



Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research



Agenda

| Covered Bonds | 3 |
|--|----|
| SSA/Public Issuers | 9 |
| Covered bond market remains on the growth path: OLB looks set to join the ranks of EUR benchmark issuers | 13 |
| NORD/LB Issuer Guide German Laender 2023 published | 17 |
| Charts & Figures | |
| Covered Bonds | 20 |
| SSA/Public Issuers | 26 |
| ECB tracker | |
| Asset Purchase Programme (APP) | 29 |
| Pandemic Emergency Purchase Programme (PEPP) | 31 |
| Overview of latest Covered Bond & SSA View editions | 32 |
| Publication overview | 33 |
| Contacts at NORD/LB | 34 |

Floor analysts:

Covered Bonds/Banks SSA/Public Issuers
Dr Frederik Kunze Dr Norman Rudschuck, CIIA

<u>frederik.kunze@nordlb.de</u> <u>norman.rudschuck@nordlb.de</u>

Melanie Kiene, CIIA Christian Ilchmann

melanie.kiene@nordlb.de christian.ilchmann@nordlb.de

Stefan Rahaus stefan.rahaus@nordlb.de

NORD/LB:NORD/LB:NORD/LB:Bloomberg:Markets Strategy & Floor ResearchCovered Bond ResearchSSA/Public Issuer ResearchRESP NRDR <GO>



Market overview Covered Bonds

Authors: Dr Frederik Kunze // Stefan Rahaus

Primary market I: lively restart after the summer break

The primary market for covered bonds in EUR benchmark format returns from the summer break with a quite remarkable volume. In total, 19 covered bonds amounting to EUR 16.1bn overall have been placed with investors since 16 August 2023 after an issuing pause of almost four weeks. As in previous years, Berlin Hyp (ticker: BHH) was the first issuer to return to the market after the summer recess, issuing a EUR 500m Pfandbrief with an order book of EUR 1.6bn at a spread of ms +6bp for five years. We would also like to highlight the triple tranche of Toronto-Dominion Bank (TD). The institution went to market on 29 August with two fixed-rate bonds (3.0y and 8.0y) and a three-year floater. We mention the floating-rate bond here for information purposes, but do not expect it to be included in the iBoxx EUR Covered benchmark index. TD placed a final total of EUR 3.25bn, having already placed a volume of EUR 5.0bn with investors in March of this year with a dual tranche (3.0y and 7.0y). In the spring, ms +22bp was paid for the three-year term, while the Canadian issuer has had to pay ms +28bp for the current three-year tranche. This change is indicative of the spread trend so far this year. From our perspective, it is also worth mentioning that for some deals placed in the last few days, the final spread has not narrowed compared with initial guidance. Issuers here include, for example, Volksbank Wien (ticker: VOWIBA; ms+37bp; 4.5y), Münchener Hypo (MUNHYP; ms +3bp; 2.9y) and Santander Totta (SANTAN; ms +40bp; 3.0y). At ms +73bp for a term of five years, the highest spread was paid by Vseobecna Uverova Banka (VUB Banka). The Aa1-rated covered bond from Slovakia therefore featured a yield at issue of 3.927%. Of the 19 transactions since mid-July, only three posted a bid-to-cover ratio greater than 2.0x - BHH and DZ HYP in mid-August and Clydesdale Bank/Virgin Money (VMUKLN) in the fourth week of August. We calculate new issue premiums to be between two and fifteen basis points and, at a simple average of +6.8bp, they are also slightly above the level of the two months prior to the summer break (+6.5bp). Certain saturation effects are evidently noticeable in the primary market for covered bonds in EUR benchmark format, which we put down not least to the high issuance volume (EUR 157.8bn by the end of August 2023), which exceeds the same period of the previous year (EUR 138.3bn) by EUR 19.5bn or 14.1%. We also expect dynamic primary market business in the coming weeks and (for the time being) continue to stick to our issuance forecast of EUR 193.5bn (which has been in place since the beginning of the year). Should favourable market conditions prevail in late autumn, we see the possibility of this amount being even higher or perhaps even exceeding the EUR 200bn threshold due to potential pre-funding activities.



| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|-------------------------|---------|--------|--------------|----------|--------|----------|---------------|-----|
| Santander Totta | PT | 04.09. | PTBSPCOM0006 | 3.0y | 0.85bn | ms +40bp | AA- / Aa2 / - | - |
| BPCE SFH | FR | 04.09. | FR001400KLW9 | 5.5y | 1.00bn | ms +29bp | - / Aaa / AAA | - |
| Münchener Hypo | DE | 30.08. | DE000MHB36J8 | 2.9y | 0.50bn | ms +3bp | - / Aaa / - | - |
| TD | CA | 29.08. | XS2676779304 | 8.0y | 1.00bn | ms +52bp | AAA / Aaa / - | - |
| TD | CA | 29.08. | XS2676778835 | 3.0y | 1.50bn | ms +28bp | AAA / Aaa / - | - |
| Volksbank Wien | AT | 29.08. | AT000B122197 | 4.5y | 0.50bn | ms +37bp | - / Aaa / - | - |
| CA Home Loan SFH | FR | 24.08. | FR001400KFO8 | 5.0y | 1.25bn | ms +24bp | -/-/AAA | - |
| Hypo NÖ Wien | AT | 24.08. | AT0000A36WE5 | 2.5y | 0.50bn | ms +18bp | -/Aa1/- | - |
| VUB Banka | SK | 24.08. | SK4000023685 | 5.0y | 0.50bn | ms +73bp | -/Aa1/- | - |
| Nordea | FI | 23.08. | XS2673972795 | 3.0y | 1.00bn | ms +5bp | - / Aaa / - | Х |
| Virgin Money/Clydesdale | GB | 22.08. | XS2641928382 | 5.0y | 0.50bn | ms +50bp | AAA / Aaa / - | - |
| Danske | FI | 22.08. | XS2673564832 | 5.4y | 1.00bn | ms +26bp | - / Aaa / - | - |
| Helaba | DE | 22.08. | XS2673929944 | 4.3y | 1.00bn | ms +6bp | AAA / Aaa / - | - |
| Slovenska Sporitelna | SK | 22.08. | SK4000023636 | 4.1y | 0.50bn | ms +53bp | - / Aaa / - | - |
| Commerzbank | DE | 21.08. | DE000CZ43Z72 | 5.0y | 1.25bn | ms +14bp | - / Aaa / - | - |
| CBA | AU | 21.08. | XS2673140633 | 4.0y | 1.50bn | ms +35bp | AAA / Aaa / - | - |
| DZ HYP | DE | 17.08. | DE000A351XK8 | 4.4y | 0.50bn | ms +4bp | - / Aaa / AAA | Χ |
| Berlin Hyp | DE | 16.08. | DE000BHY0SC8 | 5.0y | 0.50bn | ms +6bp | - / Aaa / - | Χ |

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

Primary market II: EUR sub-benchmark segment has also come to life

Up to yesterday (Tuesday 05.09.), we have seen 19 transactions in the primary market for EUR sub-benchmarks with a total volume of EUR 5.2bn this year, although we have only observed two new issues since May 2023 (Natixis Pfandbriefbank; ticker: KNFP in early June and Landesbank Berlin; ticker: LBBER in mid-July). Yesterday, two issuers entered the trading floor at the same time. Italy's Banco Desio (BANDES), which already has two benchmarks outstanding and was last in the market in 2019, went to market with initial guidance of ms +80bp area (4.5y). Ultimately, a total of EUR 400m was placed at ms +75bp. Landesbank Berlin (LBBER), which currently has nine Pfandbriefe with a total volume of EUR 2.4bn outstanding in the EUR sub-benchmark segment and was active on the primary market three times in 2022, approached its investors again in mid-July. This deal came hot on the heels of the bank's first market appearance in 2023. A total of EUR 250m (5.5y) was issued at a final spread of ms +17bp, which did not narrow compared with the initial guidance.

Secondary market: primary market impacts spreads

Dynamic primary market activity is now also leaving its mark on spreads on the secondary market. Since our last publication in mid-July, the market has widened by one to five basis points, with long maturities significantly underperforming. Obviously, traders still see demand for new deals in this maturity segment, which requires a high premium over outstanding bonds, as so far only one of the 19 covered bonds issued since the summer break has had a maturity in excess of 5.5 years. In contrast to the spring, announcements of new issues are already lowering the prices of outstanding covered bonds quite quickly. Nevertheless, we should by now have seen the majority of the spread widening we expected.



