Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

8 March 2023 ♦ 09/2023

Marketing communication (see disclaimer on the last pages)

Agenda

Floor analysts:

Covered Bonds/Banks
Dr Frederik Kunze
frederik.kunze@nordlb.de
Melanie Kiene, CIIA
melanie.kiene@nordlb.de
Stefan Rahaus
stefan.rahaus@nordlb.de

SSA/Public Issuers
Dr Norman Rudschuck, CIIA
norman.rudschuck@nordlb.de
Jan-Phillipp Hensing
jan-phillipp.hensing@nordlb.de

NORD/LB:
Markets Strategy & Floor Research

NORD/LB:
Covered Bond Research

NORD/LB:
SSA/Public Issuer Research

Bloomberg:
RESP NRDR <GO>

Market overview
Covered Bonds

Authors: Stefan Rahaus // Dr Frederik Kunze

Primary market: Toronto Dominion issues dual tranche totalling EUR 5.0bn

Since the previous edition of our weekly publication was published last Wednesday, things on the primary market remained quiet up to the end of the week. The first new deal in March appeared on our screens on Monday – and the volume was certainly eye-catching! Toronto Dominion Bank (TD) approached investors with a dual tranche featuring terms of three and seven years (initial guidance: ms +25bp area and ms +43bp area respectively). With an order book of EUR 4.6bn for the shorter tranche, a record volume of EUR 3.5bn was eventually placed at ms +22bp for three years. Deals of EUR 3.0bn or more were last seen on the market back in 2005 (four deals) and 2006 (three deals), although all seven of these bonds have since matured. In terms of outstanding volume, the new 3y deal from TD ranks in second place out of 1,146 currently outstanding EUR benchmark bonds. Only a Multi Cédulas deal from 2006 (ISIN: ES0371622020) boasts a higher volume (EUR 3.805bn), having been tapped on several occasions since first being issued. The longer-dated tranche from TD featured an issuance volume of EUR 1.5bn at a final spread of ms +40bp, so that an overall total of EUR 5.0bn was raised among investors. At EUR 7.75bn in the year to date, the jurisdiction of Canada is ranked in joint third place together with Spain in the current year 2023 when it comes to the issuance volume of EUR benchmark bonds. Top spot goes to France, which recently extended its lead over second place (now EUR 21.15bn) following the deal from Cie de Financement Foncier (CFF; EUR 1.75bn; 8.5y; ms +26bp). Yesterday, on Tuesday, Raiffeisen Bank International (RBIAV) from Austria was active on the market with a 3y covered bond, placing EUR 500m at ms +34bp. With this deal, the issuance volume in the EUR benchmark segment for the current year now stands at EUR 75.6bn. We have sought to analyse the role played by German Pfandbriefe in this environment in greater detail as part of our focus article "Where does the Pfandbrief stand within the covered bond universe?" in this present edition of our weekly publication. In the EUR sub-benchmark segment, the Finnish issuer Ålandsbanken (AABHFH) increased the issuance volume this year to EUR 2.8bn with a deal worth EUR 250m (term: 3y; spread: ms +22bp). Despite the ECB's withdrawal from the covered bond primary market, the number and volume of transactions, as well as their order books and new issue premiums, show that the primary market remains receptive to fresh supply. A yield level that has risen again compared with previous weeks is certainly supporting demand from investors. We expect brisk new issuance activity over the coming weeks, albeit not quite as dynamic as that seen in the months of January and February. Due to the continued inverse swap curve (cf. our article on term spreads in edition 06/2023 of the Covered Bond & SSA View), the greatest interest in forthcoming deals is likely to be at the short end.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
Raiffeisen Bank Inter.	AT	07.03.	XS2596528716	3.0y	0.50bn	ms +34bp	- / Aa1 / -	-
Toronto-Dominion Bank	CA	06.03.	XS2597408272	7.0y	1.50bn	ms +40bp	- / Aaa / -	-
Toronto-Dominion Bank	CA	06.03.	XS2597408439	3.0y	3.50bn	ms +22bp	- / Aaa / -	-
CFF	FR	06.03.	FR001400GI73	8.5y	1.75bn	ms +26bp	- / Aaa / AAA	-

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

Secondary market: current coupons subject to greater demand

With deals slightly thin on the ground in the first few days of March, the secondary market also remained well supported. In comparison with the previous week, spreads were at a comparable level or occasionally slightly below. We have seen brisk demand for new issues over the past few weeks, which still offer slight premiums on the spread curves due to new issue premiums. In addition, we are also hearing from customers that covered bonds with current coupons are increasingly preferred to bonds with a very low price. As a result, covered bonds that are otherwise comparable are sometimes priced differently. Bonds with a very low coupon, which are quoted at 70 to 80 percent, have a higher ASW spread. This means that they are cheaper than identical covered bonds with a current coupon of close to 100 percent. Accordingly, some investors have a preference for higher interest income, which is attributed to the original result, over price gains, which are often reported in the trading result.

EU Green Bond Standard: preliminary agreement in Brussels

The growing sub-market of ESG issuances is also an important development for the covered bond universe. This is particularly true with regard to green covered bonds. The latest reports from Brussels, according to which an – initially preliminary – agreement has been reached regarding the European Green Bond Standard (EUGBS) between the European Council and the European Parliament on the configuration of the voluntary standard, are also relevant for the covered bond segment. After all, as far as we understand it, the EUGBS represents the link between the sub-market of green covered bonds that we focus on and the EU taxonomy for sustainable economic operations that came into force in July 2020. The essential core elements of the decision on the EUGBS are (1) a minimum quota of 85% in the allocation of issue proceeds to activities in accordance with the requirements of the EU taxonomy, (2) uniform reporting standards on the part of issuers and the requirement to show the impact of bond investments with regard to the transition plan of the issuing institution, (3) a registration system and monitoring framework for external third parties to review green bonds (pursuant to EUGBS) with appropriate transparency disclosures and to manage potential conflicts of interest, and (4) supervisory powers for national supervisory bodies to monitor issuer compliance with the requirements of the new standard. Following the usual legislative process at EU level, these regulations are likely to come into force at the beginning of 2024 at the earliest. From our perspective, as is the case for other segments, the EU taxonomy remains a challenge for the covered bond market due to the fact that meeting the requirements that it stipulates and providing the corresponding evidence is far from a trivial undertaking from the point of view of covered bond issuers. While the minimum quota of 85% creates some freedom compared to the 100% solution that was initially demanded by the European Commission and the European Parliament, we do not expect covered bond issuers to assume pioneering roles when it comes to the voluntary nature of the EUGBS. This assessment is based in particular on the fact that the requirements of the EU taxonomy are to be regarded as comparatively challenging, especially for green mortgage covered bonds. In our opinion, it is much easier for issuers from other sectors or market segments to meet the requirements for both assets and the availability of data at the prescribed level of detail. Ultimately, it will also depend on the extent to which the standard is accepted or demanded by investors.

Moody's comments on new requirements from the Finnish finance ministry...
On 16 February, the Ministry of Finance of Finland limited the maximum term of mortgage bonds to 30 years. In addition, the grace period for loans (e.g., those issued by housing companies, which are not uncommon in Finland, among others) has been limited to a maximum of one year after completion of the building in question. Moody's states that this would mitigate the risk of a payment shock when the repayment periods start. In the model with housing companies, these act as intermediaries in private real estate financing and provide the real estate buyer with additional financing through specific loans in addition to the usual mortgage loans. According to Moody's, the general limitation of the term of mortgage loans is more of a preventive measure. Long mortgage terms are in any case not the norm in Finland. However, the measure aims to avoid any softening of the financing standards, with the Ministry of Finance allowing the upper limit to be exceeded for 10% of the total volume of mortgage loans at institute level. Moody's believes that this will lead to an overall reduction in the risk that borrowers will still have a high debt burden when they retire. From the point of view of covered bond investors, the rating agency states that the refinancing risk of the bonds would be reduced, since the possible mismatch between the weighted residual term to maturity of cover assets and outstanding covered bonds would be kept in check. Despite the fact that Finland is one of the covered bond jurisdictions with a very high proportion of variable interest rate agreements (usually linked to the 12M EURIBOR), we do not yet see any deterioration in the credit quality of the cover pools as a result of sharply rising interest rates. We justify this evaluation not least on the basis of the robust labour market in the Nordic economy. You can also find an overview of the Finnish covered bond market in our NORD/LB Issuer Guide Covered Bonds.

...and presents updated sector profile on Austrian covered bonds
The Austrian covered bond market was certainly among the biggest surprises of 2022 – at least in relation to primary market activities. We are again expecting strong growth in the volume of deals from Austria (net supply EUR 12.3bn). In fact, a total of EUR 5.8bn has already been placed so far in 2023. The risk experts from Moody's recently presented an updated sector profile for the covered bond market in Austria. The analysts also touch upon the sovereign rating (Aa1, stable) here and state that the war in Ukraine will have a manageable but temporarily negative effect on growth and public finances in Austria. Moreover, the macro profile is assessed as "Strong+". The banking sector benefits from an open, highly diversified, competitive and very stable macro environment. On the other hand, the competitive situation impairs the margins in the lending business. Equity investments also increase the volatility with regard to earnings. Mortgage financing risks are constrained by regulations introduced in 2022. In addition to the basic specification of a maximum LTV (90%), the financial regulator now also prescribes a maximum ratio of debt servicing to income (40%) and limits the maximum permissible loan term to 35 years. Moody's rates a total of 24 covered bond programmes from Austria, of which 16 have an Aaa rating. The share of mortgage covered bonds comes in at 62%, with the proportion of refinanced residential mortgage loans being approximately 60%. A share of around 40% is therefore attributable to commercial mortgages. However, these ratios vary greatly between individual programmes. In 2022, we devoted two focus articles to the Austrian covered bond market as part of our weekly publication (cf. issues 35/2022 and 16/2022).

Market overview
SSA/Public Issuers

Authors: Dr Norman Rudschuck, CIIA // Valentin Jansen

Investitionsbank des Landes Brandenburg again awarded top rating (AAA)

The rating agency Fitch once again awarded Investitionsbank des Landes Brandenburg (ticker: ILBB) the best possible AAA credit rating and a stable outlook at the end of January. The top rating is justified by ILB's solid business model, the bank's proven high performance and the very good creditworthiness of Brandenburg. Its business activities range from granting classic low-interest promotional loans, providing venture capital and private equity financing as well as guarantees and indemnities, all the way through to consultancy services. According to Fitch, the AAA rating also reflects ILB's very low default risk and benefits the bank in its funding activities. ILB has been an issuer of bearer bonds on the capital market since 2018 and in 2022 ILB was one of the three promotional banks that issued an inter-regional joint promotional bank bond for the first time (ticker: LFIESG). Another determining factor for the rating is the support of the owner (Brandenburg). In 2014, the ILB Act was amended, which clarifies the close link between the ILB and the State of Brandenburg. Under section 2 (6), Brandenburg is liable for ILB's liabilities with an explicit guarantee. In addition, section 1 (2) establishes an institutional liability and section 2 (3) a guarantor liability on the part of the shareholders vis-à-vis ILB. The rating agency also refers to the solidarity principle and the federal financial equalisation system, whereby the rating of the owner – also AAA with a stable outlook – is linked to that of the Federal Republic of Germany.

Sächsische Aufbaubank launches “Sustainable Municipal Loan”

With the new SAB Sachsenkredit “Sustainable Municipal Loan” funding module, the development bank aims to address the increasing consumption of energy and resources at municipal level. As it is the municipalities that are primarily called upon to prioritise climate protection and take concrete action themselves, the Sächsische Aufbaubank (ticker: SABFOE) wants to support sustainability-related projects with low-interest loans in the future. Specifically, municipalities and municipal special-purpose associations in Saxony as well as their own and governmental enterprises are to be able to obtain a financing volume of up to EUR 20m with a fixed rate lasting up to 20 years. The amount of the interest rate advantage (up to 0.5%) is determined cumulatively from two components, namely the customer-related and the project-related module. The former is aimed at the level of municipal administration, whereby, for example, an interest rate reduction of ten basis points is possible if pre-defined advisory services in the area of municipal energy management are used. Alternatively, the production of a sustainability report is mentioned. The second module focuses on the project to be funded. If specific sustainability criteria are met, the local authority receives an interest rate advantage of 15 basis points. Examples of such projects can be found in the areas of renewable energies, environmentally friendly mobility or energy efficiency measures in buildings. It is also worth mentioning that an interest rate reduction of 40 basis points is envisaged if the EU taxonomy criteria are met in full.

Kommunekredit sets 2023 funding target at EUR 5.0bn

Danish municipal financier Kommunekredit (ticker: KOMMUN) has set its funding target for the current year at EUR 5.0bn. It has already been active on the capital market in 2023 and most recently raised EUR 0.5bn in the EUR benchmark segment on 19 January with a twelve-year maturity. This year's funding volume corresponds to that of the previous year. In line with last year's issuance activity, funding needs are broken down into the short, medium and long maturity ranges. In 2022, KommuneKredit issued benchmarks and private placements with maturities ranging from two to 22 years in DKK, EUR, GBP, NOK, SEK and USD. The funding strategy is increasingly heading in the direction of sustainability. In this context, it has made it a strategic priority to integrate sustainability into the business model and to strengthen the institution's ESG profile. Another declared goal is to press ahead with raising its profile as an issuer of sustainable and green bonds. We last documented Kommunekredit's activities in this segment in June last year with a EUR benchmark amounting to EUR 0.5bn. The increase in issuance activity in the ESG segment is mainly due to its ambition to support ownership (with the focus on all Danish municipalities and regions) in the sustainable transformation process. Green bonds have already been issued since 2017 and steady growth in "green" assets is expected in the course of its business activities in order to be able to explicitly place another green benchmark bond in 2023. In anticipation of this, the Green Bond Framework was updated in 2022 and close integration with the established ICMA Principles and Guidelines was ensured. In addition to a separate look at the issuer, you will find an overview of the Scandinavian agency market in our NORD/LB Issuer Guide 2022 – Scandinavian Agencies (Nordics).

Top spot once again for Baden-Wuerttemberg in Moody's sustainability rating

In mid-February, Moody's ESG Solution once again gave Baden-Wuerttemberg an "advanced" sustainability rating. This is the third time that it has taken part in the external ESG rating process – and so far it has achieved the top rating every time. Of the 29 regional and local authorities across Europe that have a Moody's ESG rating, including 15 German Laender, BADWUR (to use its ticker) continues to hold the number one spot. Thekla Walker, Minister for the Environment, Climate Protection and the Energy Sector, is particularly pleased with the improvement in the Energy Transition Score from 77 to 81 points. In Moody's ESG Solution nomenclature, this indicator assesses how a region or company is positioning itself for the transition to a low greenhouse gas economy and managing its energy use and emissions. In addition to a traditional credit rating, Moody's ESG rating also takes into account a broad range of economic, social and environmental sustainability indicators. In addition to environmental protection, energy transition and biodiversity, aspects including human resources management, human rights and citizen participation in Baden-Wuerttemberg are also assessed. "The result shows that sustainability is a very real policy for us. This also applies to our finances. We shall consistently invest all our financial assets according to sustainable criteria and be the first federal state to legislate on it," commented Finance Minister Dr. Danyal Bayaz in regard to Moody's decision.

Société de Financement Local: 2022 budget closed with record net profit

On 22 February, Société de Financement Local (SFIL; ticker: SFILFR) presented its 2022 financial statements, achieving a record net profit of EUR 86m (+12% Y/Y). Despite the difficult market environment, French local authorities received support last year to the tune of EUR 4.8bn (+9% Y/Y). The issuer particularly focuses on ESG-related funding, with the “Green loans to local authorities” category accounting for a share of around 19%. By comparison, this was still just 12% in 2021. “Social loans to public hospitals" accounted for 15% in 2022, up from 13% in the previous year. Other new business is reported under “non-thematic loans”. The growth of ESG-related assets is also reflected on the funding side. SFIL issued a total volume of EUR 6.4bn in 2022, including EUR 1.3bn in green and social bonds (notional share around 20%). This is in line with the “#Objectif2026” strategic plan's target of generating 25% of funding from ESG-related issues by 2024. In addition, the new "Framework for Green, Social and Sustainable Bonds" was finalised in October last year based on the strategic plan. The first bond based on this was issued last November (EUR 750m). The proceeds will be used for sustainable public-sector investments in areas such as mobility, waste management and recycling as well as renewable energies. In addition, a significant innovation in the framework is that SFIL can now also pursue green and social finance in the export credit segment. The background to this is that at the beginning of 2015 the French government decided to set up a Nordic-style public model for granting export credit. From then on, this task also fell to SFIL. In this segment, SFIL closed the previous financial year with just two transactions worth EUR 0.7bn (-68% Y/Y). According to information from SFIL itself, some large projects were postponed until 2023.

CADES: Fitch reaffirms AA rating with negative outlook

Caisse d'Amortissement de la Dette Sociale (abbreviation and ticker are the same: CADES) was again awarded an AA rating by the rating agency Fitch last Wednesday. The outlook also remained unchanged again (after being lowered from stable to negative at the end of January 2020). Since CADES acts as a state financial agency in the legal form of an “Etablissement public à caractère administratif” (EPA), the credit rating agencies align the issuer's rating with that of the French state (AA with a negative outlook). The job of CADES is to finance and pay off the debts of the social security system transferred to it by, among others, the central administrative body of the social security institutions, Agence Centrale des Organismes de Sécurité Sociale (ACOSS). A special tax was explicitly introduced to repay the liabilities (Contribution pour le Remboursement de la Dette Sociale (CRDS), which is referred to in the rating report as a positive influencing factor in terms of revenue. In 2021, CADES received around EUR 7.9bn on the basis of the CRDS, which corresponded to a 41% share of the total revenue. In addition, EUR 2.1bn came from the Retirement Reserve Fund, which is also state-owned. The rating agency also takes a positive view of the strategically important role of the institution for the deficits of the French insurance system that have accumulated in the past. There is no substitute for CADES. For this to happen, a change in the law would be required in the first case, as social security is ultimately a constitutional task of the state. The role of CADES became particularly evident during and after the pandemic, when the French state extended the mandate from 2024 to the end of 2033 to absorb new deficits in social security.

