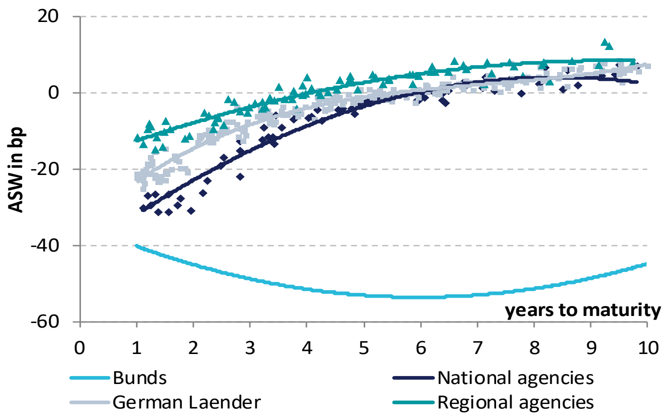
Performance (total return) by rating



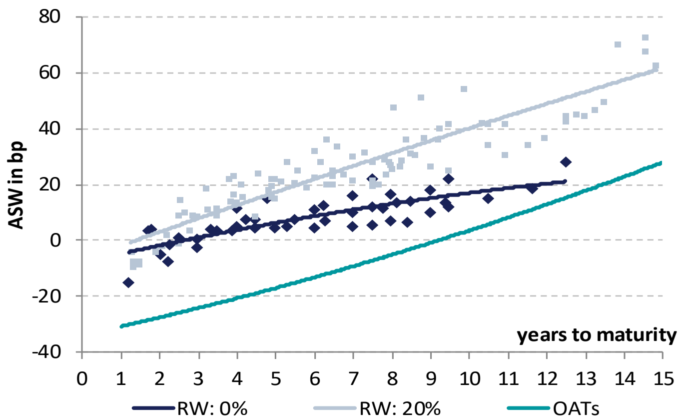
Source: Bloomberg, NORD/LB Floor Research

NORD/LB

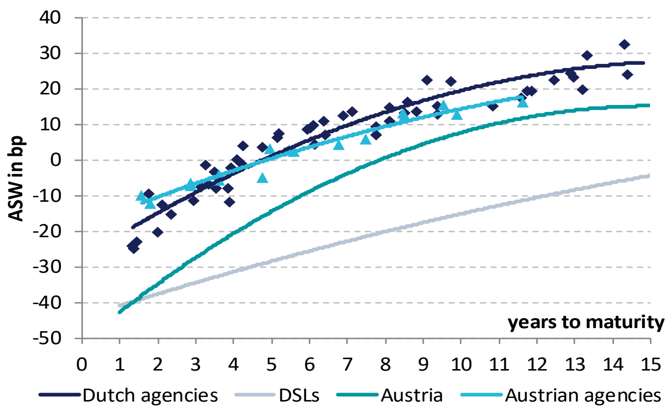
Germany (by segments)



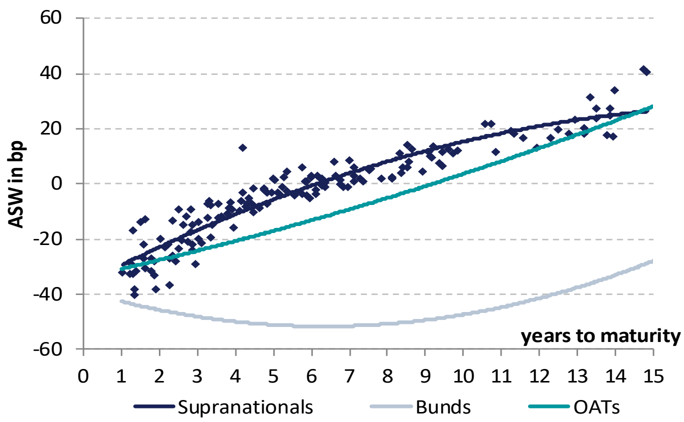
France (by risk weight)