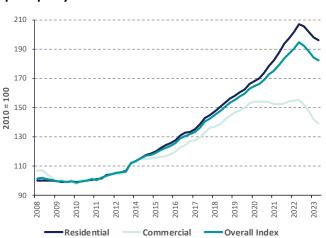
Deutsche Hypo Real Estate Economic Index recovers slightly

After the Deutsche Hypo Real Estate Economic Index had fallen to its lowest level since the financial crisis of 2008/09 in the previous month, the overall index recovered slightly in August, rising by 11.2% from 64.3 points to its current level of 71.5 points. The index continues to hover around the lows from 2020, a far cry from the 110-150 points in the years 2011 to 2019. Peter Kleinhütten, Head of the Düsseldorf office, predicts that the situation will remain tense and sees the market picking up again in the second quarter of 2024 at the earliest. A look at the sub-indices reveals some interesting developments: the logistics climate, a clear winner from the Covid-19 crisis, has fallen behind the residential climate, which now takes the top spot. The office climate is now quoted at the levels of the trading climate close to the lows of the past 13 years, while the hotel climate remains robust. Despite the downward movement of the index in recent years, we do not consider the value of assets in the cover pools of German Pfandbrief issuers to be at risk and stand by our assessment that there is currently no acute danger of rating downgrades.

Deutsche Hypo Real Estate Economic Index

Index value

vdp Property Price Index



Source: Deutsche Hypo, bulwiengesa, vdp, NORD/LB Markets Strategy & Floor Research

vdp Property Price Index continues to decline, momentum weakens

The Association of German Pfandbrief Banks (vdp) also published current figures on its property price index on 10 August 2023. Accordingly, the overall index fell by -1.1% Q/Q to 182.4 points in Q2 2023. Compared with the previous year, this corresponds to a decline of -6.4%. The decline in residential property prices (-0.9% Q/Q; -5.4% Y/Y) was significantly lower than that for commercial property (-2.0% Q/Q; -10.3% Y/Y). Increasing rents under new contracts (+0.9% Q/Q; +6.2% Y/Y for multi-family houses; +1.2% Q/Q; +4.7% Y/Y for office properties and +0.9% Q/Q; -3.3% Y/Y for retail properties) combined with falling prices led to a renewed acceleration of the rise in yields measured by the property rate. Jens Tolckmitt, Chief Executive of the vdp, also assumes that price adjustments will continue "until at least the middle of next year, particularly on the commercial property market", adding that a "sideways trend is emerging in residential property prices".



vdp: credit commitments increase slightly in Q2 2023

At the end of August, the vdp also announced that the loan commitments of its member institutions had increased by +10.2% to EUR 28.2bn compared with the previous quarter. In comparison with the second quarter of 2022, however, this sum represents a decline of -38.2%. The volume of newly granted commercial real estate loans increased by +44.1% quarter on quarter to EUR 13.4bn, while new business in residential real estate loans declined by -9.2% to EUR 14.8bn. Jens Tolckmitt, Chief Executive of the vdp, sees signs that the real estate financing business may have bottomed out after two consecutive quarterly increases, but expects a sluggish recovery into 2024. The portfolio of real estate loans extended amounted to EUR 1,005.1bn at the end of the second quarter of 2023, up +1.8% year on year. We consider this to be a pleasing development overall - especially in view of the cover pools available to German Pfandbrief issuers in the future.

NORD/LB Covered Bond Specials: "Transparency requirements §28 PfandBG" and "Risk Weights and LCR Levels of Covered Bonds"

As part of our regular publications in the series of "Covered Bond Specials", we have published the latest issues of "Transparency requirements §28 PfandBG" and "Risk Weights and LCR Levels of Covered Bonds". In the former, we also aim to provide our readers with as comprehensive an overview as possible of what is happening on the Pfandbrief market. In this context, we consider both newcomers to the market – such as the recent Evangelische Bank – as well as the general increase in volume to be of interest. In the current reporting period (Q2 2023), outstanding mortgage Pfandbriefe total EUR 270.7bn, while public sector Pfandbriefe amount to EUR 104.7bn. Our publication on the risk weights and LCR levels of covered bonds provides you with an overview of the regulatory classification of the EUR benchmark issues listed in the iBoxx EUR Covered. We supplement this information with further details on maturity structures, rating classifications and the ESG credentials of the outstanding bonds.

NORD/LB Issuer Guide Covered Bonds 2023

The NORD/LB Issuer Guide Covered Bonds, which is published on a yearly basis, is part of a series of products from the NORD/LB Markets Strategy & Floor Research team covering individual issuers and market segments in the global bond market. We recently published the eleventh edition of the NORD/LB Issuer Guide Covered Bonds. As usual, the publication provides you with a comprehensive overview of the covered bond market. The focus of the Issuer Guide Covered Bonds is again on issuers of covered bonds and their respective cover pools. In 2023, the study includes information from a total of 180 banks, each with outstanding EUR benchmark and/or sub-benchmark issues. In the course of the evaluation, we compiled data from 219 cover pools from 27 jurisdictions. In 2023, the Issuer Guide Covered Bonds will again be exclusively available in PDF format. This is a decision that we have taken with sustainability aspects in mind. However, even a sustainable approach calls for some leeway: should any of our readers prefer the Issuer Guide in printed format for their work, then we will gladly supply a hard copy. Please get in touch with your NORD/LB account manager to provide a shipping address and indicate the number of copies required. Alternatively, you can also contact markets@nordlb.de.



NORD/LB Capital Markets Spotlight: Commercial Real Estate – Bow Wave or Tsunami?

The upheaval on the capital market is also accompanied by new dynamics on the real estate market. This applies above all to the commercial real estate segment. We invite you to join us in discussing this important topic. As part of our series of digital talks, "Commercial Real Estate – Bow Wave or Tsunami?" offers you the opportunity to gain valuable insights into risk assessment for CRE assets, but also the specific sub-markets of office properties as well as retail properties and multi-family houses in a compact format. In addition, we address the security aspect of green real estate financing and pose the question as to what consequences a 30% price drop on the CRE market could trigger. From 5 September to 17 October 2023, we invite you to compact sessions of 45 minutes on Tuesdays at 2 pm. If you would like to attend but have not yet received an invitation, please feel free to contact us by sending an email to markets@nordlb.de.

Finland: S-Bank announces prospect of EUR 500m covered bond debut

With six active issuers and an outstanding volume of EUR 35.8bn, Finland is undoubtedly one of the established covered bond jurisdictions in the EUR benchmark segment. With S-Bank (S-Pankki; ticker: SPANOY; issuer rating S&P: BBB with positive outlook), this submarket is obviously enjoying pleasing growth. The Finnish institute has accordingly invited investors to attend meetings focused on a prospective EUR benchmark deal with a volume of EUR 500m. (5.0y; WNG). The benchmark transaction is awarded the top AAA rating by Standard & Poor's. The issuer considers itself well prepared for its debut (cf. current investor presentation). The cover assets consist exclusively of residential mortgages, 100% of which are located in the domestic market of Finland. As at the reporting date of 30 June 2023, the cover pool totalled EUR 3,095m made up of 37,175 loans. The pool contained no non-performing loans. Also based on Finnish legislation, the issue will carry the European Covered Bond (Premium) label and will be issued as a soft bullet.

Moody's presents "Covered Bond Sector Update Q3/2023"

The risk experts at Moody's presented their "Covered Bond Sector Update Q3/2023" on 23 August. The current issue of the quarterly publication on the global covered bond market focuses on the impact of interest rate rises on the real estate markets in the various jurisdictions. It is noted here that the development of interest rates has led to a significant decline in demand on the housing market. In this context, however, the authors of the study also point out that country-specific factors – such as demographics or the supply side of the housing market – have led to varying consequences. All in all, it must be stated that the elevated mortgage rates will not only have an impact in the short term. As part of the quarterly publication, Moody's also provides a comprehensive set of data on the covered bond programmes assessed. We regularly include this information in our weekly publication and will also present a corresponding article on the "Moody's Covered Bond Universe" in the next edition of our Covered Bond & SSA View.