Newfoundland and Labrador goes EUR (ticker: NF)

Five Canadian provinces currently have EUR-denominated bonds outstanding: ALTA, BRCOL, MP, ONT and Q. Since not everyone is familiar with Bloomberg tickers, we are planning to publish an update of our publication covering the Canadian sub-sovereign market in 2023. And moreover, with NF, to use the ticker for the province of Newfoundland and Labrador, another issuer has just joined the ranks that has laid the foundations to access the domestic market – and not only in CAD. Diversifying the province's investor base and increasing its reach into international markets provide the opportunity to further reduce borrowing costs. This is part of the government's commitment to improve treasury management. The money raised will be used to finance government programmes and services and to service existing debt. Like all Canadian provinces, Newfoundland and Labrador finances its borrowing needs by issuing bonds on the capital markets. These bonds are publicly traded and mainly held by a broad base of institutional investors. The government's strategic plan that aims to return to a balanced budget, reduce borrowing costs and cut debt was presented in London together with the "EUR Borrowing Program". The regional premier and his deputy visited the London Stock Exchange specifically for this purpose.

Primary market

Our review of events starts with the IBBSH in Kiel. A total of EUR 500m WNG was offered for eight years. The bond ultimately came in at ms +2bp after initial guidance in the area of ms +4bp. This was made possible, among other aspects, due to the fact that the order book grew to EUR 1.35bn. Excitingly, this was immediately followed by a regional promotional bank. The Potsdam-based ILBB was aiming for EUR 500m WNG for seven years and achieved this without any problems. Here, the guidance started at ms +3bp area and the deal finally went through at ms +2bp as well. The EU also came out of the woodwork with a WNG deal, and approached investors with a request for EUR 6bn. The guidance was initially ms +15bp area. In the end, the books totalled in excess of EUR 54.5bn, producing a reoffer spread of ms +13bp in the context of pricing. The coupon for this deal is 3.25%. In a moderately busy week for the SSA segment ("only" EUR 7.6bn), the fourth bond for our benchmark table came from Andalusia. Last week we saw JUNGAL, which has now been followed by ANDAL (EUR 600m for ten years). This is also the only ESG bond in the trading week under review here. During the book-building process, a narrowing of three basis points compared with the guidance was recorded. Ultimately, the spread was 29 basis points above the Spanish benchmark bond. Please see the table below for the relevant spread to mid-swap. Compared to the Paris regions IDF and VDP (20% RW), autonomous Spanish regions are candidates with a 0% risk weight. Here, too, we are planning an update of our well-known study "Beyond Bundeslaender" in the course of 2023. Our report on the primary market is rounded off by two mandates. BayernLabo is set to issue a sub-benchmark (EUR 250m, 12y) in the near future, while KfW is planning a seven-year jumbo.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
ANDAL	ES	06.03.	ES0000090904	10.1y	0.60bn	ms +72bp	- / Baa2 / BBB+	X
EU	SNAT	06.03.	EU000A3K4D41	11.3y	6.00bn	ms +13bp	AAA / Aaa / AA+	-
ILBB	DE	03.03.	DE000A351LE6	7.0y	0.50bn	ms +2bp	AAA / - / -	-
IBBSH	DE	28.02.	DE000A30VNP9	8.0y	0.50bn	ms +2bp	AAA / - / -	-

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

Cross Asset
ECB preview: Soft landing lets ECB play hard ball with key rates

Authors: Dr Frederik Kunze // Dr Norman Rudschuck, CIIA

ECB meeting on 16 March – keep seat belts fastened as cruising speed remains high

In the coming week, the ECB's Governing Council will convene for its second scheduled key rate meeting of the year. For the March meeting, there is no particularly wide range of possible surprises. Interest rate hikes of 50 basis points each for all three key rates seem like a foregone conclusion. With a meeting-by-meeting approach, by definition there should not (really) be an advance decision. The reduction of primary market purchases to 0%, particularly in terms of covered bonds, also seems to be progressing quieter than some feared. There is nothing further to add about reinvestments, and the ECB has bought itself enough time (for now) up to the end of June. Furthermore, we expect new projections for GDP growth and the rate of inflation in the Eurozone. Consequently, today, we try to view the meeting in context with the economic slowdown, without there being any major concerns of a recession. In economic terms, this is generally called a soft landing. In our opinion, a) inflation rates are set to remain uncomfortably high, and b) the Eurozone economy appears to be more robust than expected. This gives the ECB an opportunity to play hard ball when it comes to further increases in interest rates, something that the US Federal Reserve Bank has also indicated, with various opinions expecting interest rates to top out at 6%. This would be the terminal rate everyone looks to in this cycle and the current rotation of global interest rate hikes. The ECB certainly is not at that point yet, even if interest rate hikes go further in 2023 than previously expected. At the same time, we would like to state from the outset that we do not expect an interest rate cut later in 2023, something we will elaborate on later.

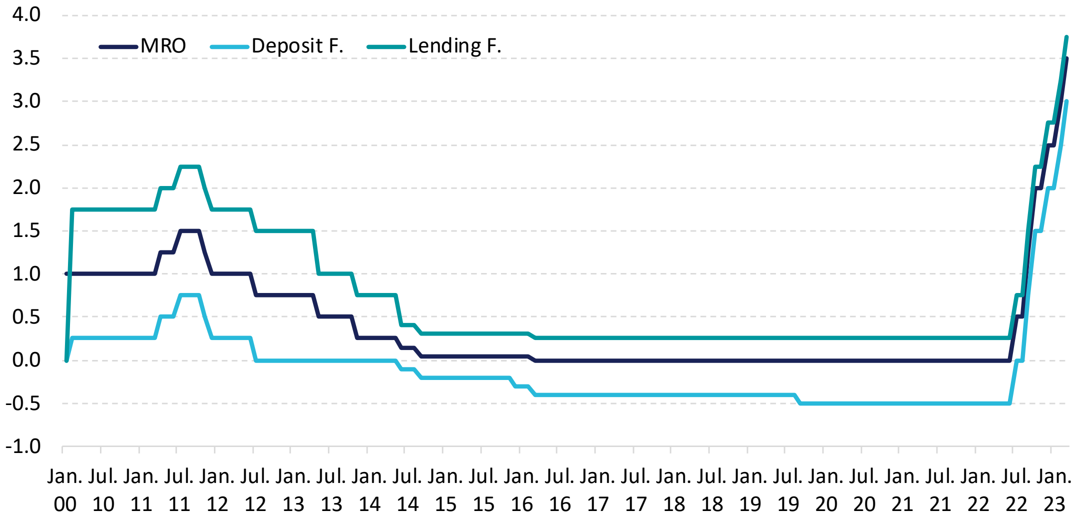
Opinions from within the ECB: is there such a thing as the *Holzmann effect*?

At this point, we often focus on the opinions of individual members of the ECB's Governing Council, which they have voiced publicly. As a matter of fact, it would be no exaggeration to speak of a hawkish bias these days. This was also made very clear in the minutes of the last ECB meeting. In the following, we therefore take a closer look at the records of the February meeting as part of our preview. With regard to more recent opinions, Robert Holzmann, a confirmed hawk, most recently reinforced this restrictive undercurrent. The head of Austria's central bank accordingly expects the core inflation rate "not to weaken significantly" in the first half of this year. If the level was maintained, he actually expects increases in interest rates to be resolved by the ECB's Governing Council in 2023 that could total a further 200 basis points (another four interest rate hikes of +50bp each). The prompt response of capital market rates practically proves that what could be described as a "*Holzmann effect*" does in fact exist. As far as Philip R. Lane is concerned, interest rate hikes will continue. However, his view is closer to that of the European Central Bank's minutes, with an emphasis on the data dependency of future monetary policy. The ECB's chief economist seems to be trying not to let the public be under the impression that the ECB's Governing Council would hastily and definitively steer in one direction, making it clear that the central bank should not go "into autopilot mode". Mario Centeno, head of Portugal's central bank, worded his concerns regarding an overly restrictive approach somewhat differently and referred to the observation that the ECB's projections now fall short of the actual general price increase.

Minutes of the February meeting – far too soon to talk about success

On 2 March 2023, the ECB presented the Minutes of the February Meeting. The hawkish undercurrent of the European Central Bank's monetary policy was unmistakably maintained. This was undoubtedly evident from the ECB minutes. The central bankers on the ECB's Governing Council still seem to be particularly preoccupied with the core inflation rate that has remained high. The term "core inflation" was mentioned far more frequently in the minutes of the February meeting than in those of the December meeting. For some hawks, the core inflation rate certainly can be seen as the key to the future course of monetary policy. This to us seems plausible, including in view of the discussed potential risk arising from wage increases in the context of inflation. With regard to economic activity, a soft landing was mentioned at the February meeting and, at the same time, it was pointed out that any necessary sacrifices relating to the growth course are unlikely to be excessive. Although the core inflation rate was said to be too firm, the upward risk regarding the rate of price increases was seen as lower overall. The combination of less marked downward risks in terms of economic activity and high core inflation certainly provides a breeding ground for a continuing hawkish direction of monetary policy. While not all members of the ECB's Governing Council shared this view, there is nothing in the minutes to suggest that the hawks will give up on their approach any time soon. This is evident from the sections which let reservations regarding overtightening appear to be overhasty. Finally, it was also recorded in the minutes of the February meeting that it is still too soon to talk of success in combating general price increases. The specific wording was as follows: "Therefore, it was much too early to declare victory". The press conference following the statement usually creates suspense: in the recent past, central bank chief Christine Lagarde has set market participants straight too many times with her comments, after first having stoically read out the ECB Statement. In other words, we believe that Madame Lagarde recently has repeatedly been able to supplement the rationality of the interest rate decision recorded in writing with a level of sentiment, the importance of which should by no means be underestimated.

Expected key ECB interest rates at end-March (in %)

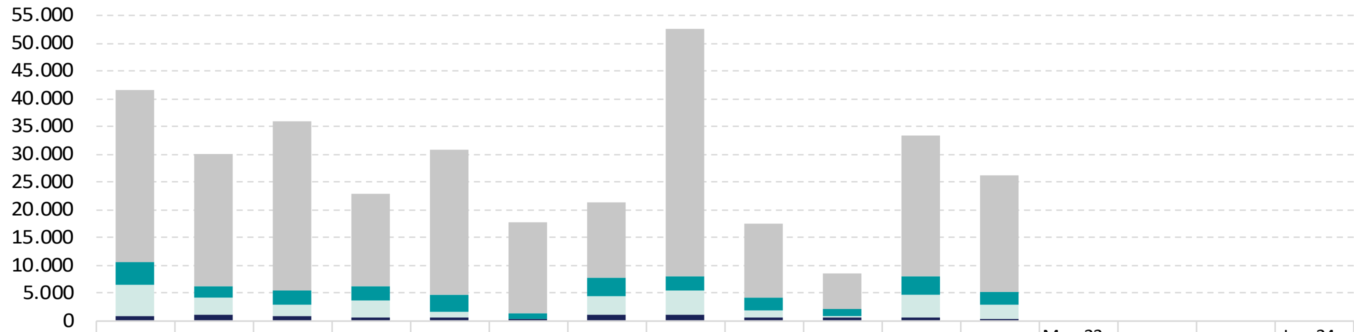


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Our expectations: +50bp, then take a deep breath and let it sink in

Although the ECB's Governing Council has surprised us once or twice in the past, we see a hike of 50 basis points as highly likely. Apart from that, all the necessary foundations for the coming weeks were laid in February: the reduction of APP holdings by a monthly average of EUR 15bn up to the end of Q2 2023, with a subsequent reassessment of the situation, started a few days ago. With regard to the further definition of more specific parameters, we do not expect major "shifts" between the various programmes that would cause an imbalance in terms of the reinvestments still required. The portfolio is likely to continue to "breathe" in the future, i.e., in the short term shifts between jurisdictions regarding maturities and purchases are as welcome as shifts between, for example, the PSPP and CBPP3. Ultimately, the ECB will initially want to wait and see how market players respond. With regard to the PEPP, we expect no surprises whatsoever. Any deviation from the approach adopted to date – reinvest maturing bonds until the end of 2024 – seems highly unlikely to us in view of the first line of defence. It would also reduce the most recent forward guidance to absurdity. In March, it is at least as important to look at the ECB's share of the primary market. In this respect, we focus particularly on covered bonds as part of our publication, which have always been prohibited in the SSA segment – and quite rightly so. In the wake of the last meeting, it can be stated that the Eurosystem has not wasted any time and rapidly moved from a 20% share of orders to 10% in February 2023. Since March this year, with immediate effect, we see no purchases of fresh bonds at all. In this regard, the ECB has neither hesitated nor procrastinated as far as its self-imposed phasing-out is concerned.

APP – expected monthly maturities (EUR m)



	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-23 - Feb-24	2022	2023	Jan-24 - Feb-24
APP	41.620	29.968	35.912	22.863	30.887	17.856	21.217	52.596	17.507	8.556	33.467	26.100	338.549	299.142	331.104	331.104
PSPP	31.061	23.858	30.558	16.619	26.130	16.445	13.351	44.559	13.255	6.336	25.524	21.013	268.709	228.585	255.266	255.266
CSPP	4.219	1.965	2.579	2.557	3.038	986	3.377	2.616	2.393	1.336	3.357	2.282	30.705	17.670	30.428	30.428
CBPP3	5.631	2.937	1.874	3.112	1.170	0	3.346	4.465	1.351	408	4.109	2.447	30.850	41.244	35.145	35.145
ABSPP	709	1.208	901	575	549	425	1.143	956	508	476	477	358	8.285	11.643	10.265	10.265

Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Thoughts on the QT schedule

The above chart illustrates the maturities in the programme. Added up, maturities total EUR 130.4bn in the period from March to the end of June. An amount of EUR 60bn (4 x 15bn) is not reinvested. In terms of a percentage, only around 54% is reinvested – considerably less than we would initially have expected last year.

Potential scenarios in the second half of the year

This in turn brings us to new hypotheses. Will the ECB also put its foot on the gas with regard to reinvestments under the APP? Let's imagine the following: it seems conceivable, on the one hand, that the pace for reducing holdings remains the same in the third and fourth quarters of this year, or is possibly even increased. If the ECB continues to reinvest "only" EUR 15bn less in Q3, in terms of a monthly average, the reinvestment rate would already have dropped to approximately 36%. In Q4, bonds maturing worth EUR 78.7bn are to be expected in view of October (EUR 52.7bn in that month alone). It is therefore quite possible that the amount not reinvested would then increase to an average of EUR 20bn, which produces a reinvestment rate of no more than 24% (or even lower) and no reinvesting at all from 2024 onwards. However, on the other hand, a faster pace cannot be ruled out. By this, we do not necessarily mean the end of reinvesting immediately on 1 July, but can certainly imagine an early exit because the market has coped well with every ECB measure to date. We do not expect any information about this to be shared at the upcoming meeting or at the meeting on 4 May. In our opinion, this means that the picture will remain vague up to 15 June. However, at that point the ECB will be forced to deliver, as there would not be much time left before the start of the second half of the year. A fact that would support this is that the ECB could then focus entirely on interest rate hikes in March and May. We have also been asking ourselves for some time when the day will come on which the three key rates will not all be increased by the same percentage and/or whether it is at all relevant for the ECB to consider and/or target a symmetrical range such as once existed. However, we think that another four interest rate hikes of 50bp each à la Holzmann are out of the question.

Imminent ECB decision – impact on public sector issuers (SSA)…

Most market players are already expecting the imminent interest rate hike of 50bp and have priced it in. The discussion about reducing total assets (QT) is particularly well received in the SSA segment. The APP is comprised of public sector securities to around 80%. As direct government financing via the primary market has always been prohibited since 2015, the Eurosystem was only able to focus on the secondary market in the past eight years. We therefore do not anticipate any additional distortion of the spread landscape. What we have observed is that some investors have comfortably stocked up on bonds in order to then sell them very quickly to the Eurosystem at a profit. This has often led us to state that the ECB was acting like a vacuum cleaner essentially at every spread level. The fascinating aspect is that KfW, for example, has to do in the market what it has to do. This means raising EUR 80-85bn in 2023 – regardless of the spread level. Of this amount, KfW has already collected more than 24%, as the financial institution announced a few days ago. And this figure is rising with every passing day! Every issuer would have been – and it is still the case, actually – well advised to go to market before further interest rate hikes are implemented, in order to secure the comparatively favourable interest rate level. Yet, the curve is currently unusually inverted. In the past, this signalled a recession. However, in this instance, that does not seem to be the case. This is accompanied by the general approach as to how a portfolio should be managed: based on LCR, positive yield, pricing at the re-offer spread versus mid-swap or versus the Bund-swap spread. KfW is used representatively in this example for the EU, EIB, ESM, etc. None of them operate in a vacuum and of course are all paying higher coupons now than in 2021/22. However, they also do not issue retained covered bonds, or have massive repayments in TLTRO III transactions, which would directly impact on their funding. They largely depend on their funding and business purposes.