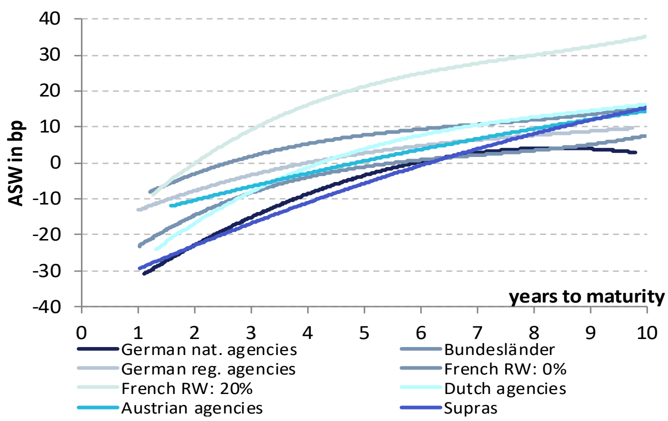
Netherlands & Austria



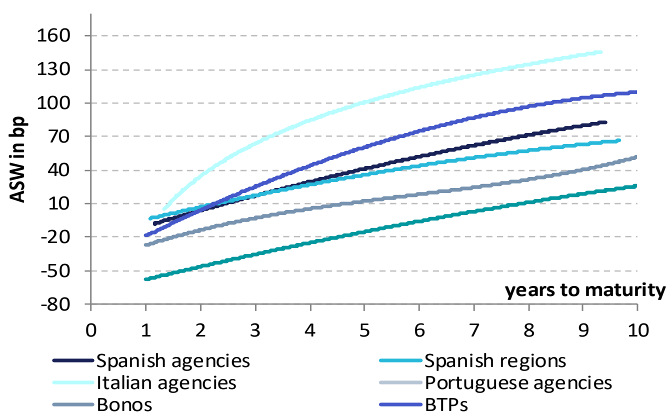
Supranationals



Core



Periphery



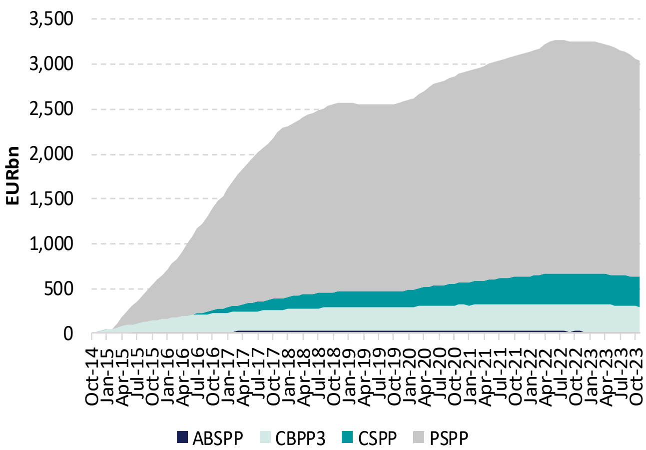
Source: Bloomberg, NORD/LB Floor Research

ECB tracker

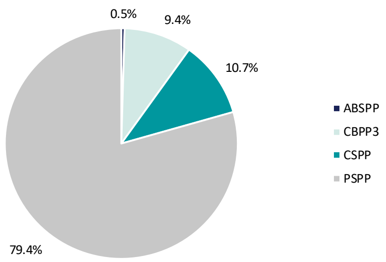
Asset Purchase Programme (APP)

	ABSPP	CBPP3	CSPP	PSPP	APP
Oct-23	14,349	287,525	328,193	2,426,355	3,056,422
Nov-23	13,842	286,174	325,481	2,412,976	3,038,473
Δ	-507	-1,351	-2,712	-13,379	-17,949