ECBC publishes Covered Bond Fact Book 2023 and Annual Statistics 2022

A few days ago, the European Covered Bond Council (ECBC) published the Covered Bond Fact Book 2023. The main purpose of this annual publication is to provide as comprehensive an overview as possible of the global covered bond market. In addition to regulatory developments, the focus is also on market trends such as ESG and fundamental changes in the asset class of covered bonds. As Floor Research, for example, we were involved in a survey of investor behaviour in the covered bond market (link to the article). Together with the Fact Book, the ECBC also presented the latest edition of the annual statistics on the global covered bond market. Even though the reporting date is 31 December 2022, we see a very high added value in this set of data. After all, the Covered Bond Annual Statistics cover all covered bond issues worldwide and are therefore not limited to individual jurisdictions or currencies. At the end of 2022, the global volume of covered bonds outstanding will total the equivalent of EUR 3,029bn, a new record value. Denmark remains the largest individual covered bond jurisdiction with a volume of EUR 463bn. However, it should be noted here that the issues were mainly placed in the home currency (DKK). The largest market from the Eurozone is Germany (EUR 394bn), followed by France (EUR 368bn) and Spain (EUR 209bn).

NORD/LB Capital Markets Conference looks to the future

On 30 and 31 August, we held our annual capital market conference in Hanover and looked to the future together with participants. In addition to specialist presentations on future-relevant topics such as geopolitics, sustainable energy production and environmental protection, we were once again pleased to have expert panels. Within the framework of three expert panels related to banking and covered bond markets, the focus was on current and future issuance activities ("Covered Bonds 2023: Status Quo & Outlook") as well as the future challenges of Basel III finalisation ("The Never-Ending Basel: What's Next for Banking Regulation?"). We also sought to outline the European banking market of tomorrow ("Future of the European Banking System"). We would like to thank all panellists for the lively and open discussions as well as the valuable insights into whatever the future may ultimately hold.



Market overview SSA/Public Issuers

Authors: Dr Norman Rudschuck, CIIA // Christian Ilchmann

NORD/LB Capital Markets Conference 2023 at Herrenhausen Palace

Fischer, Joschka Fischer. He's not 007, but the keynote speech of our former Vice Chancellor and Foreign Minister left a lasting impression on our guests and us. In addition to the covered bond and banking topics summarised on the previous page, in terms of content, the public sector is no longer such a far cry from politics: under the title "Fit for the future? Spot on for German Laender and European regions", the federal state of Berlin (ticker: BERGER), the city of Essen (multiple tickers: ESSEN, NRWGK and DEUSTD) and the Germanspeaking Community of Belgium (Deutschsprachige Gemeinschaft Belgiens, DGBE), or East Belgium for short, were among the entities which provided comprehensive information. On Day 2, we brought together promotional banks and agencies under the topical heading "From troubleshooters to agile future shapers?" We had a panel discussion with Eurofima (EUROF, the European Company for the Financing of Railroad Rolling Stock), Sfil (SFILFR, French public development bank), Sächsische Aufbaubank (SABFOE, Development Bank of Saxony) and Landwirtschaftliche Rentenbank (RENTEN, Germany's development agency for agribusiness and rural areas). We would like to thank everyone present and look forward to seeing you again in 2024.

IBB – publication of first social bond report

After its social bond debut in the EUR benchmark bond segment last year, Investitionsbank Berlin (ticker: IBB) last week published a Social Bond Report for 2022. The key points are summarised in the following. The social bond issued worth EUR 500m is complemented by a social bond cover pool amounting to around EUR 1.9bn. This means that at a factor of four, overcollateralisation is remarkably high. Accordingly, net proceeds are allocated in full and have exclusively been used to refinance existing eligible loans of social value. As at the reporting date of 31 December 2022, the social bond cover pool comprised a total of 689 loans in five categories – affordable housing, affordable basic infrastructure, access to essential services, SME financing as well as creating jobs and facilitating access to public goods and services. The definition of these categories and categorisation of loans are in line with the Social Bond Principles of ICMA. The majority of loans in the social bond cover pool, measured in terms of residual capital, were in the categories of affordable housing at around EUR 825m (47%) and access to public goods and services at approximately EUR 756m (40%). A comparatively modest share was attributable to the categories of affordable infrastructure at around EUR 132m (7%), access to essential services at around EUR 83m (4%) and SME financing at approximately EUR 31m (the remaining 2%). Furthermore, a contribution was made to six of the UN's 17 Sustainable Development Goals (SDGs) by means of the social loans granted. At 47%, the biggest share of total lending was aimed at achieving the eleventh SDG, sustainable cities and communities, while the second highest share at 40% was used towards the tenth SDG, reduced inequalities. Overall, more than 400 companies and 100 communities were supported. In the process, the conditions for creating an additional 1,704 school places and 599 jobs were put in place. IBB's first social bond issue of last year can therefore be described as a success story - we wait with bated breath for the next bond issue to arrive on the market.



NIB – strong performance and record-setting fulfilment of mandate

On 25 August 2023, Nordic Investment Bank (ticker: NIB) presented its half-year report. The key points are summarised below. In the first six months of 2023, new lending business amounted to around EUR 1.2bn (same period in the previous year: EUR 2.2bn). To meet the high demand for loans from NIB's perspective, the bank raised fresh funds totalling EUR 4.7bn in the capital market during the first half of 2023. Net income from January to June amounted to an impressive EUR 127m, following EUR 139m for the full year in 2022. This increase mainly resulted from higher interest income of EUR 139m (same period in the previous year: EUR 104m) as well as previously unrealised profits from financial transactions. André Küüsvek, CEO of NIB, stated: "In addition to our strong financial performance, I am very pleased that NIB has fulfilled its environmental mandate to a historical record level [...]." In the first half of 2023, projects which received a "good" and "excellent" environmental mandate accounted for 99.8% of the total amount of loans disbursed.

EAA - interim report as at 30 June 2023 and realignment of operating model

On 23 August 2023, Erste Abwicklungsanstalt (ticker: EAA) presented its interim report as at 30 June 2023. As per usual, the financial situation of EAA in the first half of 2023 was once again largely determined by its remit as a winding-up agency. The nominal volume of the non-trading portfolio decreased by -9.2% to EUR 7.1bn, while the nominal volume of the trading portfolio was reduced by -5.7% to EUR 53.3bn in the same period. EAA's total assets fell by -10.4% from EUR 15.7bn to EUR 14.1bn. This mainly resulted from the reduction of cash reserve assets by around EUR -2.2bn and the rundown of the non-trading portfolio. The business volume, which also included off-balance sheet components, declined by -9.9% to EUR 15.1bn. The earnings position of EAA was primarily influenced by the following figures: net interest income of EUR 16.7m, balance of other expenses and income totalling EUR 9.4m, gain/loss on financial assets and investments as well as income from writing back loan loss provisions of EUR 24.0m in total, general administrative expenses of EUR 37.9m and net commission income of EUR -10.0m. Staff expenses amounted to EUR 7.4m. Other administrative expenses of EUR 30.5m mainly consisted of expenses for services from various service providers and project expenditure related to a change of service provider. The decrease in net interest income essentially resulted from progress with the portfolio rundown. Net commission income at its core was attributable to commitment commission for the equity drawdown facility. The trading loss of EUR -2.2m was approximately EUR 0.5m lower than the trading performance in the same period of the previous year. Overall, this produced a loss after taxes of EUR -0.2m (previous year: EUR -1.1m). The publication of the interim report followed an announcement by EAA at the end of June this year that its operating model had successfully been realigned. Erste Abwicklungsanstalt endeavours to outsource all its operating processes and infrastructure to new service providers in order to further optimise existing cost structures and make them more flexible. EAA went live with its new service provider network on 15 May 2023. This was preceded by a pan-European tender and an extensive transition phase. Christian Doppstadt, EAA Management Board member, commented: "EAA has demonstrated the outsourcing options that exist in the financial industry. Other European financial institutions have already shown an interest in EAA's success."



RENTEN – sharp increase in operating profit in the first six months of 2023

On 9 August 2023, Landwirtschaftliche Rentenbank (ticker: RENTEN) presented its figures for the first half of 2023. Demand for programme loans was down year on year, with new business totalling EUR 3.2bn (-15.8%). The trend in the development segment of agriculture was weaker, in particular, and amounted to EUR 801m (-27.4%). Demand from agricultural businesses was lower for loans to acquire land and farm buildings. New business also decreased to EUR 415m (-32.2%) in the agribusiness and food segment, especially with regard to machine and building financing. At the same time, marked growth was recorded in the segment of rural development, where new business amounted to around EUR 1.6bn (+74.9%). Nikola Steinbock, Chair of the Management Board of Rentenbank, assessed these developments as follows: "Uncertainty about future political conditions, significantly higher interest rates and volatile markets is evidently impacting more and more on the willingness to invest in agriculture. This has been particularly noticeable in animal husbandry. In addition, we are in the midst of a transformation to becoming a climate neutral and more sustainable economy. Much remains uncertain and is still being discussed. But one thing is certain: agriculture can offer solutions for this transformation. And we will support it in so doing. To ensure that forward-looking farmers are able to seize these opportunities, we continually adapt our development products." In the year to date, Rentenbank has raised around EUR 7.4bn in the capital markets to fund its development business, which represents approximately EUR 900m (-10.5%) less than in the same period of the previous year. This equates to around two-thirds of the planned total amount to be issued in 2023 of EUR 11bn. Operating profit before risk provisions and valuation in the first six months of 2023 considerably exceeded the previous year's level at EUR 103.9m (+39.8%). According to the bank, the main reason was the higher interest level and the resultant higher net interest income figure. As a result of increased IT investment as part of the 2026 IT roadmap, administrative expenses rose to EUR 49.3m (+8.1%). The tier 1 capital ratio (CET1) of Rentenbank was 31.6% as at 30 June 2023 (31 December 2022: 31.7%). In contrast, the total capital ratio was unchanged at 31.7%.