…and the covered bond market

We see some significant implications for the covered bond segment at the upcoming meeting. The expectations of capital market players with regard to the future structure of monetary policy, also beyond the March meeting, ultimately determine the interest rate pattern. For example, the question as to when the EUR swap curve will stop being inverted is likely to be on the minds of covered bond issuers. Today, it is already safe to say that the ECB's influence in the covered bond market is dwindling, both on the supply and demand sides. In fact, the question arises as to how long and to what extent the ECB will continue to be a buyer in the secondary market, now that it has completely withdrawn from the primary market. We stand by our opinion that the covered bond market does not need the ECB as a purchaser. Consequently, we believe that capital market participants should not expect the European Central Bank to be present in the secondary market for a very long time. Its presence will of course depend on the actual QT course, for which we outlined possible scenarios above. We continue to believe the most probable scenario is that spreads in the covered bond universe we analyse will continue to widen modestly up to the middle of this year. Any potential pressure in terms of widening – even if it is linked to the ECB's specific monetary policy – is likely to be triggered to a considerable extent by the general sentiment.

Conclusion and outlook

In March this year, a further +50 basis points seem to be priced in and for May, we expect another +25 basis points. This means that the ECB would still have plenty to do in terms of interest rate hikes in the coming two meetings. The month of March has already served up plenty of news: firstly, the Eurosystem has embarked on QT and is very slowly reducing its total assets, specifically by an average of EUR 15bn per month. In addition, it has completely withdrawn from order books in the primary market. Nevertheless, new covered bond transactions are substantially oversubscribed. This is proof if ever it was needed that the primary market does not need ECB orders for its purchase programmes. At the same time, increased secondary market activities are keeping spreads in check there. It would not be far-fetched to speculate whether the Eurosystem will continue to be present in the secondary market during the second half of this year in connection with the APP. This is something we will probably find out on 15 June 2023. We then will also know whether it is the end of the road as far as interest rate hikes are concerned. Furthermore, we do not anticipate interest rate cuts by the end of this year. However, the ECB has the potential to also surprise us in this respect and, if necessary, may overshoot the target. It is therefore worth looking at the ECB's projections for economic growth and inflation, both now in March and then again in June. More accurate projections than in 2022 would be most welcome, dear ECB. After all, these projections form the basis for the ECB's strategy, comprising the economic analysis as well as the monetary and financial analysis. Once rather more separate, these two pillars have provided the integrated analysis framework for all monetary policy decisions since July 2021. This improves nothing per se. However, there is further scope for developments. Yet, we believe that a further four interest rate hikes of +50bp each – as called for by Robert Holzmann, member of the ECB's Governing Council – are out of the question.

NORD/LB

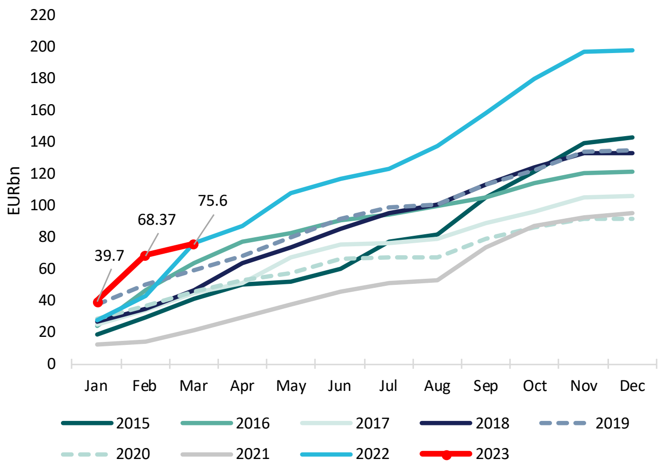
Covered Bonds
Where does the Pfandbrief stand within the covered bond universe?

Author: Stefan Rahaus

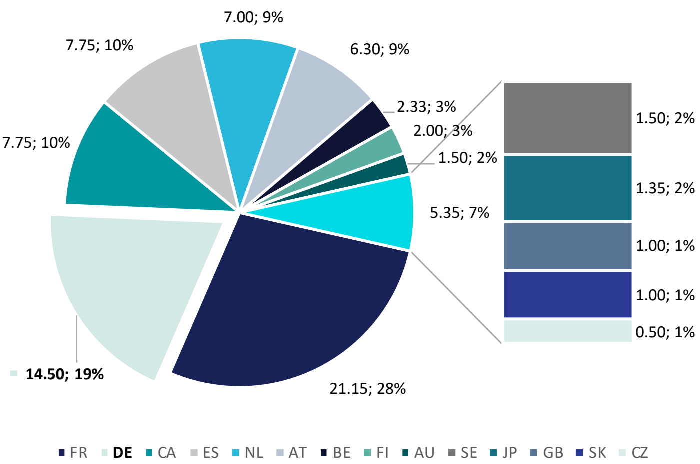
Dynamic issuance activity also shines the spotlight on the spread landscape

The issuance trend in the EUR benchmark segment so far in 2023 can undoubtedly be described as highly dynamic. Up to yesterday, a total of EUR 75.6bn had been placed with investors via the primary market. As such, the EUR benchmark issuance volume in 2023 so far exceeds the pro-rata periods of previous years, in some cases quite significantly. We have repeatedly explained the reasons for the brisk issuance activity on the part of covered bond issuers - such as the ECB's quantitative tightening from March this year - in our weekly publications. In today's edition of the NORD/LB Covered Bond & SSA View, we would like to discuss the current spread landscape and the repricing that has taken place in addition to the issuance activity. We are focusing in particular on German Pfandbriefe and examining where they fit in the global covered bond universe.

Primary market: issuance trend (EUR BMK; EUR bn)



Primary market: issues 2023 (EUR BMK; EUR bn)

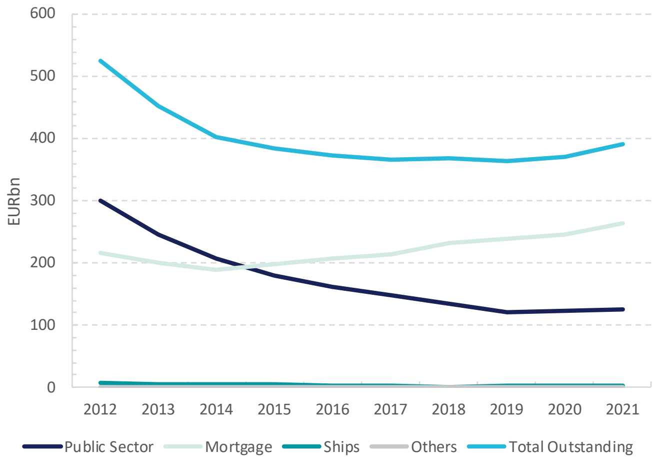


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

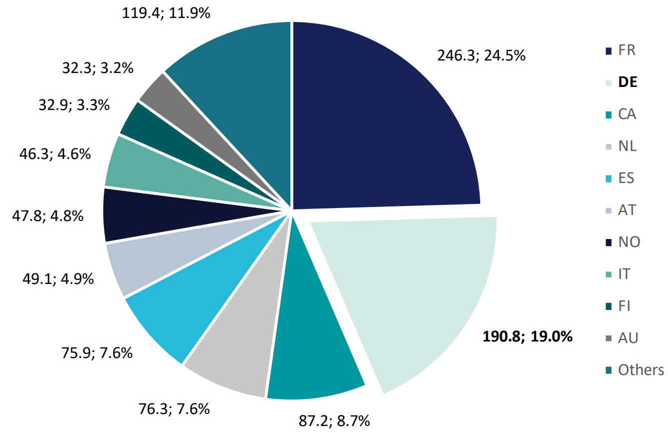
Issuance volume of EUR benchmarks: German Pfandbriefe in second place

In the rankings for primary market activity by issuance volume in 2023, covered EUR benchmark bonds from Germany are ranked in second place at EUR 14.5bn (19.2% of the issuance volume recorded so far in 2023), behind those from France (EUR 21.2bn; 28.0%). At present, Spain and Canada (EUR 7.8bn; 10.3%) follow some way behind Germany in a share of third place. A total of 22 Pfandbriefe have been issued so far this year, resulting in an average issue size of EUR 659m. Two issues with a total volume of EUR 1.8bn were issued as public sector Pfandbriefe (Öpfe), with the rest issued in the form of mortgage Pfandbriefe (Hypfe). Therefore, in the year to date, at 12.1%, Öpfe account for a significantly lower share of the EUR benchmark issues placed from Germany in the EUR benchmark segment in comparison with mortgage-backed bonds.

ECBC statistics: Total outstanding Pfandbriefe DE



Outstanding EUR BMK volume per country EUR bn)



Source: ECBC Fact Book 2022, market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

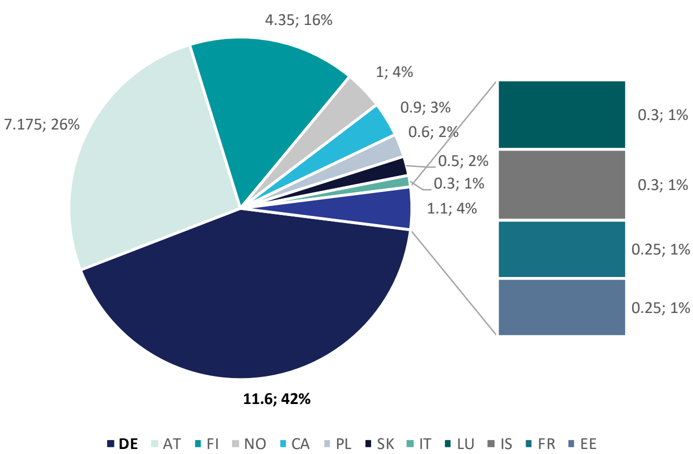
Overall market for covered bonds from Germany: Total outstanding Pfandbrief volume down significantly versus 2012

If we also look at the overall market for Pfandbriefe, we can definitely see that there is a significant supply shortage. Based on the ECBC's annual statistics for the global covered bond market, the volume of covered bonds outstanding worldwide in all currencies at the end of 2021 was equivalent to EUR 2,940bn, of which Pfandbriefe from Germany accounted for EUR 391.4bn (13.3%). At the end of 2012, the Pfandbrief ratio was as high as 18.7%. The total volume of Pfandbriefe outstanding in Germany has declined by just over 25.0% since the end of 2012, dropping from EUR 524.9bn to EUR 391.4bn at the end of 2021. At that time, EUR 168.6bn (43.1%) of the outstanding Pfandbriefe were publicly placed in benchmark format, with a total of EUR 191.4bn (49.0%) attributable to private placements. The remaining 8.0% (EUR 31.3bn) were attributable to public placements with an issue volume of less than EUR 500m. The annual statistics also show that the ratio of outstanding public sector Pfandbriefe to outstanding mortgage Pfandbriefe has changed significantly since 2012. Whereas at the end of 2012 the share of Öpfe still accounted for 57.4% (EUR 301.1bn) of the total Pfandbrief volume outstanding, this fell to just 32.0% (EUR 125.3bn) at the end of 2021. In the same period, the share of Hypfe increased from 41.1% (EUR 216.0bn) to 67.5% (EUR 264.0bn). The importance of mortgage-backed refinancing has therefore increased markedly compared with 2012. More recent data from the transparency disclosures pursuant to Section 28 of the German Pfandbrief Act for Q4 2022, which the Association of German Pfandbrief Banks (vdp) publishes for its members on its website, underline the trends described.

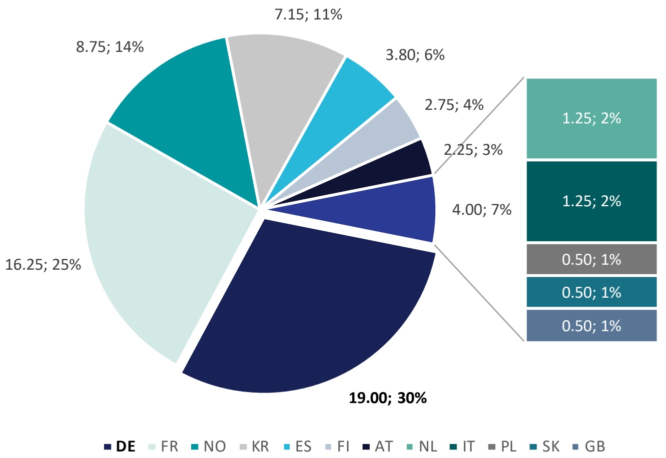
Pfandbriefe rank second in terms of outstanding EUR benchmark volume

With a total outstanding EUR benchmark volume of EUR 1,004.1bn at present, the share attributable to German Pfandbriefe amounts EUR 190.8bn or 19.0%. Germany is therefore in second place behind France (24.5%) and ahead of Canada (8.7%). In terms of the number of outstanding EUR benchmark bonds, however, Pfandbriefe are top of the list with 272, ahead of France and Austria with 237 and 84, respectively.

Outstanding EUR sub-benchmarks (EUR bn)



Outstanding ESG covered bonds (EUR BMK; EUR bn)



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

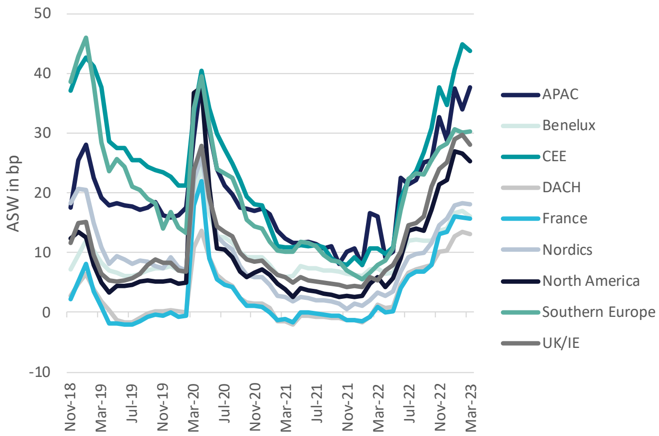
German Pfandbriefe: Largest share of EUR sub-benchmarks and ESG benchmarks

In terms of outstanding EUR sub-benchmark bonds, Germany is the most important jurisdiction with covered bonds in this segment totalling EUR 11.6bn. Austria ranks second (EUR 7.2bn). With a total volume of EUR 27.5bn at present, the share of Pfandbriefe is 42.0% here. In the area of ESG issues, German Pfandbriefe again claim top spot as measured by the outstanding EUR benchmark volume, at EUR 19.0bn. With a total volume of outstanding EUR benchmark bonds in ESG format of EUR 64.0bn, the share of ESG covered bonds from Germany thus amounts to 30.0%. France (EUR 16.3bn; 25.0%) and Norway (EUR 8.8bn; 14.0%) follow in second and third place.

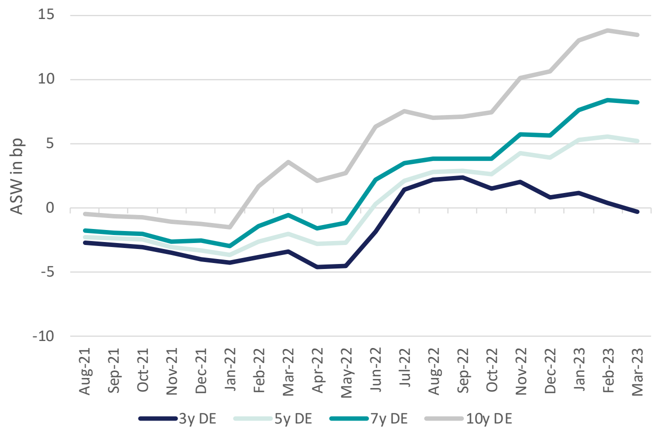
ASW spreads from all covered bond regions have widened significantly

ASW spreads have widened significantly across all jurisdictions since the end of 2021, in some cases reaching the highs seen in 2018 and 2020, although the extent of the widening varies significantly by region. In recent weeks, there have been signs of a consolidation or slight downward correction. The spread widening for Pfandbriefe was lower compared with other jurisdictions. In addition to qualitative factors, such as the high standard of the PfandBG, we believe that the broad investor base in Germany is also responsible for this. However, a differentiation of ASW spreads - which was not unusual in the period before the strong ECB influence - has also recently become apparent between other jurisdictions. In addition to the differentiated widening in the various regions, the ASW spreads of different maturities have also developed differently. In the Pfandbrief segment, for example, ASW spreads have widened by 15bp from -1.5bp to 13.5bp in the ten-year segment since the beginning of 2022, while there has only been an increase from -4.2bp to -0.3bp for maturities of three years (i.e., a total of just 3.9bp). As a result, there are currently significantly steeper term spreads. For example, the ASW differential between three and ten-year Pfandbriefe has widened from 3bp in January 2022 to around 14bp in March 2023. Overall, the yield level of Pfandbriefe has also increased considerably. While the yield on German Pfandbriefe was in part clearly negative for maturities of up to ten years in July 2021, it is currently possible to “earn” well over 3%. At the same time, papers with three-year maturities are currently yielding more than those with ten-year maturities.