Portfolio development

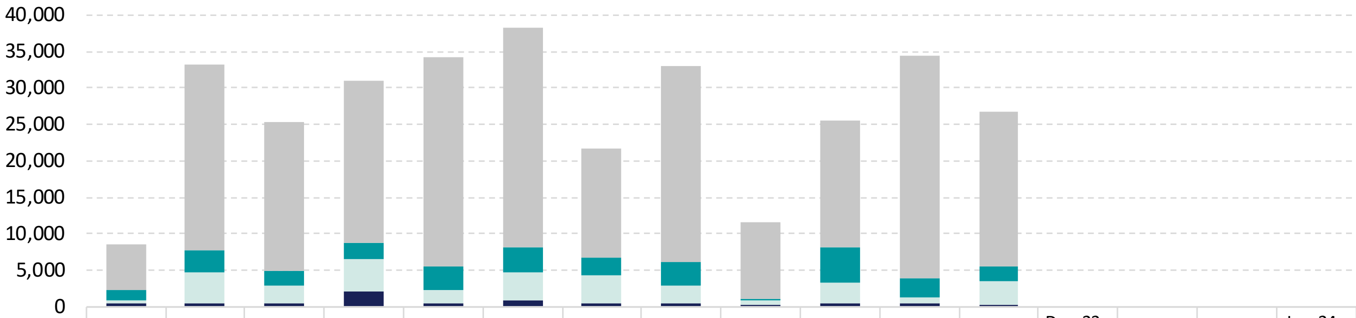


Portfolio structure



Source: ECB, NORD/LB Floor Research

Expected monthly redemptions (in EURm)

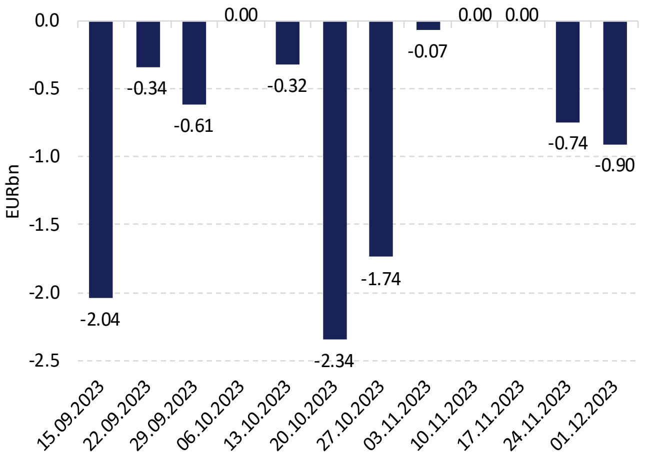


	Dec-23	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-23 - Nov-24	2022	2023	Jan-24 - Nov-24
APP	8,562	33,244	25,257	31,046	34,264	38,242	21,684	33,000	11,591	25,520	34,450	26,689	323,549	299,142	331,565	314,987
PSPP	6,336	25,524	20,387	22,413	28,712	30,194	14,974	26,894	10,533	17,438	30,578	21,298	255,281	228,585	255,025	248,945
CSPP	1,336	3,101	2,075	2,188	3,316	3,463	2,462	3,204	244	4,738	2,720	2,031	30,878	17,670	31,251	29,542
CBPP3	408	4,109	2,449	4,434	1,814	3,836	3,777	2,558	541	2,993	736	3,136	30,791	41,244	35,147	30,383
ABSPP	482	510	346	2,011	422	749	471	344	273	351	416	224	6,599	11,643	10,142	6,117

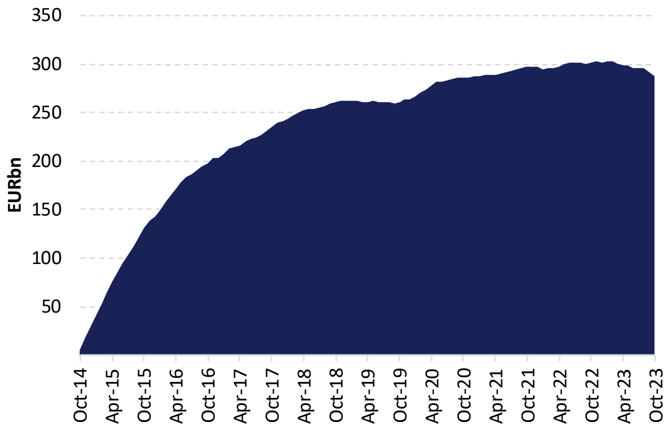
Source: ECB, Bloomberg, NORD/LB Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