ISBRLP – start-up booster during the summer lull

Investitions- und Strukturbank Rheinland-Pfalz (ticker: ISBRLP) was not idle during the summer break. It ignited the booster of the start-up rocket with several new investments. In chronological order, these started with Medea Biopharma GmbH on 26 July 2023, a company working on a generation of sustainable and effective antibacterial active agents in response to growing antibiotic resistance. This was followed by Wattro GmbH on the same date. This company is developing a digital stock management platform. Since 3 August, HTM Hydro Technology Motors GmbH has been supported in the optimum exploitation of the potential offered by hydrogen combustion. Greenable GmbH (10 August) is developing software aimed at enabling small and medium-sized enterprises to record the carbon footprint of their products, while finally, the approach of Mentalport GmbH (17 August) is a health app that replicates a human coach for mental health.



Primary market

Interlude during the summer break - following the slump in the primary market with no new deals in the second half of July, Schleswig-Holstein (ticker: SCHHOL) emerged from the wilderness on 8 August 2023 with a benchmark bond issue. Originally, an amount of EUR 500m was to be raised at a guidance in the ms +1bp area. However, the issuer seized the moment to bag the deal at a slightly tighter spread, ms flat, but with a volume totalling EUR 750m. At EUR 890m, the order book was only slightly oversubscribed. The primary market then immediately went on another summer break for a further fortnight before returning with a bang in the second to last week of August. Six fresh benchmark bond issues were presented on the floor within two days. BNG from the Netherlands kicked off proceedings on 22 August 2023, opting for a green bond worth EUR 1bn (10y). The bid-tocover ratio was 1.5x, which comfortably facilitated tightening versus the original guidance by one basis point to ms +11bp. True to the motto "go big or go home", KfW was caught up in the general optimism and directly weighed in with EUR 4bn for a deal with a term of just over five years. The order book was ultimately significantly oversubscribed at EUR 7.3bn. Consequently, the spread tightened by one basis point versus the guidance in the area of ms -12bp. The next announcement of the day was made by SEK, with EUR 600m (7y) and a guidance in the ms +23bp area. Despite the deal being only slightly oversubscribed – the final order book totalled EUR 860m – the transaction also achieved tightening of one basis point. The next day immediately started with another heavyweight, when EFSF sought a fresh EUR 3bn, which it raised in two parts. For one, there was the tap issue of a 2026 bond worth EUR 1bn in line with the guidance in the ms -20bp area. In addition, a new 15y bond worth EUR 2bn was issued. Remarkably, the latter bond issue had a bid-to-cover ratio of 4.2x and, accordingly, an order book that was fit to burst. As a result, the spread eventually tightened to ms +28bp (guidance: ms +30bp area). The next deal to follow comprised a green bond by KOMINS, with a term to maturity of just over 4y and a total volume of EUR 500m. The bond was placed at ms -8bp (bid-to-cover ratio: 1.3x, guidance: ms -6bp area). The current week started with IBRD wishing to raise EUR 2.5bn with a maturity of 15 years. The bank succeeded at ms +29bp (guidance: ms +30bp area) and an almost twice oversubscribed order book. Finally, another genuine heavyweight entered the stage yesterday (Tuesday, 05.09.). The EIB placed a bond worth EUR 3bn (WNG) with a term to maturity slightly in excess of 5y. The deal eventually went ahead with a bulging order book of EUR 23bn at ms -13bp, two basis points tighter than the guidance. Other mandates we expect to see in the market shortly are DBJ with a sustainable benchmark deal and IBB with a social bond worth EUR 500m (WNG).

| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|--------|---------|--------|--------------|----------|--------|----------|-----------------|-----|
| IBRD | SNAT | 04.09. | XS2679922828 | 15.0y | 2.50bn | ms +29bp | - / Aaa / AAA | Χ |
| EIB | SNAT | 04.09. | EU000A3K4ED6 | 5.2y | 3.00bn | ms -13bp | AAA / Aaa / AAA | - |
| KOMINS | Nordics | 28.08. | XS2676440048 | 4.3y | 0.50bn | ms -8bp | - / Aaa / AAA | Χ |
| NRWBK | DE | 22.08. | DE000NWB9114 | 5.0y | 1.00bn | ms -5bp | AAA / Aa1 / AA | - |
| EFSF | SNAT | 22.08. | EU000A2SCAK5 | 15.0y | 2.00bn | ms +28bp | - / Aaa / AA | - |
| SEK | Nordics | 21.08. | XS2673978644 | 7.0y | 0.60bn | ms -22p | -/Aa1/AA+ | - |
| KFW | DE | 21.08. | DE000A351MT2 | 5.1y | 4.00bn | ms -13bp | - / Aaa / AAA | - |
| BNG | NL | 21.08. | XS2673570995 | 10.0y | 1.00bn | ms +11bp | AAA / Aaa / AAA | Χ |
| SCHHOL | DE | 08.08. | DE000SHFM907 | 10.0y | 0.75bn | ms flat | AAA / - / - | - |

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



Covered Bonds

Covered bond market remains on the growth path: OLB looks set to join the ranks of EUR benchmark issuers

Authors: Melanie Kiene, CIIA // Dr Frederik Kunze

Dynamic covered bond market set to welcome another new issuer in the near future?

The primary market in the EUR benchmark segment was already lively in 2022, with the issuance volume in comparison with 2021 having more than doubled from EUR 95.7bn to EUR 198.6bn. This dynamic development has continued in the current year. As at 05 September 2023, an issuance volume of EUR 159.9bn has been recorded so far. However, the EUR sub-benchmark segment has also impressed with brisk issuance activity of its own. Following an issuance volume of EUR 3.8bn in 2021, a total of EUR 8.0bn was placed in 2022. This year, the issuance volume to date amounts to EUR 5.8bn. Smaller or younger issuers in particular often test the waters by making their debut in EUR sub-benchmark format before graduating to full benchmark size in due course. Whatever is true of the covered bond market overall equally applies to the Pfandbrief segment. As such, this subsegment has also recorded dynamic development. In addition, there are some Pfandbrief banks that have been identified as having the potential to join the ranks of EUR benchmark issuers at some point in the future. This assumption applies in particular to Oldenburgische Landesbank AG (OLB). While the bank's fundamental dynamics in connection with potential increased issuance of covered (but also uncovered) bonds already pointed to this conclusion, recent announcements made by OLB during investor meetings only served to consolidate this view of the state of play. For example, in the process of presenting its most recent business figures, OLB also pointed out that it is planning to issue one or two deals per year over the next few years and that these deals could even take the form of benchmark issues (senior unsecured and/or covered bonds). We are using these comments as an opportunity to take a closer look at this issuer.

OLB records strong inorganic growth

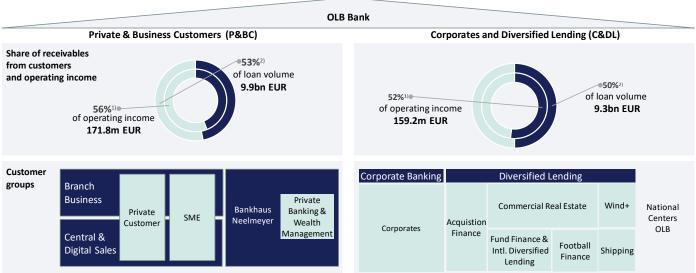
Headquartered in Oldenburg, OLB is a (profitably growing) universal bank for retail and corporate customers in Germany and selected neighbouring European countries. The bank in its present form was established following the merger of OLB with Bremer Kreditbank AG and Bankhaus Neelmeyer in 2018, and then with Wüstenrot Bank AG Pfandbriefbank in 2019. In this regard, OLB has already recorded significant growth over recent years. Only last year, OLB signed an agreement to acquire Degussa Bank AG (loans: EUR 4.7bn; customers: 322,000; data refers to FY 2022). The transaction is expected to be concluded in the second half of 2023, subject to the usual regulatory and other closing conditions. With the takeover of Degussa Bank, the merged bank is set to generate a balance sheet total of around EUR 30bn in 2024, meaning that OLB would in future be subject to supervision by the European Central Bank. A total of 94% of the share capital (FY 2022) in OLB was held by Apollo Global Management, Grovepoint Investment Management and the Teacher Retirement System of Texas, with none of the shareholders having a stake of ≥40%. Nevertheless, OLB is openly discussing the possibility of an IPO. In this regard, the shareholders are waiting for a stable market environment to arrive.