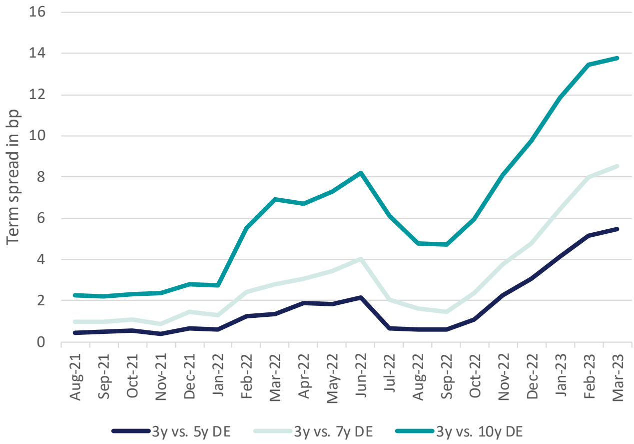
ASW spreads by region (5y generic)



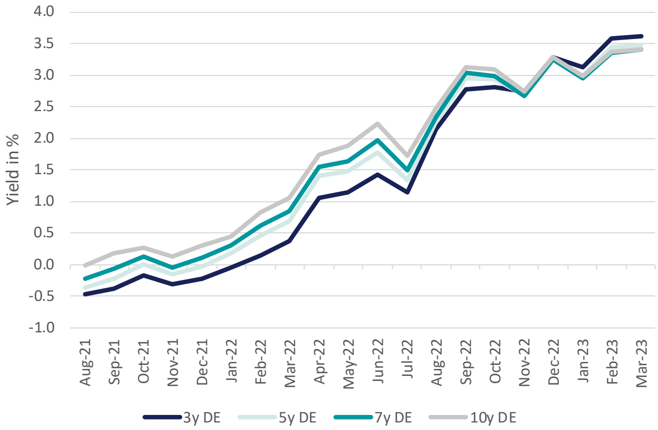
ASW spreads Pfandbriefe DE (generic)



Term Spreads Pfandbriefe DE (generic)



Pfandbriefe yields DE (generic)

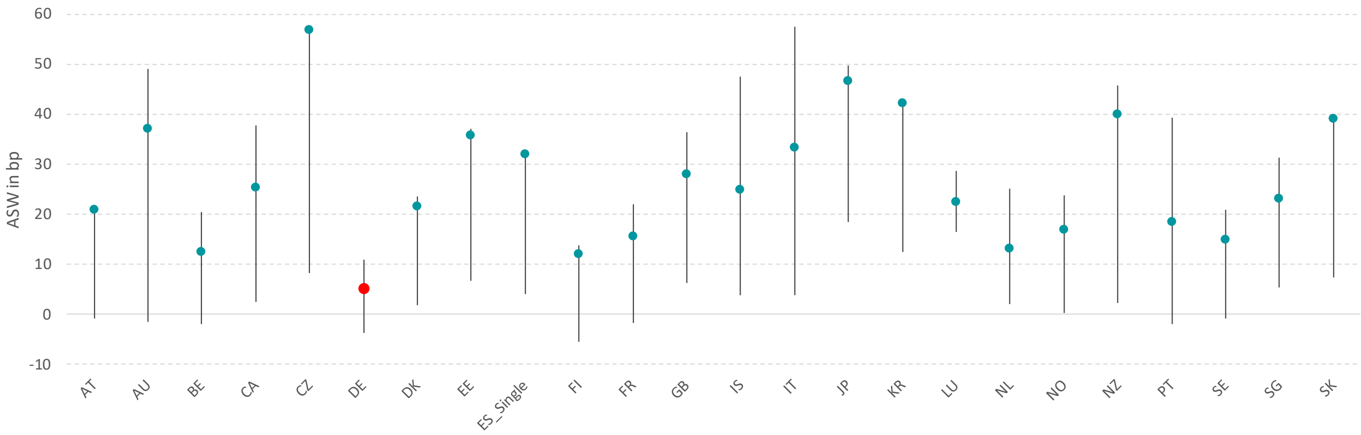


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread movement of Pfandbriefe in the covered bond universe

The chart below provides an overview of the spread movement range (high; low; current) of EUR benchmark bonds from various jurisdictions over the past 36 months in the 5y maturity segment. The first thing that stands out here is that German Pfandbriefe (together with Luxembourg, which is quite small in terms of outstanding volume) have the lowest trading spread (14.5bp) in comparison with other jurisdictions. In our view, Pfandbriefe have therefore underlined their status as a "low beta" instrument within the covered bond universe (in relation to EUR benchmarks). Comparable countries from core Europe such as France or the Netherlands had ASW spreads of just under 23.7bp and 23.0bp respectively over the past 36 months. We can also see that German Pfandbriefe in the generic five-year segment have ASW spreads of around 5bp and, as such, are quoted around 10bp or 8bp below the ASW spreads of covered bonds from France or the Netherlands. In our view, some investors therefore also seem to have a preference for the low spread volatility of German Pfandbriefe.

ASW spread: trading range of the past 36 months (5y generic)



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research; based on month-end values or last reporting date 06 March 2023; vertical line marks maximum and minimum value; dot mark corresponds to the most recent value

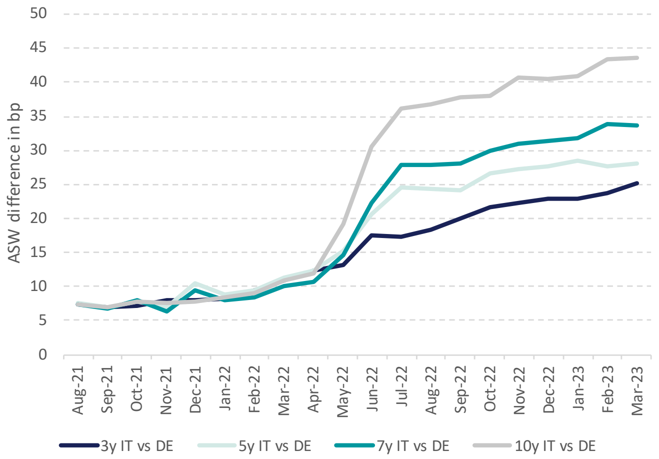
ASW spreads of Pfandbriefe versus selected jurisdictions

Based on the observations described in the previous paragraph, we have taken a closer look at the spread development of German Pfandbriefe versus some other countries. The charts below on the left depict the development of the spread difference between Italian, Austrian, Canadian and Australian covered bonds and German Pfandbriefe in different maturity segments. In the charts on the right-hand side, we have mapped the spread difference between the respective country and Pfandbriefe in the generic five-year maturity band and underlaid it with the weighted 36-month moving average of the difference plus a margin of ±10%. The result gives us an indication of whether the spread differences versus Pfandbriefe are above or below the average of the last 36 months. In this way, we can say whether the spread difference in the five-year range has narrowed or widened to an above-average extent at the respective point in time compared to the last 36 months.

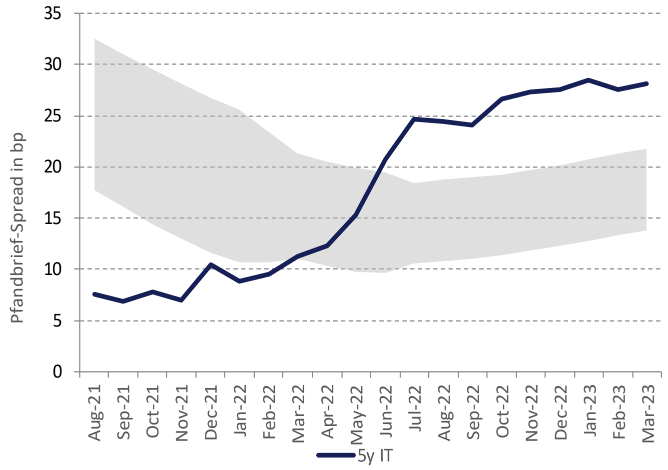
Spread difference between Italian and Austrian covered bonds versus Pfandbriefe

The ASW spread difference between the two eurozone countries and Pfandbriefe was in a fairly narrow range of two to four basis points (AT) and five to ten basis points (IT) across all generic maturity bands in the period from August 2021 to February 2022. At the beginning of the window, the spreads compared with Pfandbriefe were lower than the average (±10%) of the previous 36 months. Subsequently, there was a marked widening movement in the ASW spread difference, which was significantly larger in absolute terms for covered bonds from Italy. What both countries have in common, however, is the fact that the spread differences versus Pfandbriefe have also widened significantly compared with the 36-month average and are now well above the observed average range. As such, the observed spread differences appear relatively large at present.

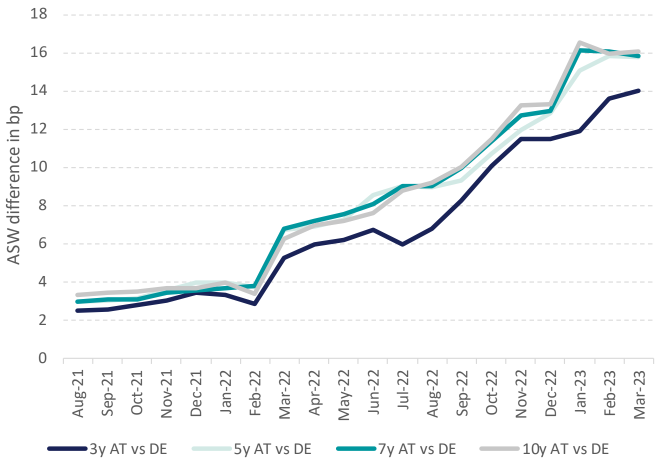
ASW spreads: IT vs. DE (generic)



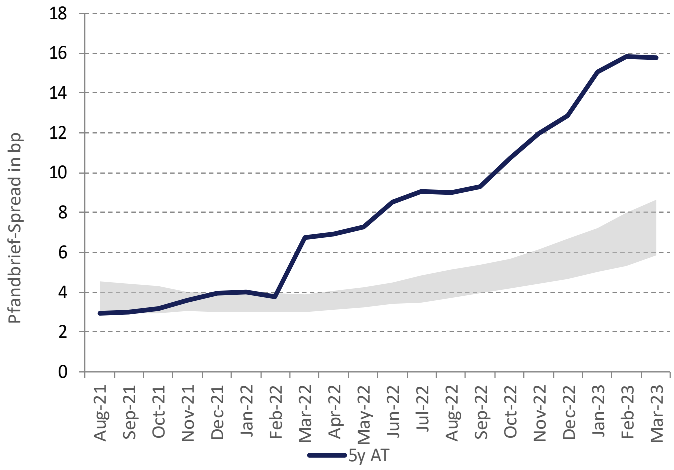
ASW spreads: IT vs. DE (36M average; 5y; gen.)



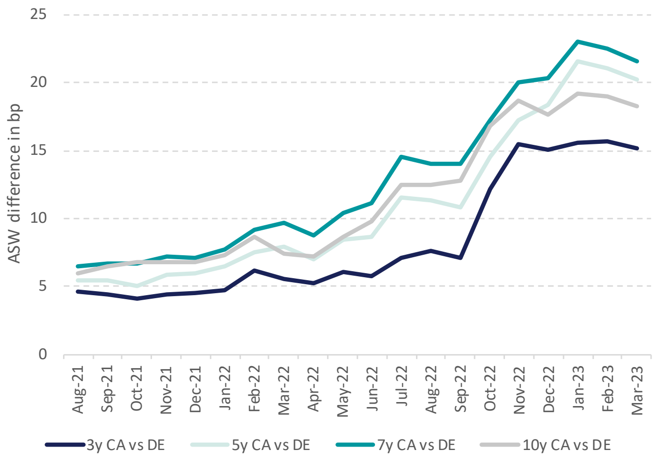
ASW spreads: AT vs. DE (generic)



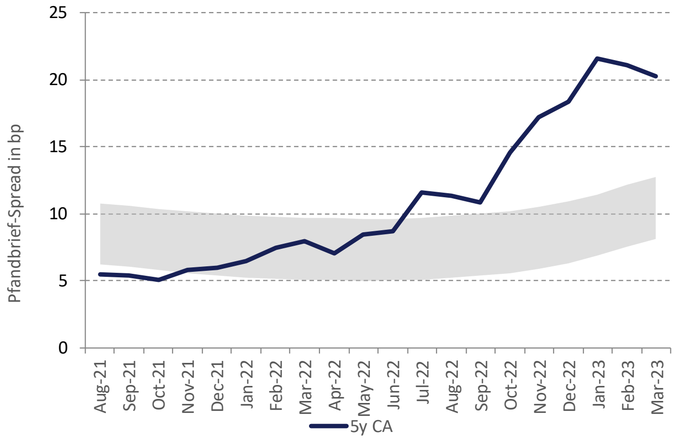
ASW spreads: AT vs. DE (36M average; 5y; gen.)



ASW spreads: CA vs. DE (generic)

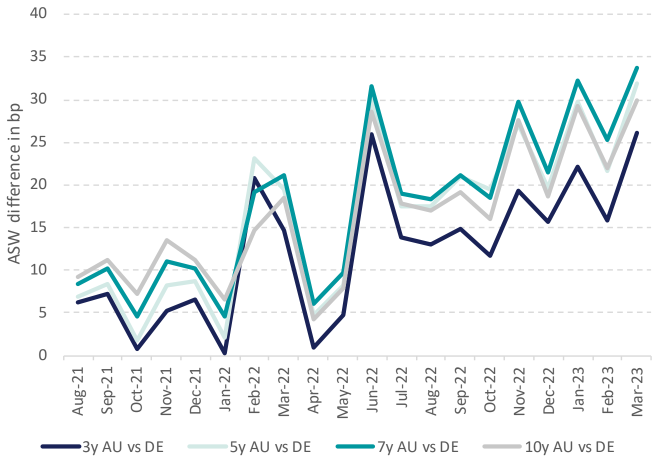


ASW spreads: CA vs. DE (36M average; 5y; gen.)

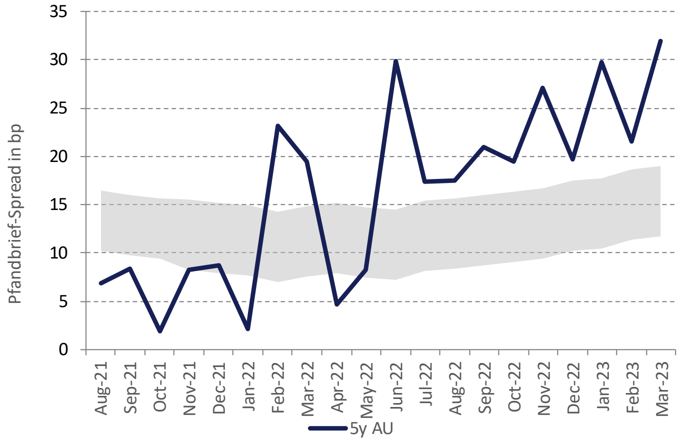


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

ASW spreads: AU vs. DE (generic)



ASW spreads: AU vs. DE (36M average; 5y; gen.)



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

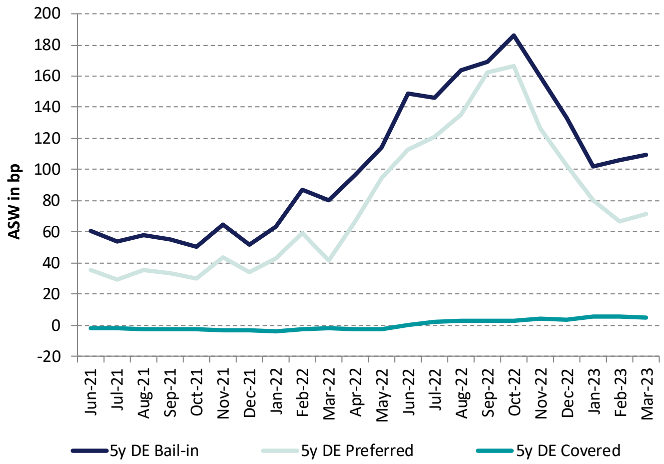
Spread difference between Canadian and Australian covered bonds versus Pfandbriefe

The ASW spread difference between covered bonds from the two overseas markets Canada and Australia and covered bonds from Germany has also widened significantly in recent months. In this context, German Pfandbriefe benefit from a better LCR rating and eligibility for purchase under the ECB's CBPP3 and PEPP programmes, even though the volume of reinvestments for CBPP3 will now be lower from March 2023. The range of the 36-month average ±10bp spread difference is currently 8.2bp to 12.8bp for Canada, whereas the current spread difference is 20.2bp. For Australia, these values range from 11.7bp to 19.0bp and 31.9bp. What both countries have in common is that the spread difference compared with Pfandbriefe is currently clearly above the 36-month average range, whereas it was still below it between August 2021 and October 2021. Here, too, it can be deduced that the difference versus Pfandbriefe is currently relatively large compared with the weighted moving average of the last 36 months.

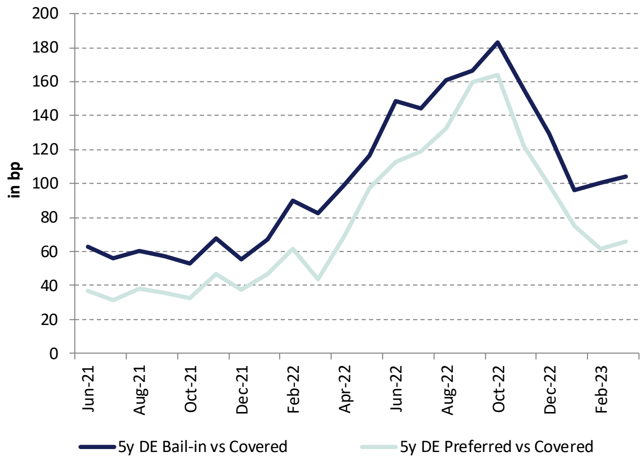
Pfandbriefe versus seniors

Finally, we would like to take a look at the development of Pfandbriefe versus senior unsecured bonds (preferred and bail-in) from Germany. ASW spreads of senior bonds in the generic five-year maturity band rose to over 165.0bp (preferred) and 185.0bp (bail-in) last year due to war, inflation and economic fears. As Pfandbrief spreads, on the other hand, have only moved up minimally, the difference in ASW spreads between covered and uncovered bonds has also moved almost in line with the widening of senior spreads, peaking at a good 160.0bp and 180.0bp respectively last autumn. This difference subsequently decreased again significantly. The pick-up of bail-in bonds over Pfandbriefe remains just over 100.0bp at present, while the ASW pick-up for senior preferred bonds is only around 66.0bp. In comparison with autumn 2022, senior bonds have therefore become significantly more expensive than Pfandbriefe.

Covereds vs. Seniors (DE; 5y generic)



Spread difference of covereds vs. seniors (DE; 5y gen.)