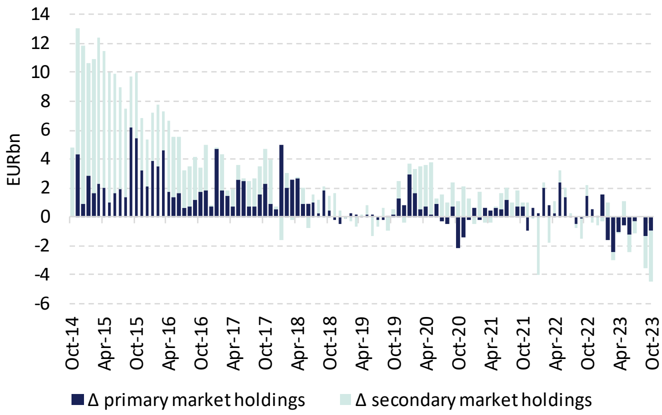
Weekly purchases



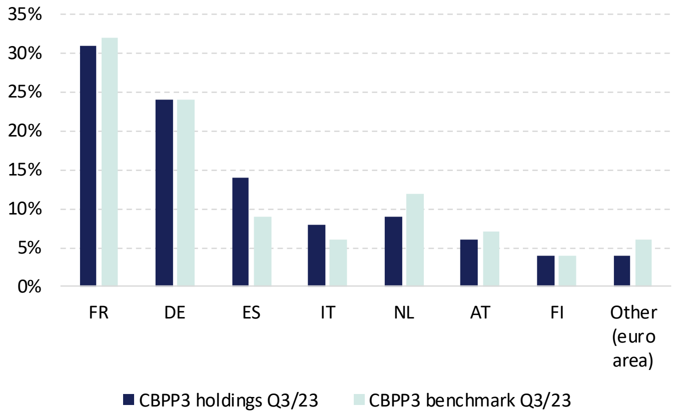
Development of CBPP3 volume



Change of primary and secondary market holdings

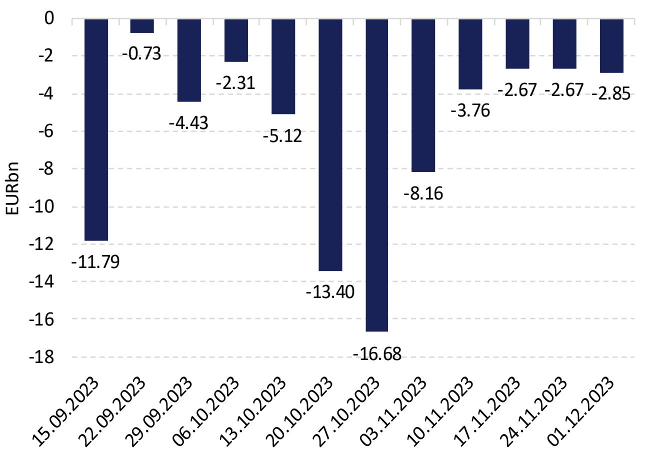


Distribution of CBPP3 by country of risk

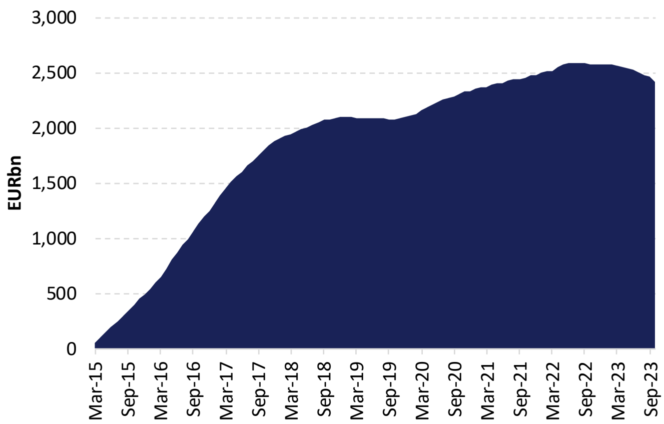


Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume

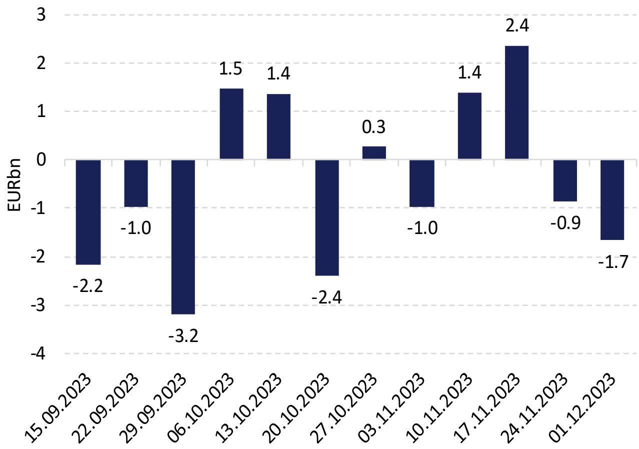


Source: ECB, Bloomberg, NORD/LB Floor Research

Pandemic Emergency Purchase Programme (PEPP)

Portfolio development

Weekly purchases



Breakdown of public sector securities under the PEPP

Jurisdiction	Holdings (in EURm)	Δ Holdings previous period	Adj. distribution key[1]	PEPP share	Deviations from the adj. distribution key[2]	Current WAM[3] (in years)	WAM of eligible universe[4] (in years)
AT	43,189	470	2.6%	2.6%	0.0%	7.2	7.8
BE	55,942	473	3.3%	3.4%	0.1%	6.0	9.4
CY	2,458	36	0.2%	0.1%	0.0%	8.2	8.2
DE	394,133	-4,271	23.7%	23.7%	0.0%	6.6	7.1