OLB business model based on two pillars

The bank employs around 1,300 staff (FTEs), who serve over 650,000 customers through a regional branch network in north-west Germany in addition to five national branches for the domestic market and a nationwide online offering. In terms of the business model, OLB reports across two strategic business segments: Private & Business Customers (P&BC; 56% of operating earnings in H1 2023) and Corporates & Diversified Lending (C&DL; 49%). The P&BC segment includes the retail customer and SME business, as well as Private Banking & Wealth Management (brand: Bankhaus Neelmeyer). The business segment C&DL comprises large volume corporate transactions, acquisition and football financing as well as commercial real estate financing, among other aspects. OLB operates in niche markets across Europe.

Two equally strong pillars underpin the business model



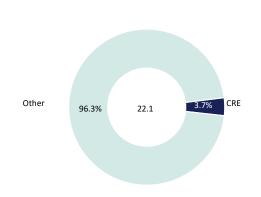
¹⁾ H1 2023, negative operating income pertaining to the Corporate Center segment not shown here; ²⁾ H1 2023, negative loan volume pertaining to the Corporate Center segment not shown here; Source: OLB, NORD/LB Markets Strategy & Floor Research

Loan portfolio: Largely attributable to Germany, with commercial property financing accounting for a minor share

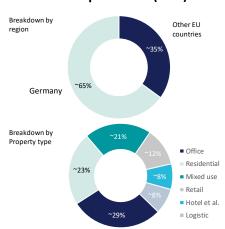
The OLB loan portfolio can be roughly split between the two segments of Private & Business Customers (H1 2023: EUR 9.9bn) and Corporates & Diversified Lending (EUR 9.3bn). The asset class of commercial real estate financing, which has recently come into greater focus, accounts for a share of just 3.7% of the bank's loan portfolio, which amounted to EUR 22.1bn in the first half of 2023. The majority (65%) is located in Germany. Broken down by property type, the largest groups include office space (29% of the real estate portfolio), residential properties (23%) and mixed-use properties (21%). Since 2021, the bank has no longer offered financing to property developers. OLB has been offering mortgage financing for residential properties since 2022 as part of a cooperation with the Tulp loan platform in the Netherlands. This has more than made up for the slightly weaker lending business in Germany in recent times. Otherwise, the loan portfolio primarily grew in the first half of 2023 in the newer business areas of football finance, fund finance and international diversified lending. In our view, the Tulp cooperation also aims to support the bank's efforts to amass material suitable for use as cover pool assets over the long term, which, in the event that OLB does opt to enter the EUR benchmark segment, would help to facilitate repeated market access on the part of the bank.



CRE share of the loan portfolio¹⁾ (EUR bn)



Breakdown of the CRE portfolio1) (in %)



Source: OLB, NORD/LB Markets Strategy & Floor Research; 1) on the basis of the exposure at default as at 30 June 2023

Sustainable credit business offers the prospect of an inaugural green bond

Sustainability is also a distinct focus for OLB, with the bank having defined a series of targets to reflect this topic in its business model. Although the bank's most recent investor presentation does not include full details of the green loan portfolio, the wind portfolio was reported as having a loan volume of around EUR 600m in the first half of the year. In addition, OLB is not involved in any ESG-critical industries (e.g., coal-fired power plants, extraction of fossil fuels). In the future, OLB is also offering the prospect of a green bond debut (albeit without specifying in which asset class) in addition to launching a sustainable investment fund. By issuing a green bond (either in the form of a senior unsecured or covered bond), the bank would find itself in good company in the medium term. In so doing, OLB would not only be serving a new group of investors, but would also enter an emerging market. The bank's sustainable activities are confirmed by an ESG rating from S&P that has improved by five points. The rating agency awarded an initial score of 30 points in March 2023, before increasing this to 35 points in August of this year (cf. OLB press release dated 28 August 2023). Accordingly, the bank comfortably exceeds the industry average of 29 points in terms of S&P's ESG ratings.

Overcollateralisation of 24.05% in the cover pool

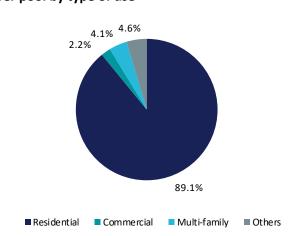
As mentioned previously, OLB is already established as an active issuer of EUR subbenchmark deals. As at 05 September 2023, the outstanding volume of sub-benchmark bonds in Germany amounts to EUR 12.1bn, with OLB accounting for a share of EUR 700m of this figure (spread over two issues, each worth EUR 350m). After an inaugural deal in March 2021, OLB placed a second sub-benchmark bond in April 2022. As at 30 June 2023, the cover pool amounted to EUR 1,316m (100% located in Germany). The Pfandbriefe outstanding totalled EUR 1,061m, resulting in nominal overcollateralisation (OC) of 24.05%. In view of the loan portfolio of Degussa Bank (merger still to be finalised), additional loan growth and statements made by the bank at its most recent investor call, we are of the view that the ground has been prepared for a EUR benchmark deal. There are hardly any inconsistencies with regard to the interest rates for Pfandbriefe and the cover pool (proportion of fixed-interest cover assets: 95.44%; proportion of Pfandbriefe with a fixed coupon: 100%). The cover pool does not contain any loans in arrears. Similar to the bank's loan portfolio, the proportion of commercial financing is once again minor: residential use (including apartment buildings) stands at over 93%.



OLB cover pool data

| Reporting date: 30 June 2023 | Mortgage |
|---|----------------|
| Cover pool volume (EURm) | 1,316 |
| Amount outstanding (EURm) | 1,061 |
| -thereof ≥ EUR 250m | 66.0% |
| Current OC (nominal) | 24.1% |
| Committed OC | 2.0% |
| Cover type | Mortgage |
| Main country | 100% Germany |
| Number of loans | 11,171 |
| Number of borrowers | 9,803 |
| Avg. exposure to borrowers (EUR) | 128,091 |
| WAL (cover pool / covered bonds) | 12.7y / 8.4y |
| Fixed interest (cover pool / covered bonds) | 95.4% / 100.0% |
| LTV (unindexed) | 56.2% |
| Loans in arrears | 0.0% |

Cover pool by type of use

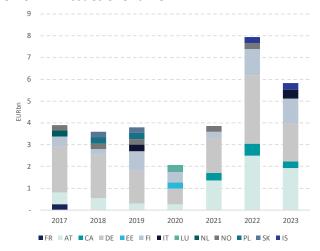


Source: OLB, NORD/LB Markets Strategy & Floor Research

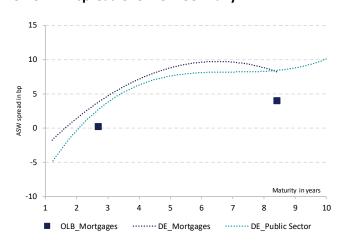
EUR sub-benchmarks from OLB recognised as Level 2A assets for LCR management

From our perspective, Pfandbfriefe issued by OLB in EUR sub-benchmark format can be recognised as Level 2A assets within the framework of LCR management and benefit from a discounted risk weighting of 10%. Covered bonds issued by OLB in EUR benchmark format would, in our view, qualify for treatment as Level 1 assets. The rating agency Moody's has awarded a rating of Aa1 to OLB Pfandbriefe and a collateral score of 5.1% to the programme.

EUR SBMK: issues over time



EUR SBMK: spread overview Germany



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

Conclusion

OLB has undergone a process of radical change over recent years that has included huge inorganic balance sheet growth on the back of portfolio acquisitions, takeovers and partnerships. The imminent acquisition of Degussa Bank is also expected to result in OLB becoming a bank that is subject to ECB supervision. For example, the loan portfolio will shortly become more diversified, with a prospective breakdown (based on provisional business figures as at year-end 2022) of 37% to the C&DL segment and 42% to P&BC, plus an additional 20% share attributable to Degussa. In our opinion, this growth (as well as the organic loan growth) could be the catalyst for a benchmark issue in the near future.