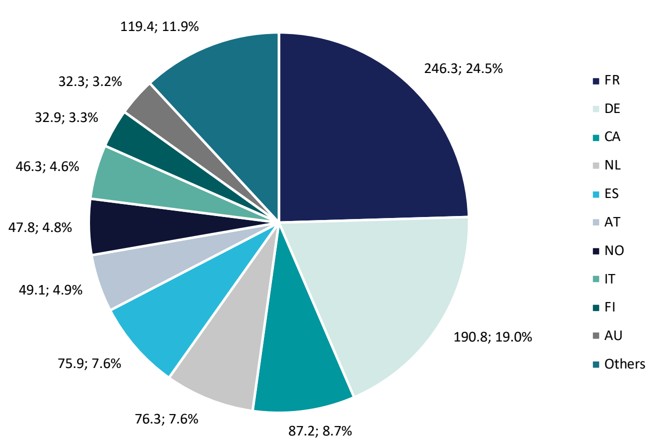
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Conclusion

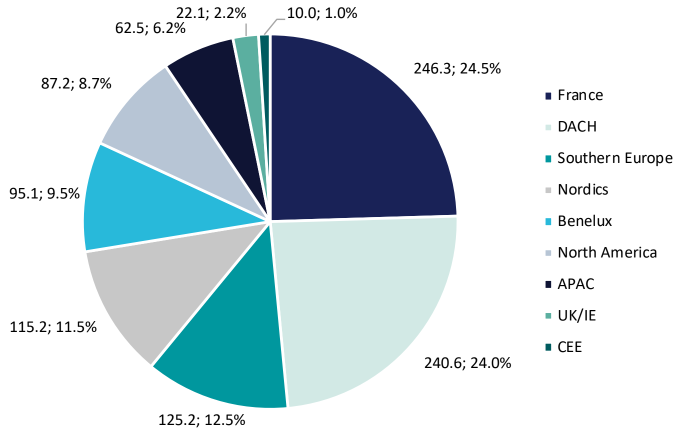
Even though the total outstanding volume of Pfandbriefe in Germany has decreased significantly compared with 2012, covered bonds are ranked in second place in the EUR benchmark segment behind France. Pfandbriefe currently have the same ranking in this year's new issue statistics by volume. Measured by the total number of outstanding issues, Pfandbriefe even take first place at present. Top spots by volume are occupied by Pfandbriefe in the EUR sub-benchmark segment as well as for EUR benchmark bonds in the ESG format. The ASW spreads of Pfandbriefe have only widened to a below average extent in comparison with other jurisdictions, and compared with the weighted 36-month moving average Pfandbriefe currently appear relatively expensive versus covered bonds from some other countries. The difference between the ASW spreads of Pfandbriefe versus senior unsecured bonds, on the other hand, has narrowed considerably compared to October 2022, meaning that unsecured bonds can be swapped for secured bonds on much better terms than last autumn. Despite slight price declines on the German property market and strains on borrowers due to inflation and high interest rates, we do not consider the quality of German cover pools to be at risk due to strict regulatory requirements. Pfandbriefe should be able to defend their status as the “asset of choice” in the future. In our view, a broad investor base with a pronounced home bias supports the currently rather expensive level of German Pfandbriefe. Moreover, with yields between 3.4% and 3.6%, some investors prefer the “safe haven” status of Pfandbriefe to the potential headline spread risks of other jurisdictions. Despite the start of the QT era, we still anticipate a buoyant new issue market. In the previous edition of our weekly publication (08/2023), we took a closer look at the issuance potential for 2023 and reiterated our primary market forecast of EUR 189.5bn (net supply of EUR 74.0bn). We expect EUR 33.0bn in new Pfandbrief issuances from Germany this year in the EUR benchmark segment. With maturities of EUR 17.8bn, this would result in a net new supply of EUR 15.2bn. In terms of spreads, although significant repricing has already taken place in recent months, we can still envisage a slight widening with regard to the new issue volume we are expecting up to the midpoint of this year owing to technical reasons.

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



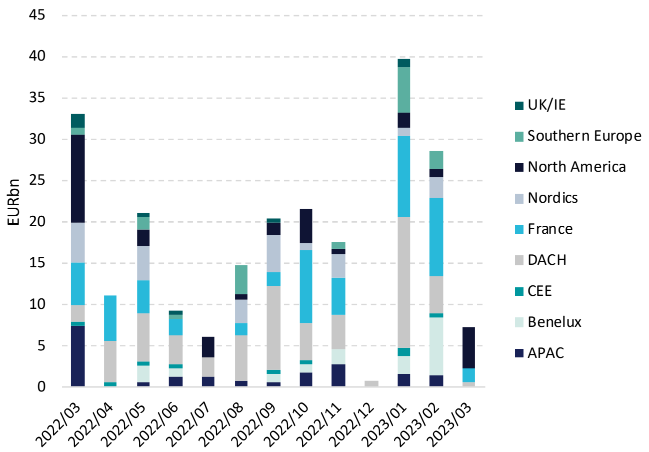
EUR benchmark volume by region (in EURbn)



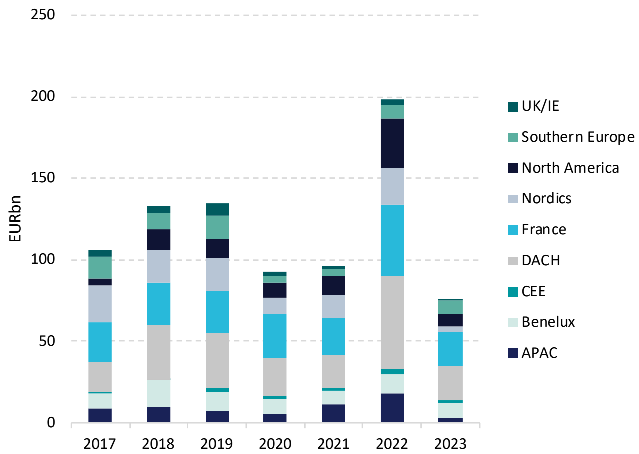
Top-10 jurisdictions

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	246.3	237	16	0.97	9.6	5.3	1.10
2	DE	190.8	272	31	0.65	8.1	4.3	0.88
3	CA	87.2	65	0	1.30	5.6	2.9	0.74
4	NL	76.3	76	2	0.94	10.9	6.7	0.98
5	ES	75.9	61	6	1.14	10.9	3.7	1.90
6	AT	49.1	84	4	0.58	8.7	5.4	1.09
7	NO	47.8	57	11	0.84	7.2	3.7	0.50
8	IT	46.3	57	2	0.79	9.2	3.6	1.24
9	FI	32.9	35	3	0.93	7.4	3.9	0.90
10	AU	32.3	32	0	1.01	7.6	3.8	1.19

EUR benchmark issue volume by month



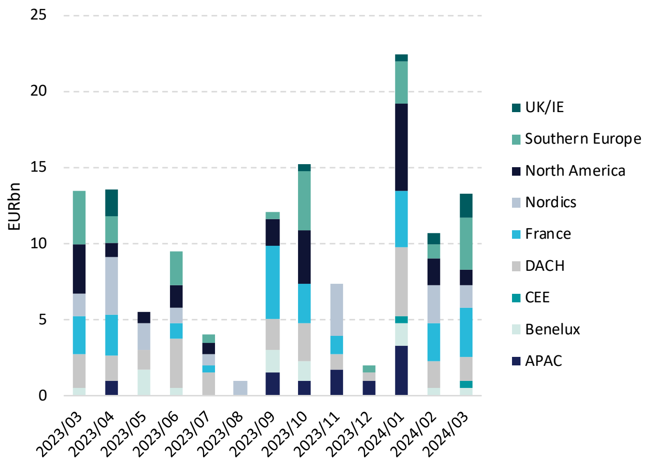
EUR benchmark issue volume by year



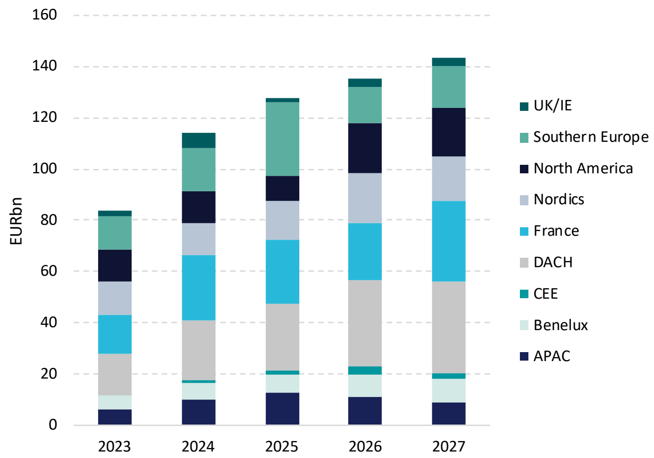
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

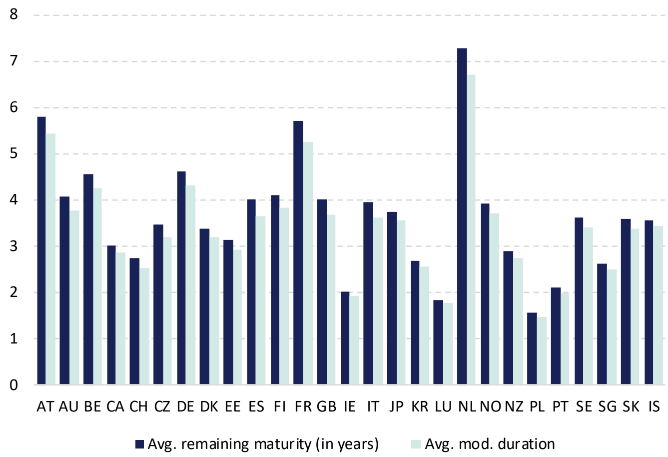
EUR benchmark maturities by month



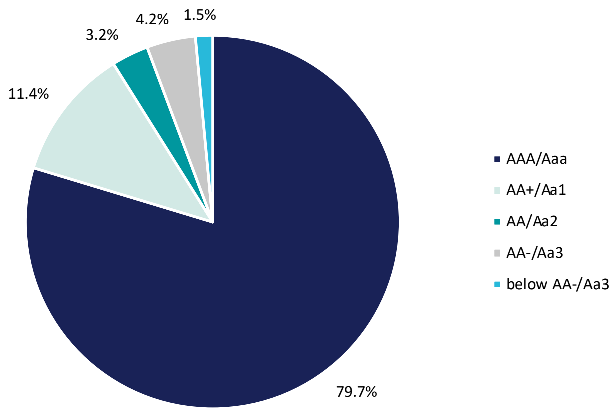
EUR benchmark maturities by year



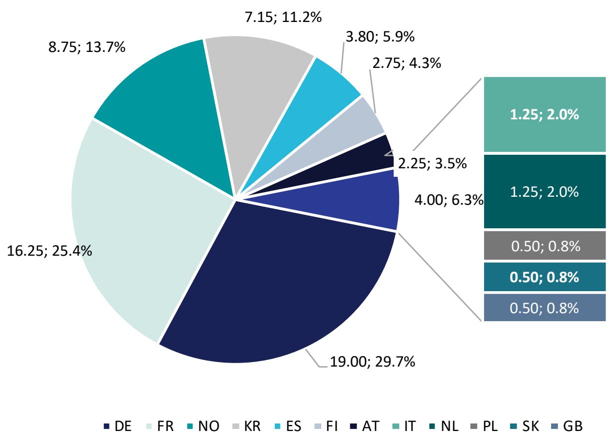
Modified duration and time to maturity by country



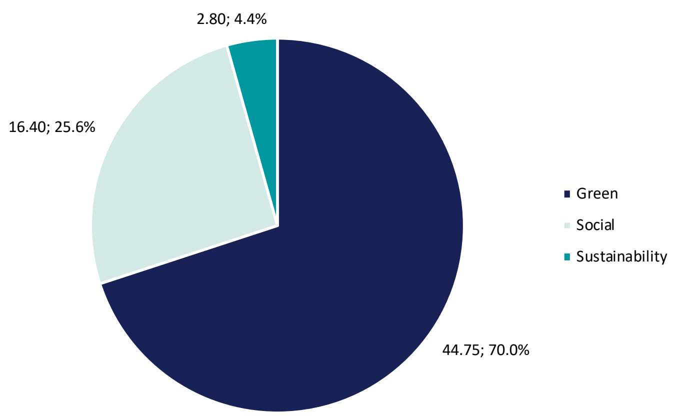
Rating distribution (volume weighted)



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



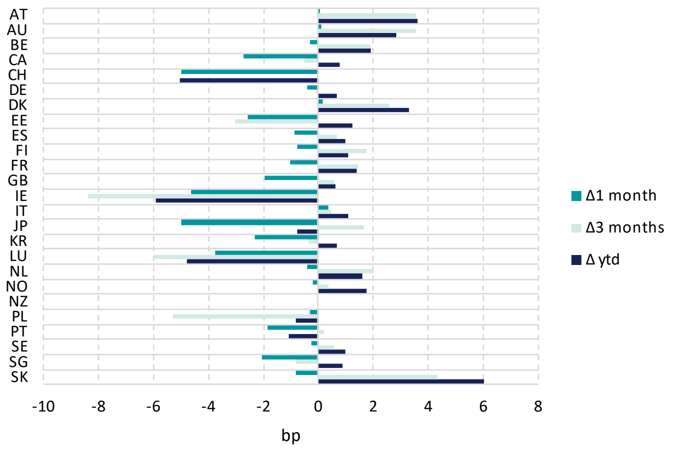
EUR benchmark volume (ESG) by type (in EURbn)



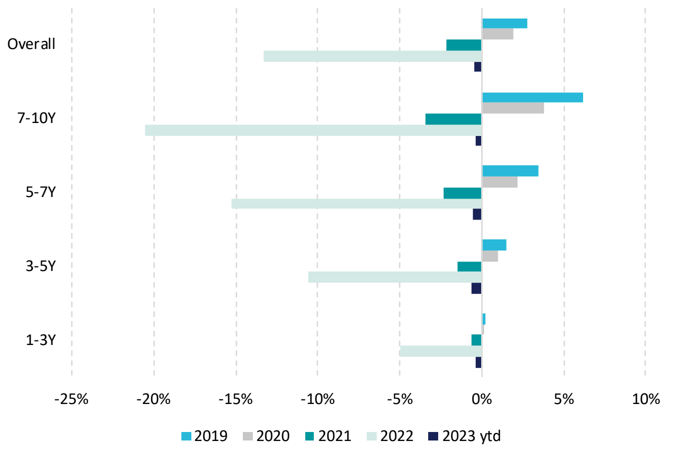
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

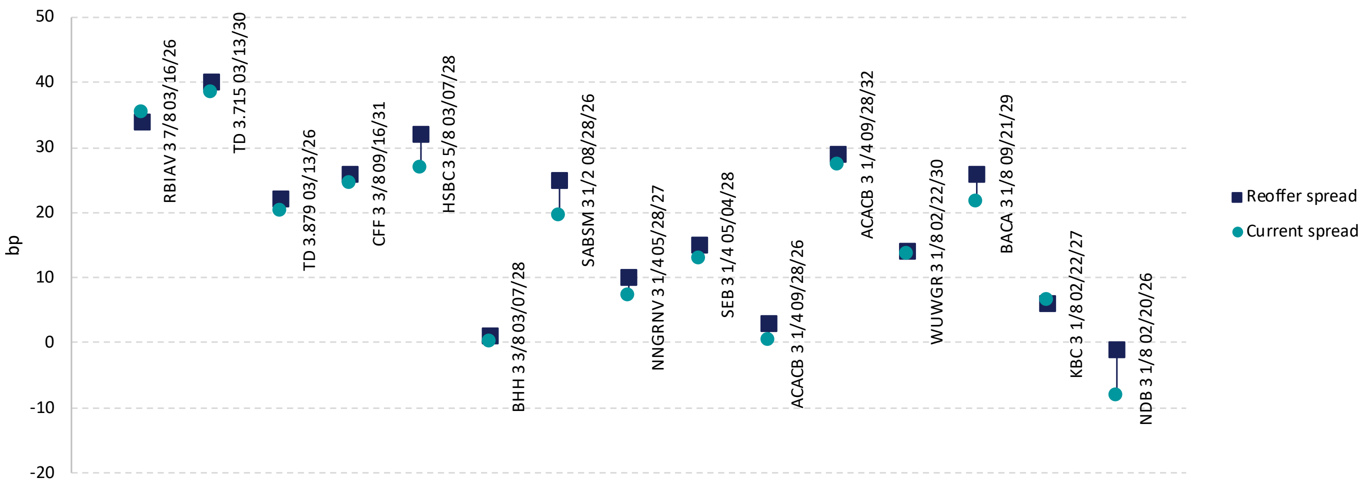
Spread development by country



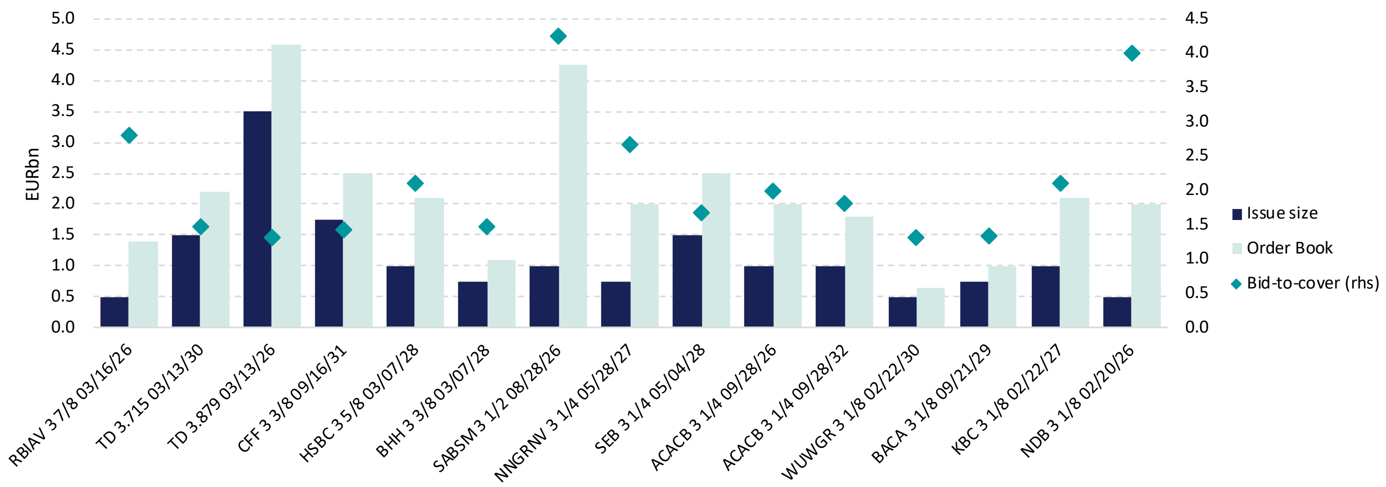
Covered bond performance (Total return)