EE	256	0	0.3%	0.0%	-0.2%	6.5	6.4
ES	192,989	1,452	10.7%	11.6%	0.9%	7.2	7.4
FI	26,210	-806	1.7%	1.6%	-0.1%	7.2	7.3
FR	298,624	1,649	18.4%	18.0%	-0.4%	7.2	7.7
GR	39,232	281	2.2%	2.4%	0.1%	8.4	9.0
IE	25,708	128	1.5%	1.5%	0.0%	8.7	9.1
IT	287,549	-1,636	15.3%	17.3%	2.0%	7.1	6.9
LT	3,181	-90	0.5%	0.2%	-0.3%	9.1	8.6
LU	1,881	13	0.3%	0.1%	-0.2%	6.0	8.1
LV	1,857	19	0.4%	0.1%	-0.2%	7.7	7.2
MT	604	0	0.1%	0.0%	-0.1%	9.7	8.2
NL	84,487	911	5.3%	5.1%	-0.2%	7.3	9.2
PT	32,323	-67	2.1%	1.9%	-0.2%	7.4	7.6
SI	6,547	43	0.4%	0.4%	0.0%	8.3	8.7
SK	7,868	56	1.0%	0.5%	-0.6%	8.0	8.2
SNAT	155,091	999	10.0%	9.3%	-0.7%	9.8	8.9
Total / Avg.	**1,660,130**	**-338**	**100.0%**	**100.0%**	**0.0%**	**7.3**	**7.6**

[1] Based on the ECB capital key, adjusted to include supras [2] Based on the adjusted distribution key
[3] Current WAM of public sector securities holdings under the PEPP [4] WAM of eligible universe of public sector securities holdings under the PEPP
Source: ECB, Bloomberg, NORD/LB Floor Research

Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
35/2023 ♦ 29 November	▪ ESG covered bonds: a look at the supply side ▪ Current risk weight of supranationals & agencies
34/2023 ♦ 22 November	▪ Transparency requirements §28 PfandBG Q3/2023 ▪ Teaser: Issuer Guide – German Agencies 2023
33/2023 ♦ 15 November	▪ Development of the German property market ▪ ECB repo collateral rules and their implications for Supranationals & Agencies
32/2023 ♦ 08 November	▪ Norway: creation of SpareBank 1 Sor-Norge ▪ ECB: PEPP versus TPI – or: (re)investing where others like to go on holiday
31/2023 ♦ 25 October	▪ Banks in Europe: the EBA Risk Dashboard in Q2 2023 ▪ Teaser: Issuer Guide – Spanish Agencies 2023
30/2023 ♦ 18 October	▪ Focus on covered bond jurisdictions: Canada in the spotlight ▪ A closer look at Newfoundland and Labrador
29/2023 ♦ 11 October	▪ A covered bond view of Belgium ▪ Funding of Canadian provinces – an overview
28/2023 ♦ 27 September	▪ The covered bond universe of Moody's: an overview ▪ Update on DEUSTD – Joint German cities (bond No. 1)
27/2023 ♦ 20 September	▪ Newcomer to the EUR benchmark segment: Bendigo and Adelaide Bank set to expand issuer base in Australia ▪ Teaser: Issuer Guide – Austrian Agencies 2023
26/2023 ♦ 13 September	▪ ECBC publishes annual statistics for 2022 ▪ Teaser: Issuer Guide – Dutch Agencies 2023
25/2023 ♦ 06 September	▪ Covered bond market on the growth path: OLB looks set to join the ranks of EUR benchmark issuers ▪ NORD/LB Issuer Guide German Laender 2023 published
24/2023 ♦ 19 July	▪ Banks in Europe: EBA Risk Dashboard in Q1 2023 ▪ ECB repo collateral rules and German Laender
23/2023 ♦ 12 July	▪ Covereds: Half-year review and outlook for the second half of 2023
22/2023 ♦ 28 June	▪ Special publication on LCR classification and risk weights: a (regulatory) overview of the EUR benchmark segment ▪ ESG bonds of German Laender – significant further development
21/2023 ♦ 21 June	▪ ESG covered bonds: a look at the supply side ▪ Increasing exposure of E-supras to Ukraine
20/2023 ♦ 14 June	▪ Moody's covered bond universe – an overview ▪ Beyond Bundeslaender: Spanish regions
19/2023 ♦ 07 June	▪ ECB Preview: ECB's 25th anniversary and is still going strong ▪ Focus on legal requirements for covered bonds
18/2023 ♦ 24 May	▪ Repayment structures on the covered bond market: an update ▪ Stability Council convenes for 27th meeting

NORD/LB:	NORD/LB:	NORD/LB:	Bloomberg:
Floor Research	Covered Bond Research	SSA/Public Issuers Research	RESP NRDR <GO>

Appendix
Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2023

Covered Bond Laws

Covered Bond Directive: Impact on risk weights and LCR levels

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

Transparency requirements §28 PfandBG Q3/2023 (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

Issuer Guide – German Laender 2023

Issuer Guide – German Agencies 2023

Issuer Guide – European Supranationals 2023

Issuer Guide – French Agencies 2023

Issuer Guide – Dutch Agencies 2023

Beyond Bundeslaender: Belgium

Beyond Bundeslaender: Greater Paris (IDF/VDP)

Beyond Bundeslaender: Spanish regions

Fixed Income Specials:

ESG-Update 2023

ECB: Now is not the time for forward guidance!

ECB preview: Wait and see without calling it a pause

ECB: This rate terminates here – 99.9% sure

NORD/LB

Appendix
Contacts at NORD/LB

Floor Research

Dr. Frederik Kunze
Covered Bonds/Banks

+49 172 354 8977
frederik.kunze@nordlb.de

Dr. Norman Rudschuck, CIIA
SSA/Public Issuers

+49 152 090 24094
norman.rudschuck@nordlb.de

Lukas Kühne
Covered Bonds/Banks

+49 176 152 90932
lukas.kuehne@nordlb.de

Christian Ilchmann
SSA/Public Issuers

+49 157 851 64976
christian.ilchmann@nordlb.de

Sales

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

Trading

Covereds/SSA	+49 511 9818-8040
Financials	+49 511 9818-9490
Governments	+49 511 9818-9660
Länder/Regionen	+49 511 9818-9550
Frequent Issuers	+49 511 9818-9640

Origination & Syndicate

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

Sales Wholesale Customers

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

Treasury

Collat. Management/Repos	+49 511 9818-9200
Liquidity Management	+49 511 9818-9620 +49 511 9818-9650

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 Finanzdienstleitungsaufsicht; 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: Wednesday, 06 December 2023 (08:56)