SSA/Public Issuers NORD/LB Issuer Guide German Laender 2023 published

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

NORD/LB Issuer Guide German Laender 2023 published in its tenth edition

The NORD/LB Issuer Guide German Laender, which is published on a yearly basis again, is part of a series of NORD/LB Markets Strategy & Floor Research products covering individual issuers and market segments in the global bond market. Following on from the first issue in 2013 – and an unplanned break in 2019 – this freshly released edition is the tenth edition in this format, which has consistently provided an extensive overview of the largest EUR market for sub-sovereigns. The focus of our Issuer Guide has always been to provide a relative comparison of this group of issuers and to highlight their respective idiosyncrasies. With the 16 Bundeslaender and the "Gemeinschaft deutscher Laender" joint issuance vehicle, we are once again firmly of the view this year that the publication – dated August 2023 – will offer our readers an extensive insight into the German Laender segment.

Laender characterised by high degree of heterogeneity – spread convergence could be reversed due to terminated purchase programmes

The German Laender are characterised by a high degree of heterogeneity. Differences between the Bundeslaender exist not only in terms of area, number of inhabitants and economic strength; they also differ significantly with regard to factors such as debt situation, focus on exports and demographic trends. In addition, the liquidity of Laender bonds and their ratings result in differences, although these are at most reflected marginally due to the very minor differences in spreads. In the past, this spread convergence was intensified or perhaps even actually manifested by way of the ECB's focus on bonds issued by German Laender within the framework of its securities purchases (e.g. under the APP/PEPP). Net purchasing activity has now been brought to an end both in this context and in connection with APP reinvestments, meaning that the fundamental differences between the Laender will gradually start to become more important again. In the discussion, we will initially look at the overall development of the Laender, before focusing on the differences between them.

Broad range of products

The 16 German Laender offer a broad range of bonds and Schuldscheindarlehen (SSD). At present, an outstanding volume of EUR 399.7bn is spread across 833 separate bond deals. Only EUR 11.4bn (2.9%) of this amount is not denominated in EUR, which again serves to illustrate the fact that foreign currencies remain of very minor importance in Laender funding mixes. Fixed-coupon bonds (outstanding volume: EUR 360.6bn) and floating rate notes (EUR 24.6bn; FRNs) dominate Laender funding profiles. Overall, 348 EUR-denominated bonds feature a volume of at least EUR 500m and can therefore be classified as benchmark bonds. In the non-public segment, loans and Kassenkredite together account for a volume of around EUR 145.8bn. The data also includes a total of 17 Laender jumbos (EUR 18.0bn) jointly placed by a group of several Laender.

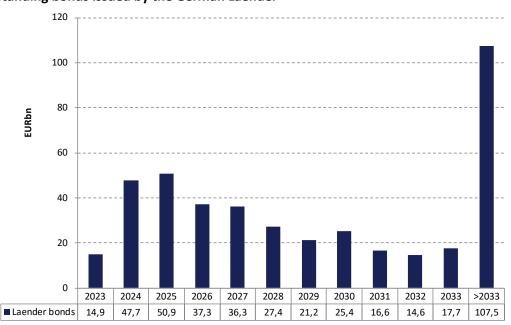


General information

Total debt* EUR 563.0bn Of which bonds** EUR 417.7bn

* As reported at year-end 2022

Outstanding bonds issued by the German Laender

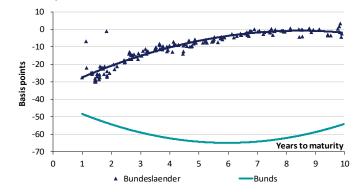


Foreign currencies are converted into EUR at rates as at 07 August 2023. Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

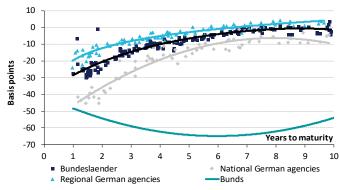
Ratings

The rating agencies Fitch, Moody's and S&P link their ratings for each of the Laender with the rating of the German federal government (for the most part). Fitch regards the system of financial equalisation among the Laender and the principle of federal loyalty in general as the dominant factors in equating the ratings directly. Moody's also views this system as a significant factor, although the agency does take other aspects into consideration, with the result that the ratings are not necessarily equated. The Bundesland of NRW, for example, is currently rated Aa1, which is one notch below the Aaa top rating held by the German federal government. S&P makes an even wider distinction. Although this rating agency does also factor the system of financial equalisation among the Laender and the principle of federal loyalty in to its rating decision, it occasionally diverges more widely from the AAA rating held by the German federal government. In this context, for example, S&P currently awards NRW a rating of AA (for the first time since 2004) following a rating upgrade in September 2019.

ASW-Spreads vs. Bunds



ASW-Spreads vs. agencies



NB: Residual term to maturity >1 year and <10 years; minimum outstanding volume of EUR 500m.

National agencies: KFW, RENTEN, FMSWER, among others. Regional agencies: NRWBK, LBANK, BAYLAN, IBB, BYLABO, WIBANK, among others.

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

^{**} Data retrieved on 07 August 2023





Bond amounts maturing in the next 12 months

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

D 23

J 24

N 23

Refinancing

Although Laender issuance volumes have been declining for many years, they have nonetheless remained at a high level. Before the coronavirus pandemic, the recently introduced debt brake was a factor in this development. After the period between 2020 and 2022, significant refinancing volumes and gross credit authorisations are expected for 2023 as well. The most important funding instruments are bonds and SSD deals, while public-sector bonds in benchmark format are used just as frequently as large-volume private placements. As a result, there is a relatively abundant fresh supply of large-volume bonds. After credit authorisations rose from around EUR 70bn to approximately EUR 154bn in 2020 on the back of supplementary budgets, these authorisations fell to EUR 119bn in 2021 and EUR 91bn in 2022. For 2023, a sum of EUR 91.7bn has been announced. As such, credit authorisations remain at a high level (2019: EUR 67bn).

M 24

A 24

M 24

J 24

Credit authorisations of German Laender in 2023 (EURbn)*

| | Net | Gross |
|-------------------------------|-------|-------|
| Baden-Wuerttemberg | 1.25 | 29.79 |
| Bavaria | -0.05 | 3.83 |
| Berlin | 0.10 | 5.49 |
| Brandenburg | 1.58 | 4.04 |
| Bremen | 0.54 | 1.80 |
| Hamburg | 0.06 | 2.80 |
| Hesse | 0.21 | 4.95 |
| Mecklenburg-Western Pomerania | 0.00 | 1.32 |
| Lower Saxony | 0.00 | 7.25 |
| North Rhine-Westphalia | 5.00 | 16.70 |
| Rhineland-Palatinate | -0.16 | 4.04 |
| Saarland | 0.00 | 1.70 |
| Saxony | 0.00 | 0.28 |
| Saxony-Anhalt | - | 1.91 |
| Schleswig-Holstein | 0.37 | 4.91 |
| Thuringia | -0.24 | 0.87 |
| Total | 8.66 | 91.68 |

^{*}Some figures are rounded and/or provisional; as at: 05 September 2023; unchanged values from 23 March 2023 Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

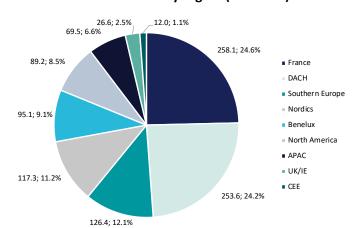


Charts & Figures Covered Bonds

EUR benchmark volume by country (in EURbn)

137.0; 13.1% 258.1; 24.6% 35.8; 3.4% 44.0; 4.2% 47.7; 4.5% 54.6; 5.2% 198.3; 18.9% 73.3; 7.0% 89.2; 8.5%