Spread development (last 15 issues)



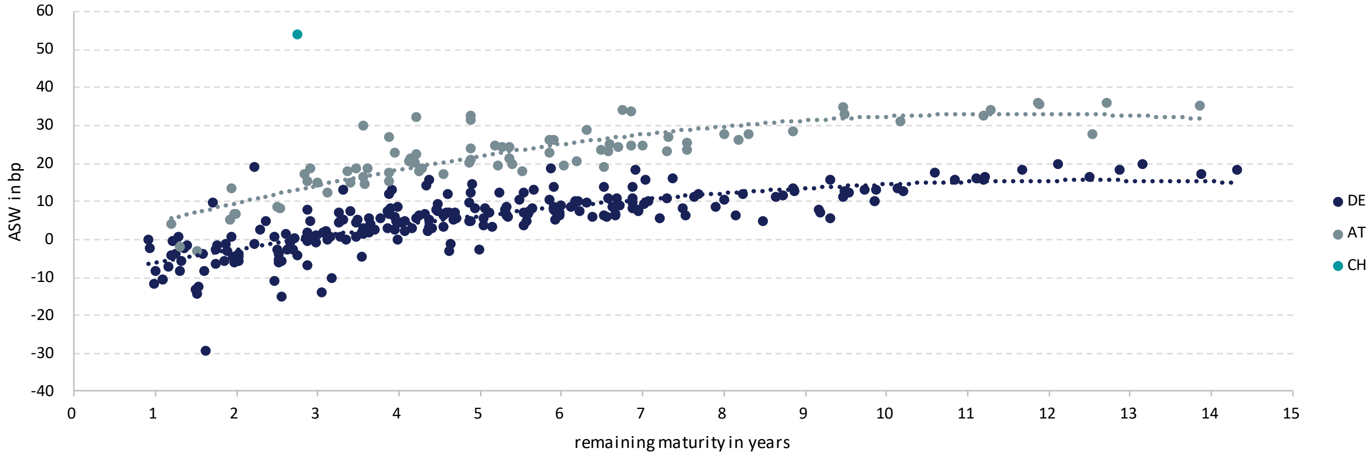
Order books (last 15 issues)



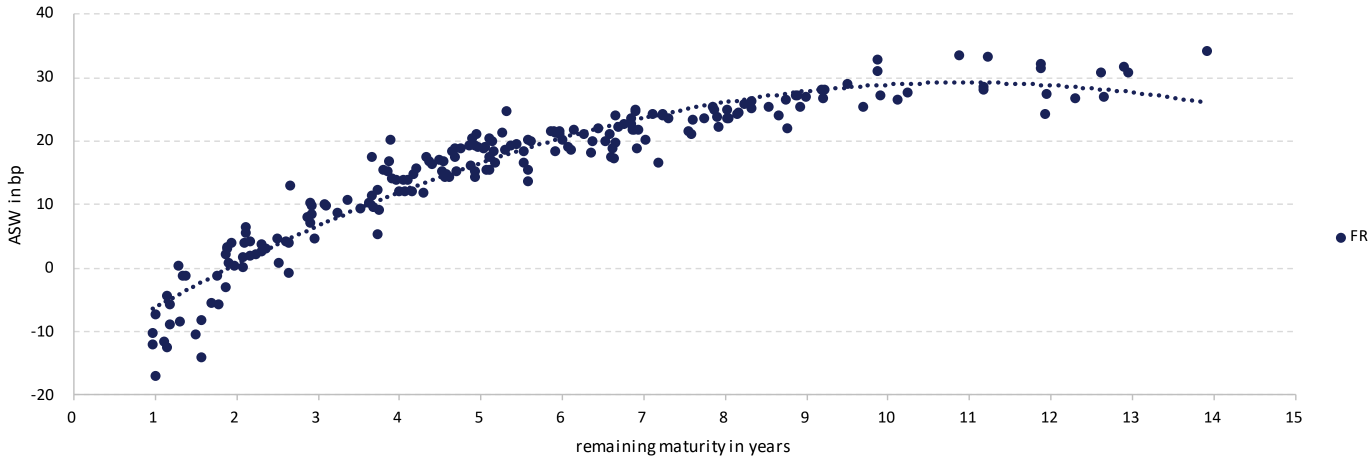
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread overview[1]

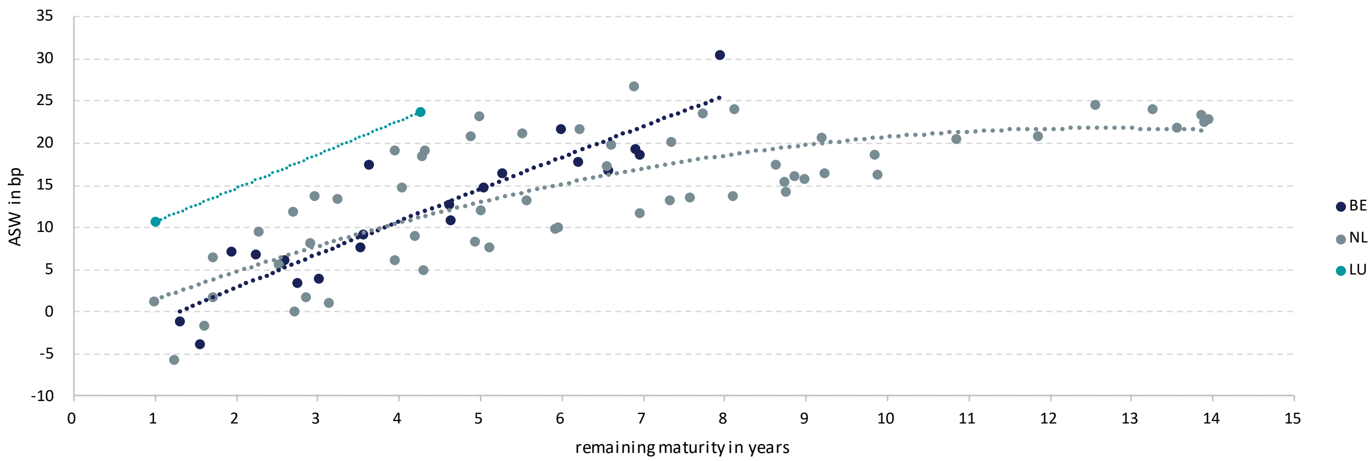
DACH



France

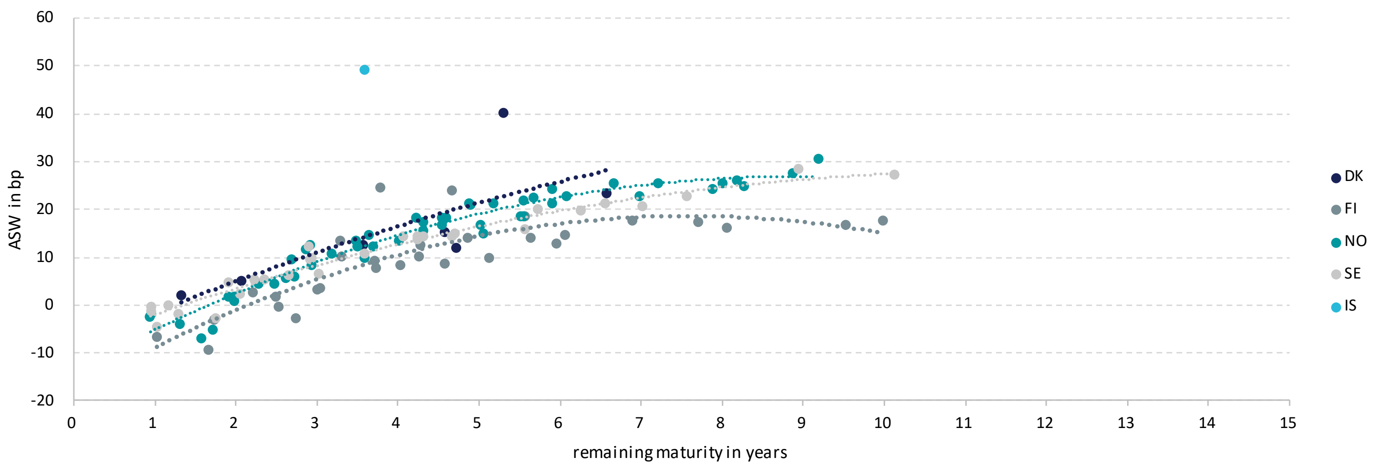


Benelux

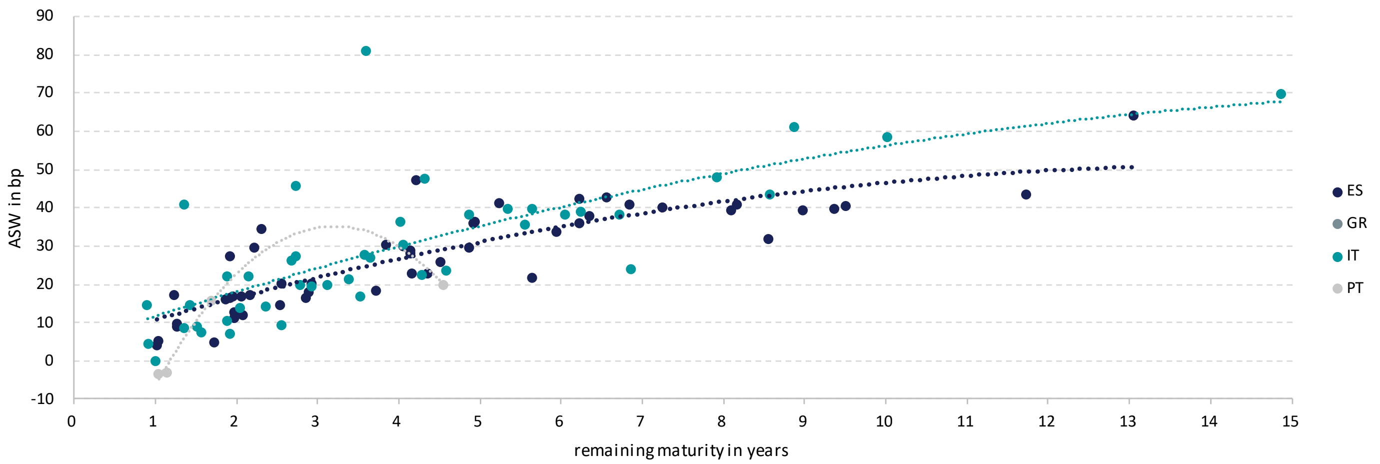


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

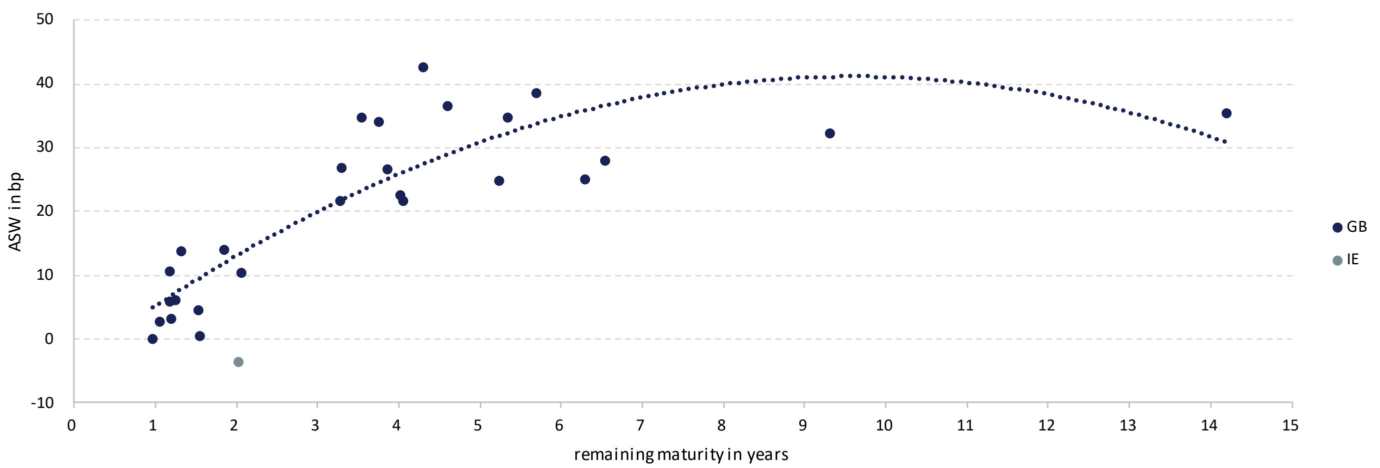
Nordics



Southern Europe

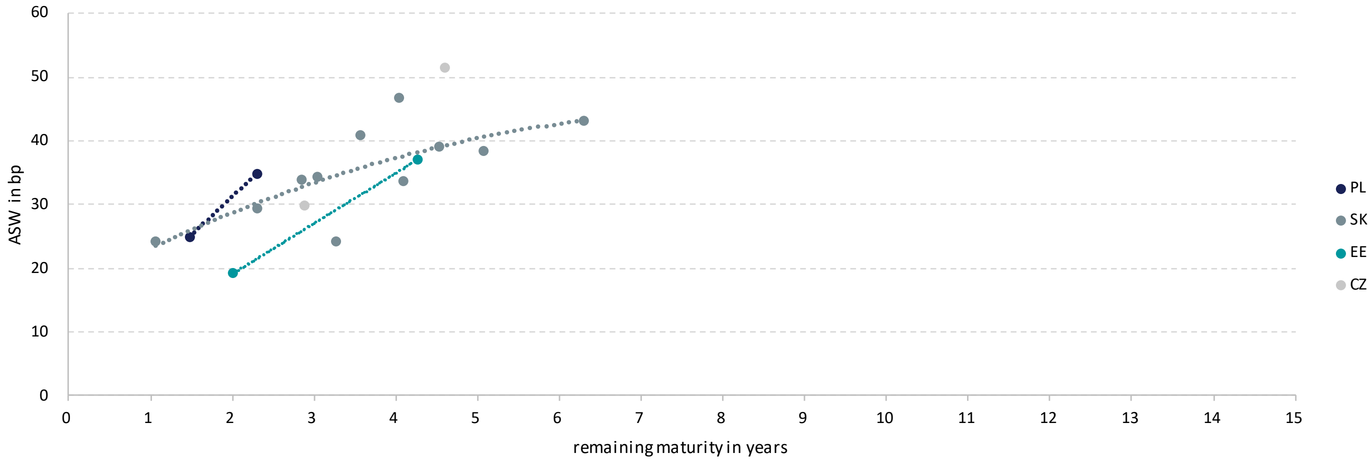


UK/IE

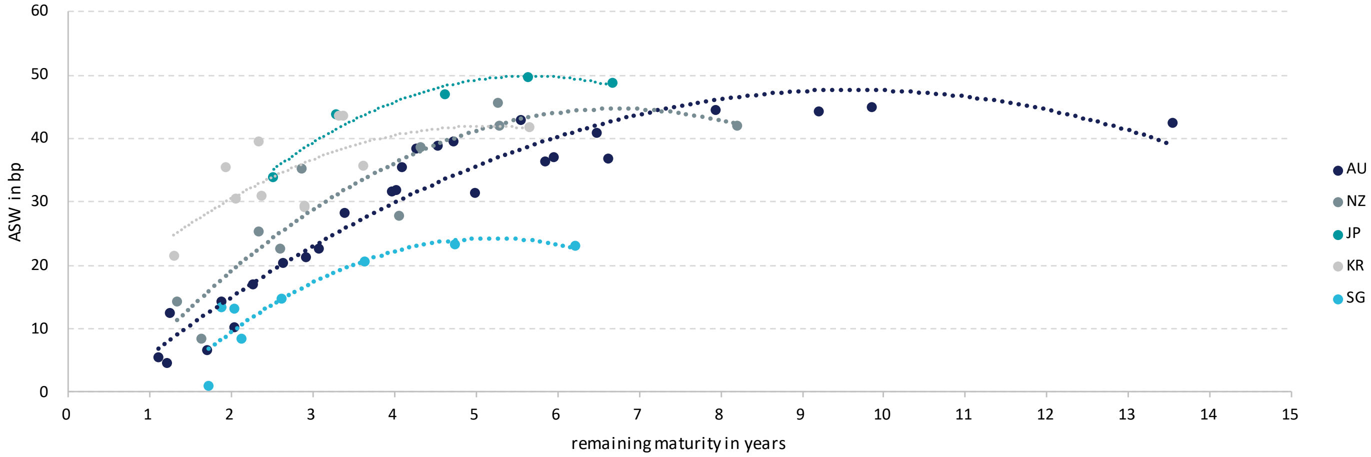


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

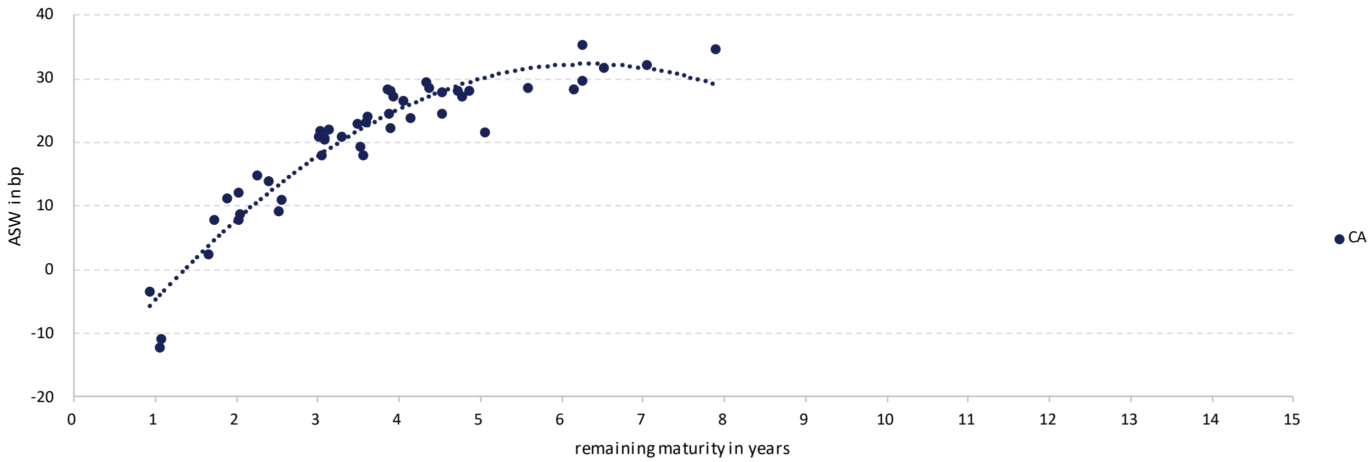
CEE



APAC



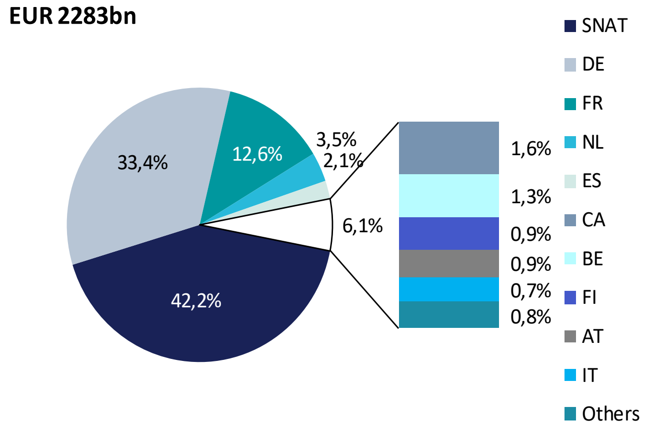
North America



Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
SSA/Public Issuers

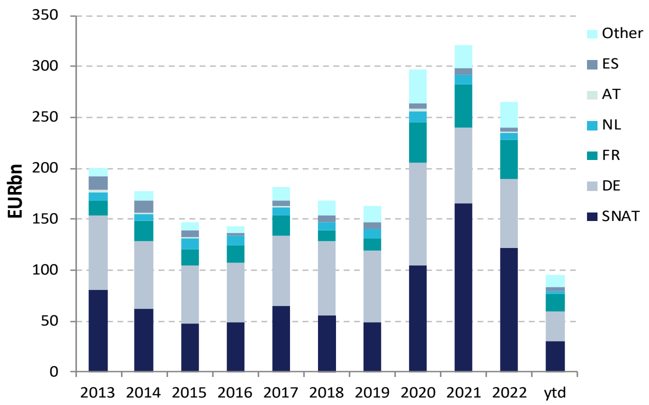
Outstanding volume (bmk)



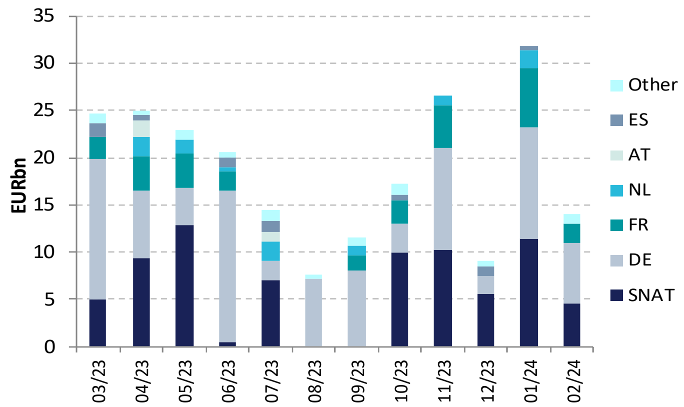
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	964,4	226	4,3	8,0
DE	762,8	566	1,3	6,3
FR	288,1	190	1,5	6,1
NL	79,2	70	1,1	6,5
ES	48,9	65	0,8	4,6
CA	35,5	25	1,4	4,5
BE	29,5	33	0,9	11,5
FI	21,2	24	0,9	5,2
AT	19,6	22	0,9	4,3
IT	15,5	20	0,8	4,7

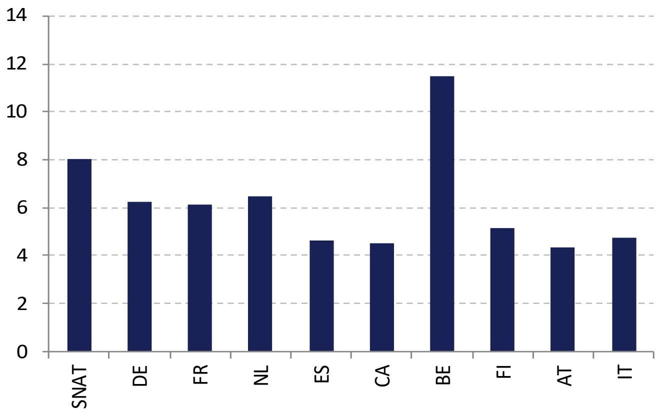
Issue volume by year (bmk)



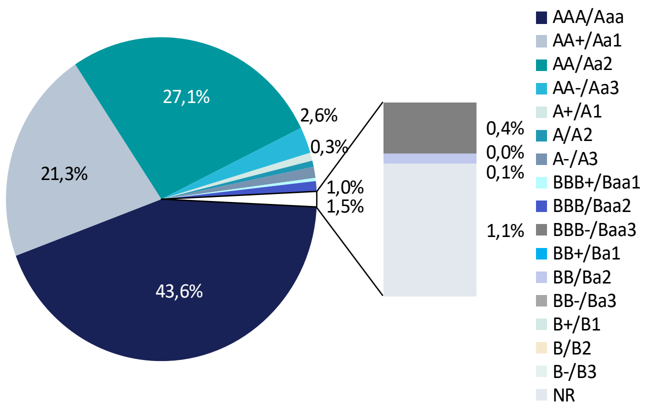
Maturities next 12 months (bmk)



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

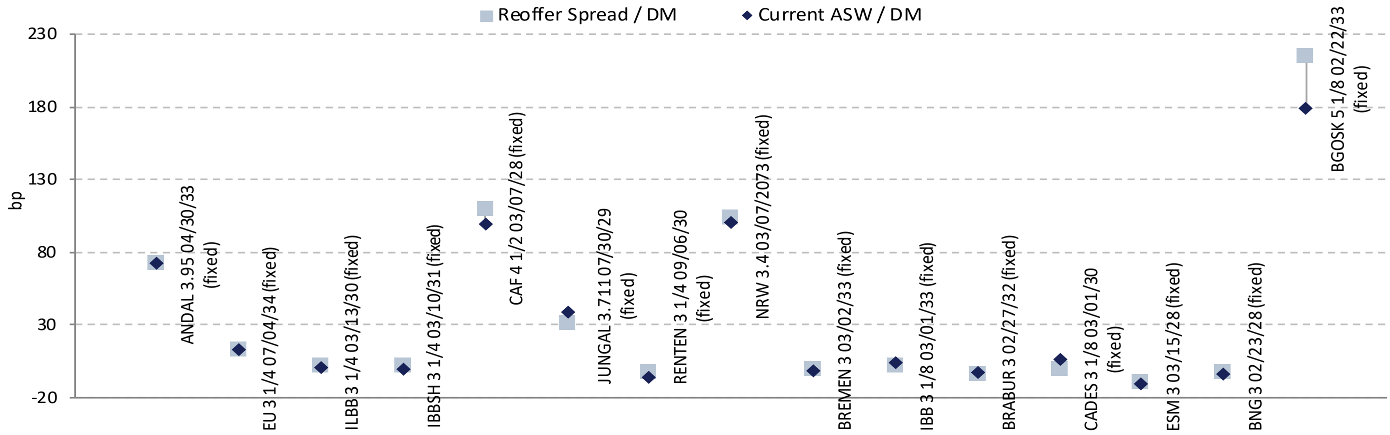


Rating distribution (vol. weighted)

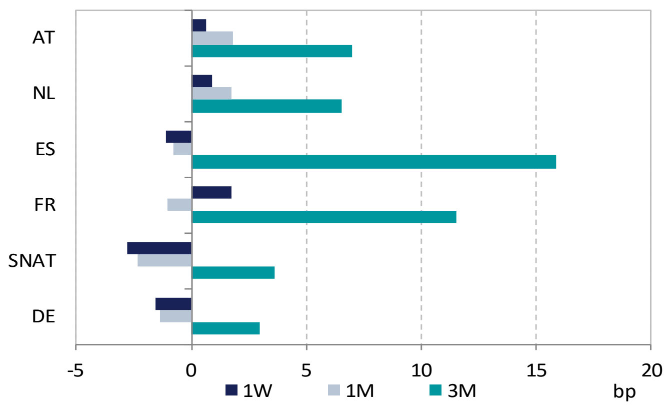


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

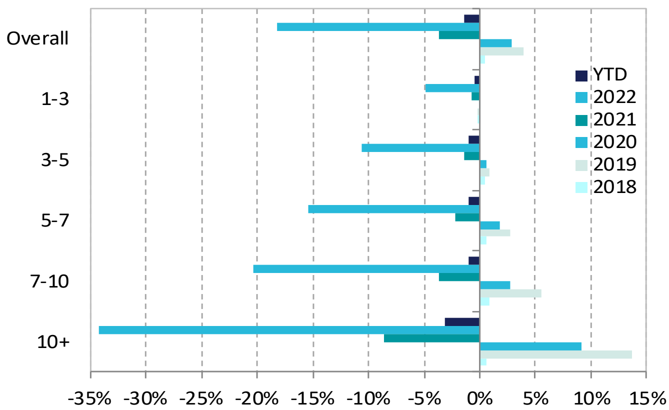
Spread development (last 15 issues)



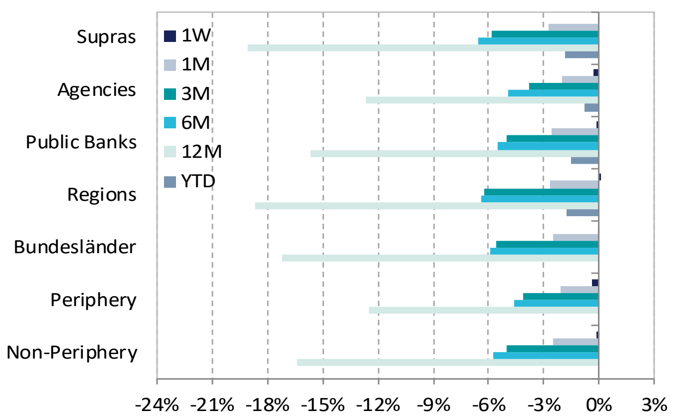
Spread development by country



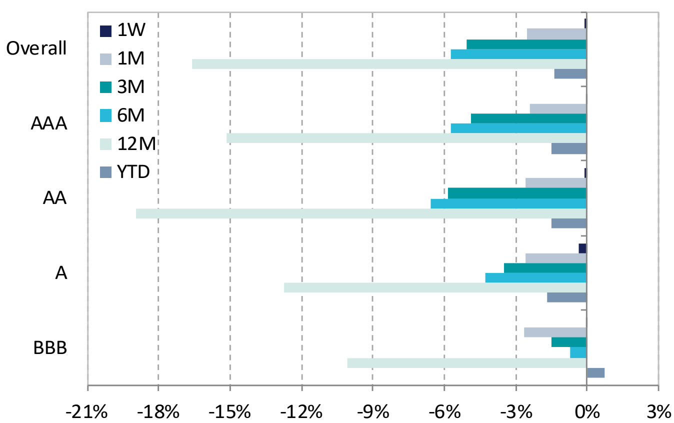
Performance (total return)



Performance (total return) by segments

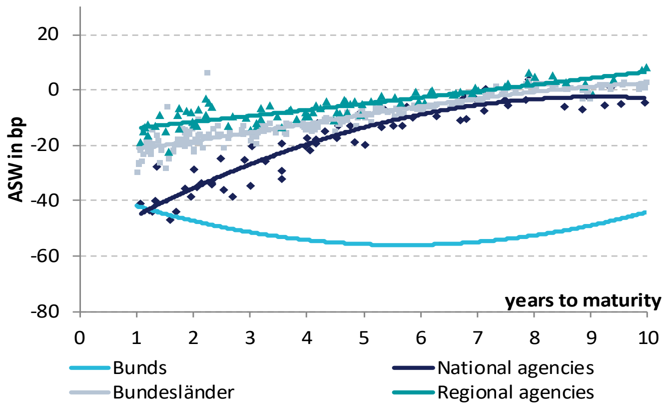


Performance (total return) by rating

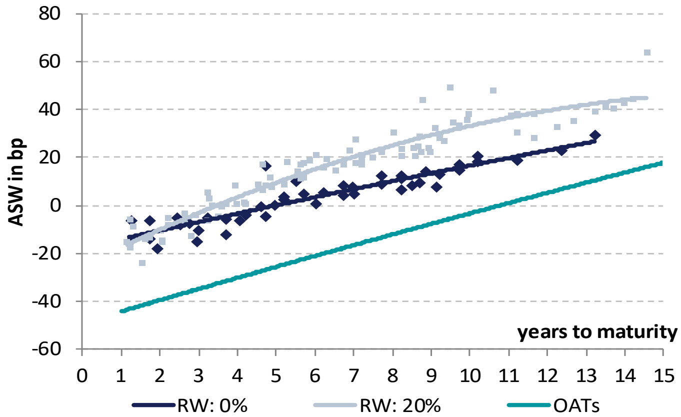


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

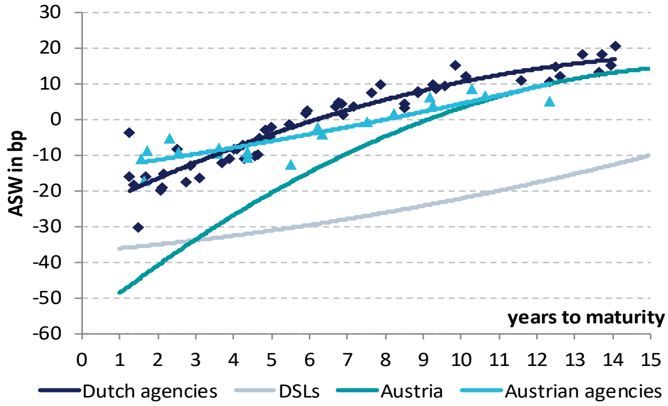
Germany (by segments)



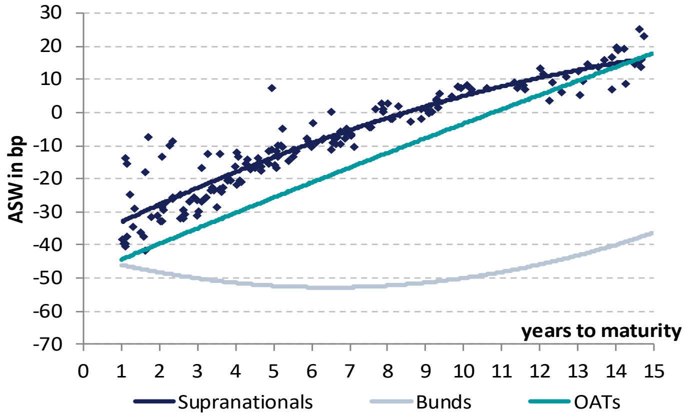
France (by risk weight)