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 | 258.1 | 247 | 19 | 0.97 | 9.5 | 5.0 | 1.25 |
| 2 | DE | 198.3 | 282 | 35 | 0.65 | 8.0 | 4.2 | 1.12 |
| 3 | CA | 89.2 | 66 | 0 | 1.33 | 5.5 | 2.8 | 1.07 |
| 4 | NL | 74.3 | 75 | 2 | 0.92 | 10.8 | 6.6 | 1.06 |
| 5 | ES | 73.3 | 58 | 6 | 1.15 | 11.2 | 3.4 | 1.95 |
| 6 | AT | 54.6 | 93 | 4 | 0.58 | 8.2 | 4.9 | 1.35 |
| 7 | IT | 47.7 | 57 | 2 | 0.81 | 9.0 | 3.7 | 1.46 |
| 8 | NO | 44.0 | 53 | 12 | 0.83 | 7.4 | 3.8 | 0.62 |
| 9 | FI | 35.8 | 39 | 4 | 0.90 | 7.1 | 3.6 | 1.22 |
| 10 | AU | 35.6 | 34 | 0 | 1.05 | 7.2 | 3.3 | 1.42 |

■ FR

■ DE

■ CA

= NL

■ ES

AT

■ IT

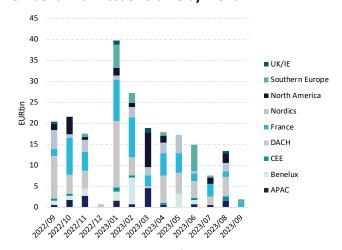
■ NO

■ FI

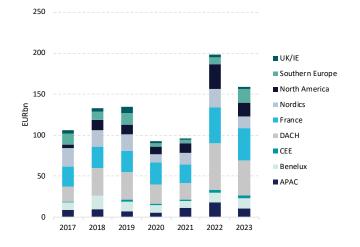
■ AU

Others

EUR benchmark issue volume by month



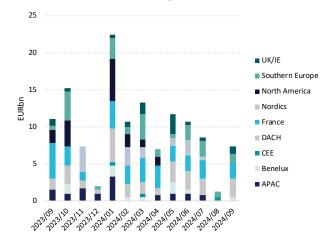
EUR benchmark issue volume by year



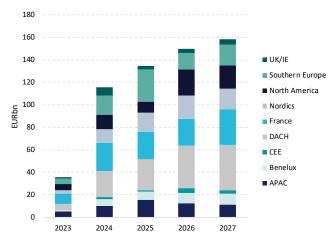
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research



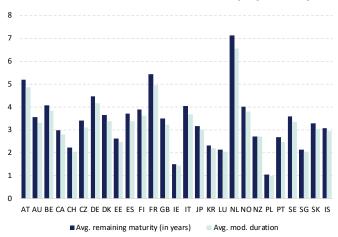
EUR benchmark maturities by month



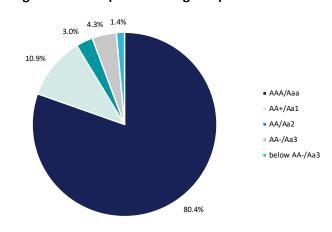
EUR benchmark maturities by year



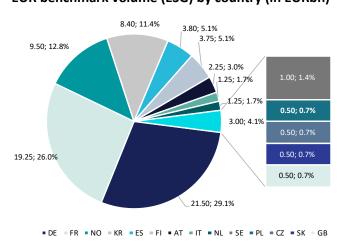
Modified duration and time to maturity by country



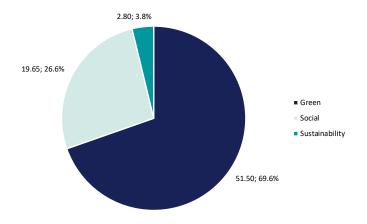
Rating distribution (volume weighted)



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



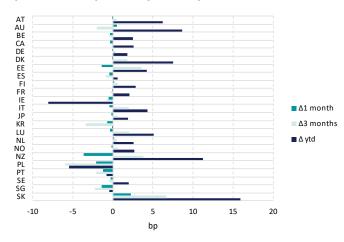
EUR benchmark volume (ESG) by type (in EURbn)



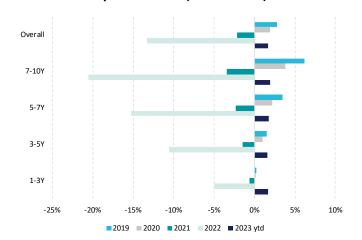
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research



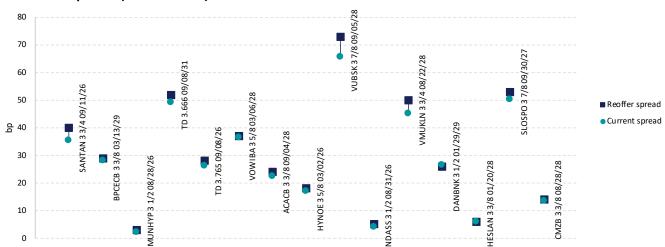
Spread development by country



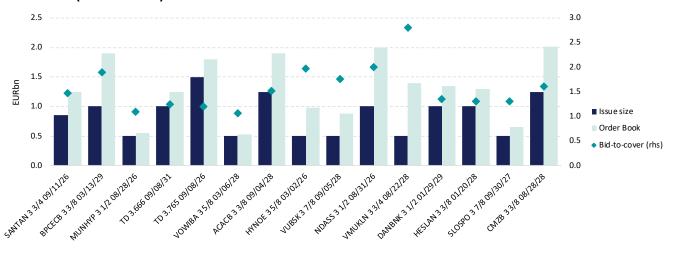
Covered bond performance (Total return)



Spread development (last 15 issues)



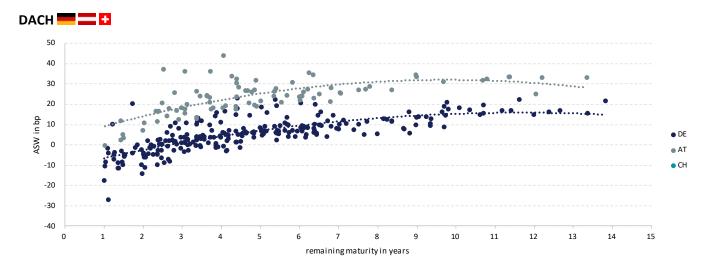
Order books (last 15 issues)

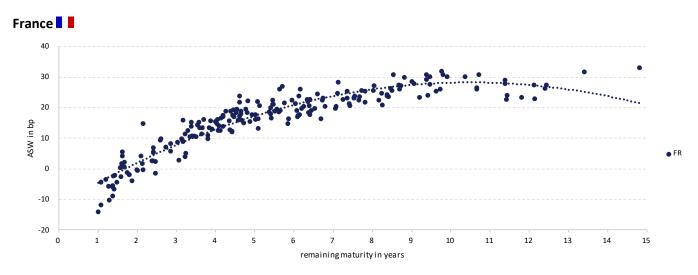


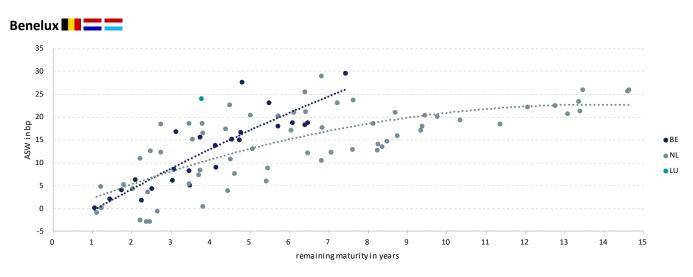
Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research



Spread overview¹

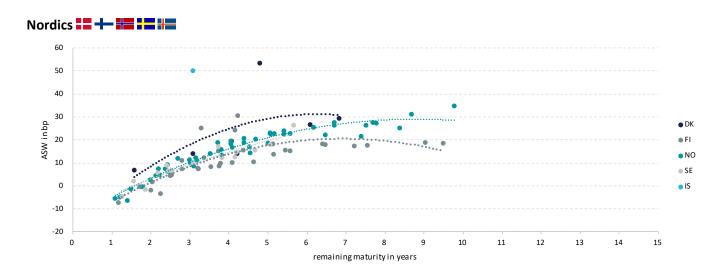


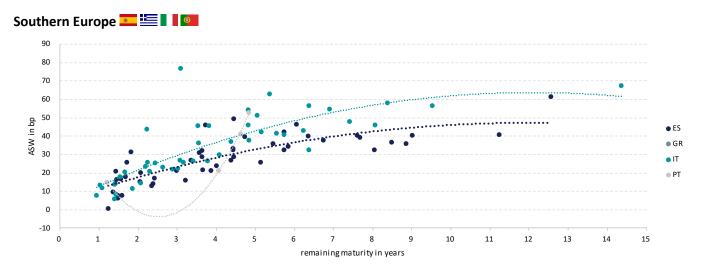


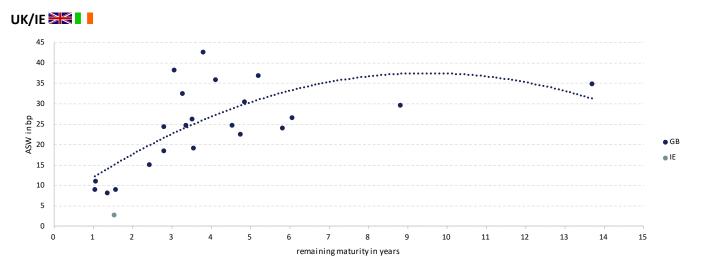


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research 1 Time to maturity $1 \le y \le 15$