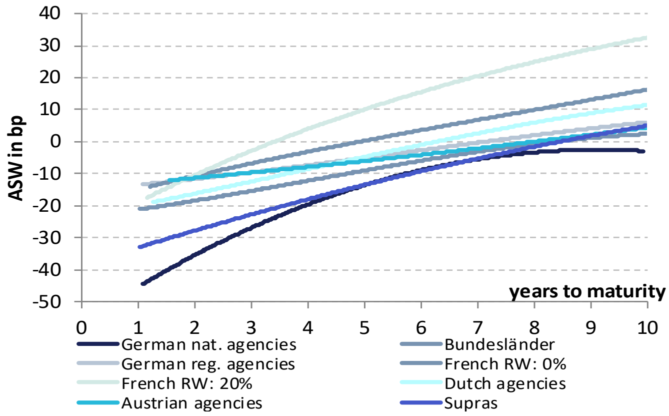
Netherlands & Austria



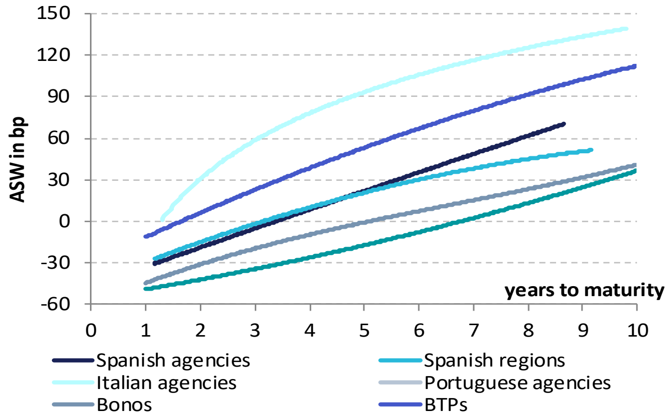
Supranationals



Core



Periphery



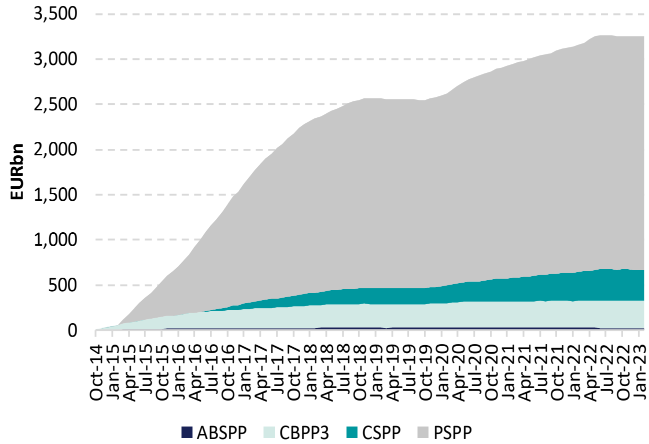
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

ECB tracker

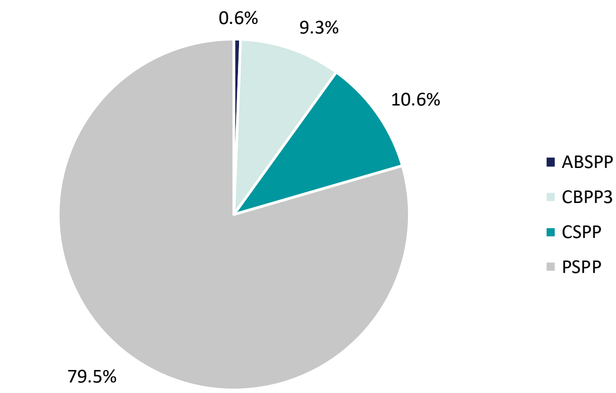
Asset Purchase Programme (APP)

	ABSPP	CBPP3	CSPP	PSPP	APP
Jan-23	20,829	303,269	344,010	2,584,798	3,252,906
Feb-23	20,191	302,677	344,102	2,584,935	3,251,905
Δ	-638	-592	+92	+137	-1,001

Portfolio development

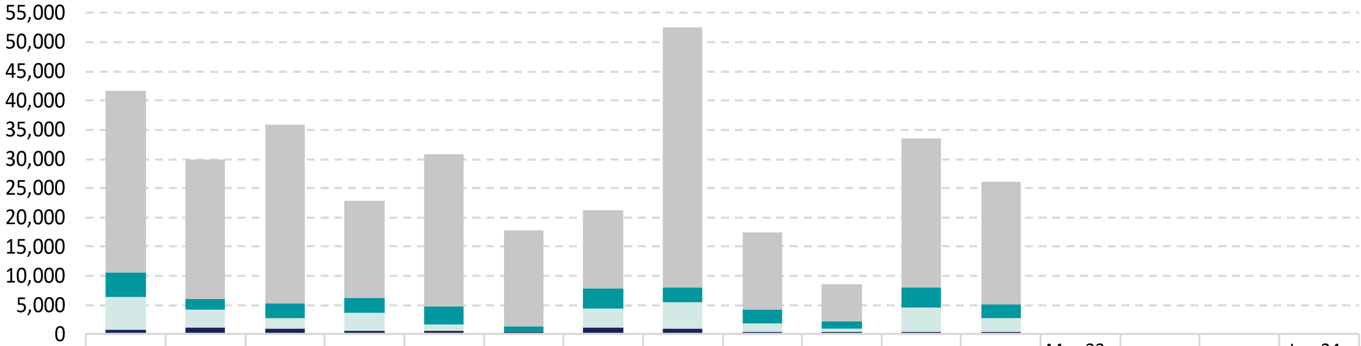


Portfolio structure



Source: ECB, NORD/LB Markets Strategy & Floor Research

Expected monthly redemptions (in EURm)

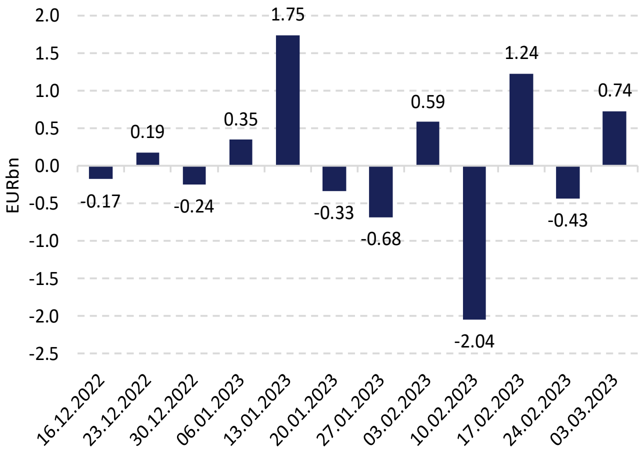


	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-23 - Feb-24	2022	2023	Jan-24 - Feb-24
APP	41,620	29,968	35,912	22,863	30,887	17,856	21,217	52,596	17,507	8,556	33,467	26,100	338,549	299,142	331,104	331,104
PSPP	31,061	23,858	30,558	16,619	26,130	16,445	13,351	44,559	13,255	6,336	25,524	21,013	268,709	228,585	255,266	255,266
CSPP	4,219	1,965	2,579	2,557	3,038	986	3,377	2,616	2,393	1,336	3,357	2,282	30,705	17,670	30,428	30,428
CBPP3	5,631	2,937	1,874	3,112	1,170	0	3,346	4,465	1,351	408	4,109	2,447	30,850	41,244	35,145	35,145
ABSPP	709	1,208	901	575	549	425	1,143	956	508	476	477	358	8,285	11,643	10,265	10,265

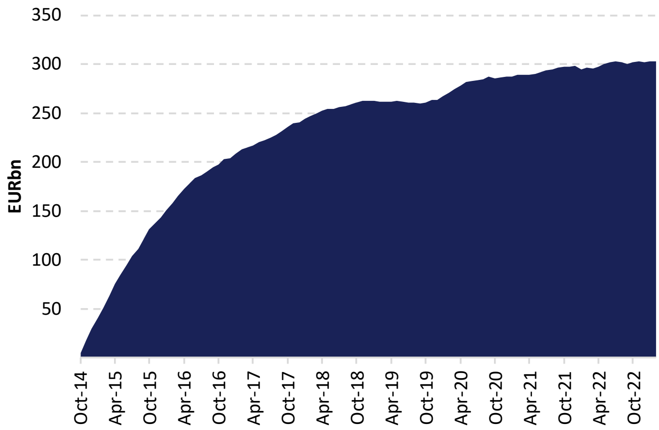
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

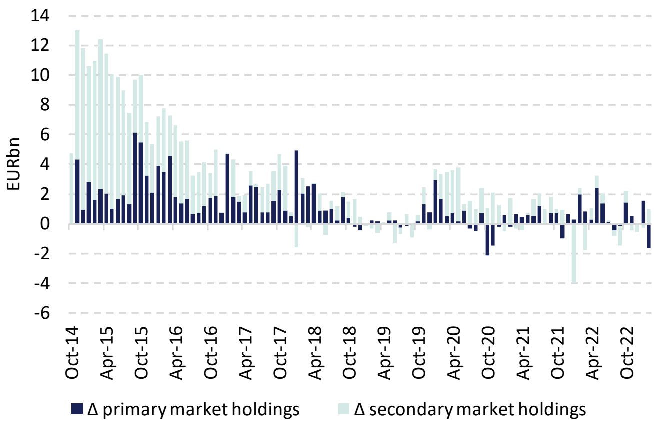
Weekly purchases



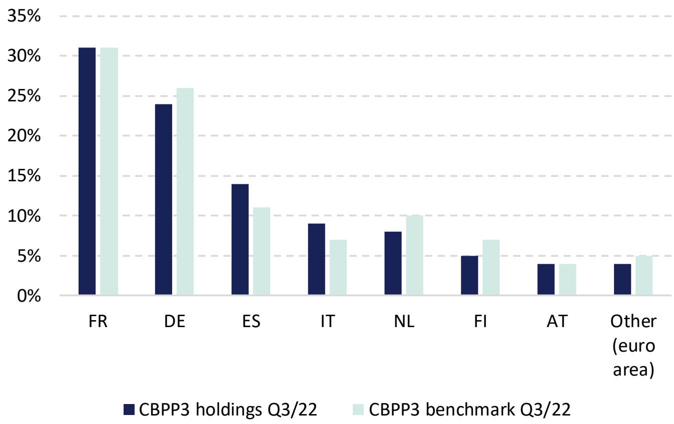
Development of CBPP3 volume



Change of primary and secondary market holdings

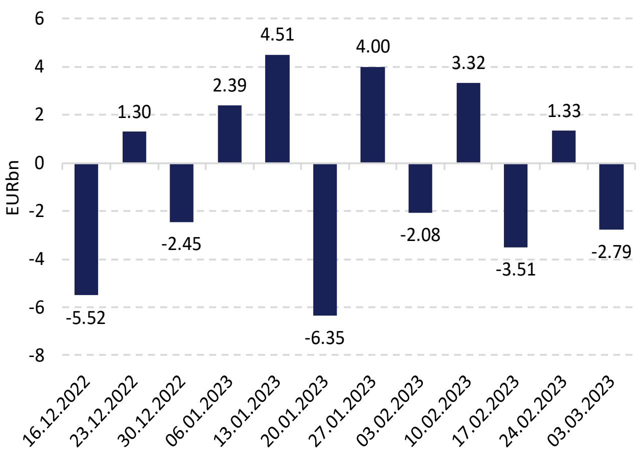


Distribution of CBPP3 by country of risk

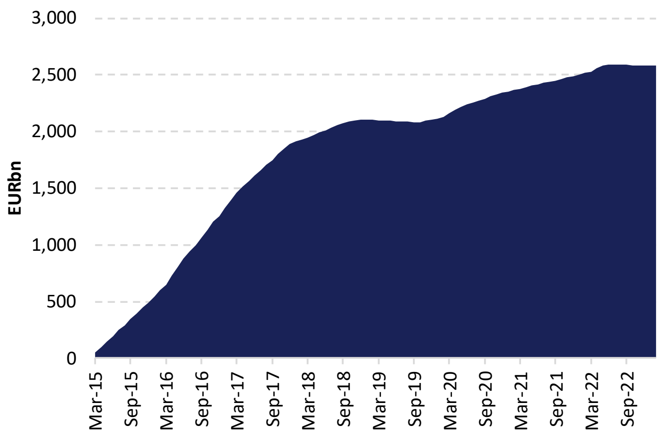


Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume

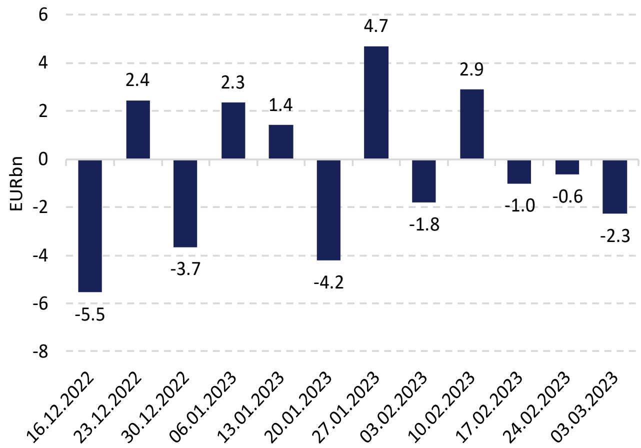


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

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	44,037	-671	2.6%	2.7%	0.0%	7.5	7.4
BE	55,795	-698	3.3%	3.4%	0.1%	6.3	9.3
CY	2,493	4	0.2%	0.2%	0.0%	8.3	8.1
DE	398,297	2,551	23.7%	24.0%	0.3%	6.7	6.9
EE	256	0	0.3%	0.0%	-0.2%	7.4	8.0
ES	193,376	-1,418	10.7%	11.6%	0.9%	7.4	7.3
FI	26,953	-173	1.7%	1.6%	0.0%	7.4	7.5
FR	301,844	14	18.4%	18.2%	-0.2%	7.6	7.8
GR	37,760	729	2.2%	2.3%	0.0%	8.5	9.4
IE	25,998	-503	1.5%	1.6%	0.0%	8.8	10.2
IT	287,658	-794	15.3%	17.3%	2.0%	7.2	6.9
LT	3,256	14	0.5%	0.2%	-0.3%	9.5	9.1
LU	1,922	19	0.3%	0.1%	-0.2%	5.9	6.5
LV	1,911	0	0.4%	0.1%	-0.2%	7.9	7.4
MT	607	1	0.1%	0.0%	-0.1%	10.4	8.6
NL	83,388	1,689	5.3%	5.0%	-0.3%	7.7	8.7
PT	33,909	-1,068	2.1%	2.0%	-0.1%	6.8	7.3
SI	6,627	19	0.4%	0.4%	0.0%	8.5	9.4
SK	8,031	0	1.0%	0.5%	-0.5%	8.1	8.2
SNAT	147,088	0	10.0%	8.9%	-1.1%	10.2	8.8
Total / Avg.	**1,661,205**	**-281**	**100.0%**	**100.0%**	**0.0%**	**7.5**	**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 Markets Strategy & Floor Research

Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
08/2023 ♦ 01 March	▪ The covered bond market and the ECB: a gradual farewell? ▪ Beyond Bundeslaender: Focus on Greater Paris (IDF and VDP)
07/2023 ♦ 22 February	▪ The Italian market for EUR benchmark covered bonds ▪ European supranationals – an overview
06/2023 ♦ 15 February	▪ Maturity premiums on covered bonds ▪ Development of the German property market ▪ Spotlight on the EU: a mega issuer spawned by the crisis
05/2023 ♦ 08 February	▪ January 2023: record start to the new covered bond year ▪ SSA monthly review: dynamic issuance activity to kick off the new year
04/2023 ♦ 01 February	▪ Focus on covered bond jurisdictions: Canada in the spotlight ▪ Focus on covered bond jurisdictions: Slovakia and Czech Republic in the spotlight ▪ 26th meeting of the Stability Council (December 2022)
03/2023 ♦ 25 January	▪ ECB preview: all eyes and ears on the press conference ▪ Successful start to the year for EUR sub-benchmarks as well ▪ ESG covered bonds from France: La Banque Postale SFH issues inaugural social covered bond
02/2023 ♦ 18 January	▪ Focus on covered bond jurisdictions: Belgium in the spotlight ▪ The Moody's covered bond universe: an overview ▪ Beyond Bundeslaender: focus on Belgian issuers
01/2023 ♦ 11 January	▪ ECB review: 2022 entailed all manner of monetary policy action ▪ Covered Bonds Annual Review 2022 ▪ SSA: Annual review of 2022
39/2022 ♦ 14 December	▪ Our view of the covered bond market heading into 2023 ▪ SSA outlook 2023: ECB, NGEU and the debt brake in Germany
38/2022 ♦ 07 December	▪ ECB preview – next hike but total assets (finally) reduced?! ▪ Covered bond jurisdictions in the spotlight: a look at Spain
37/2022 ♦ 30 November	▪ Transparency requirements §28 PfandBG Q3 2022 ▪ ECB repo collateral rules and their implications for Supranationals & Agencies
36/2022 ♦ 23 November	▪ ESG covered bonds - another record year ▪ Current LCR classifications for our SSA coverage
35/2022 ♦ 16 November	▪ Covered bond jurisdictions in the spotlight: a look at Austria ▪ Development of the German property market ▪ EIB goes Blockchain… again!
34/2022 ♦ 09 November	▪ Covered bond jurisdictions in the spotlight: a look at Norway ▪ Tenth edition of the NORD/LB Issuer Guide Covered Bonds ▪ SSA primary stats ytd before the final sprint

Appendix
Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2022

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 Q3/2022 (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

Issuer Guide – German Laender 2022

Issuer Guide – German Agencies 2022

Issuer Guide – Dutch Agencies 2022

Beyond Bundeslaender: Belgium

Beyond Bundeslaender: Greater Paris (IDF/VDP)

Spotlight on Spanish regions (Update planned in 2023)

Fixed Income Specials:

ESG-Update 2022

ECB interest rate decision: Roadmap to QT

ECB: The Wishing-Table, the Gold-Ass, and the Cudgel in the Sack

ECB interest rate decision: delivered as expected?

ECB acts as the 'House of Hikes' – or: Winter is coming!

Appendix
Contacts at NORD/LB

Markets Strategy & Floor Research

Dr Frederik Kunze
Covered Bonds/Banks

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

Melanie Kiene
Covered Bonds/Banks

+49 172 169 2633
melanie.kiene@nordlb.de

Stefan Rahaus
Covered Bonds/Banks

+49 172 6086 438
stefan.rahaus@nordlb.de

Dr Norman Rudschuck
SSA/Public Issuers

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

Jan-Phillipp Hensing
SSA/Public Issuers

+49 172 425 2877
jan-phillipp.hensing@nordlb.de

Sales

Institutional Sales	+49 511 9818-9440
Sales Sparkassen & Regionalbanken	+49 511 9818-9400
Sales MM/FX	+49 511 9818-9460
Sales 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 Markets Strategy & 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, 08 March 2023 (08:52)