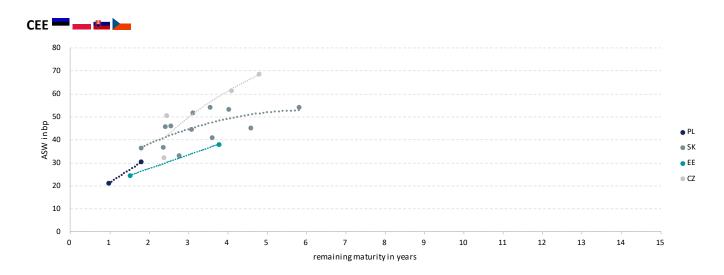


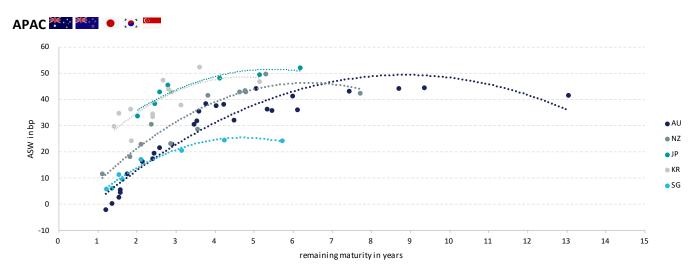


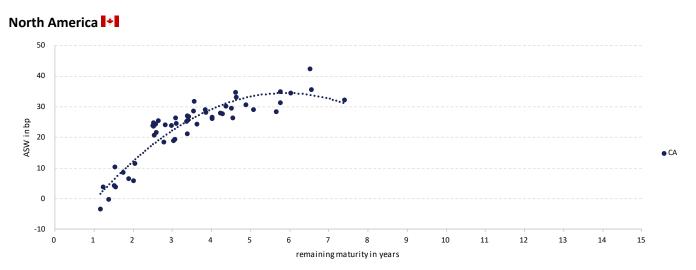


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research







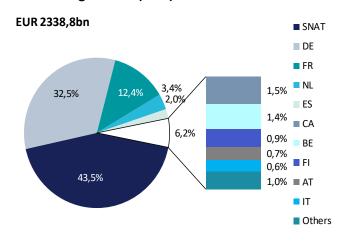


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research



Charts & Figures SSA/Public Issuers

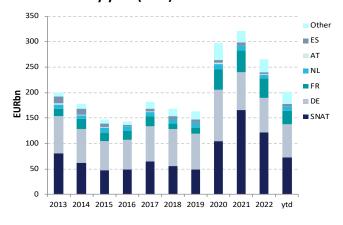
Outstanding volume (bmk)



Top 10 countries (bmk)

| Country | Vol. (€bn) | No. of bonds | ØVol. (€bn) | Vol. weight. ØMod. Dur. |
|---------|------------|--------------|----------------|----------------------------|
| SNAT | 1.016,4 | 227 | 4,5 | 8,0 |
| DE | 761,1 | 564 | 1,3 | 6,2 |
| FR | 290,5 | 195 | 1,5 | 6,0 |
| NL | 78,5 | 68 | 1,2 | 6,6 |
| ES | 47,5 | 65 | 0,7 | 4,7 |
| CA | 35,7 | 25 | 1,4 | 4,4 |
| BE | 32,5 | 36 | 0,9 | 10,9 |
| FI | 22,1 | 24 | 0,9 | 4,9 |
| AT | 16,8 | 20 | 0,8 | 4,6 |
| IT | 15,0 | 19 | 0,8 | 4,5 |

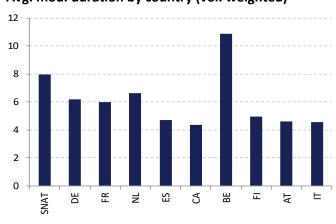
Issue volume by year (bmk)



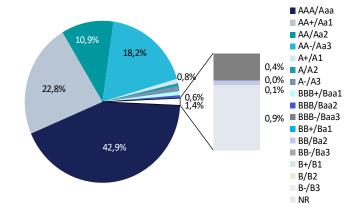
Maturities next 12 months (bmk)



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



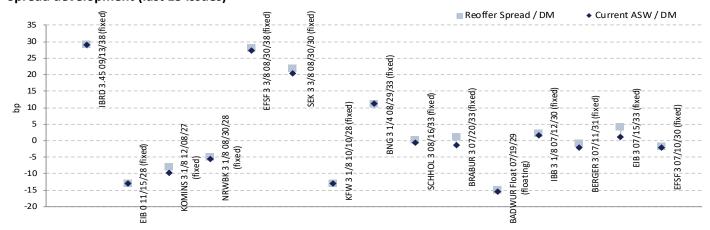
Rating distribution (vol. weighted)



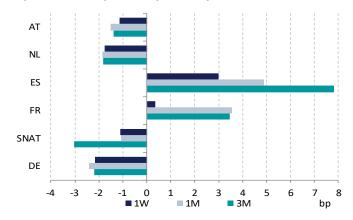
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research



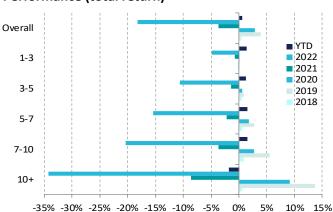
Spread development (last 15 issues)



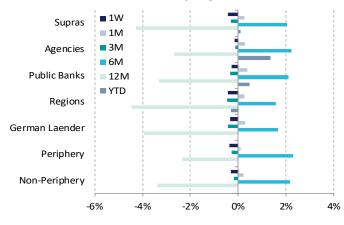
Spread development by country



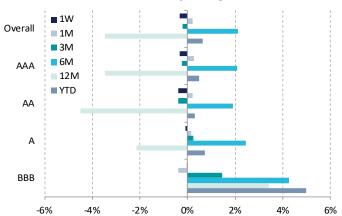
Performance (total return)



Performance (total return) by segments



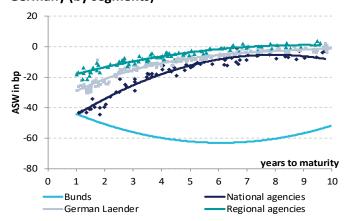
Performance (total return) by rating



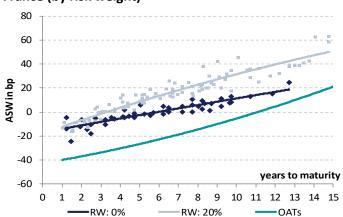
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research



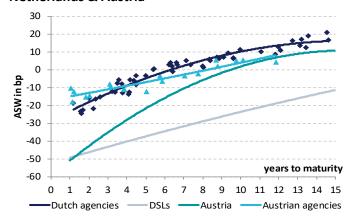
Germany (by segments)



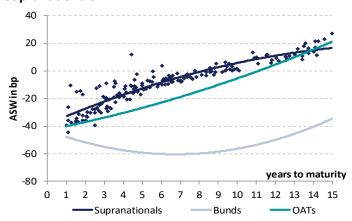
France (by risk weight)



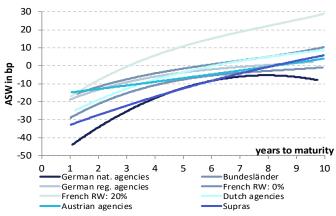
Netherlands & Austria



Supranationals

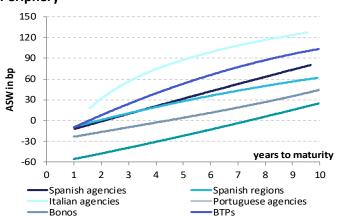


Core



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

Periphery





ECB tracker

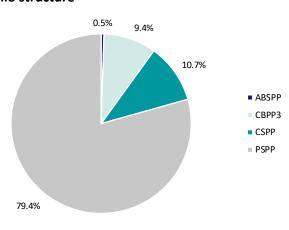
Asset Purchase Programme (APP)

| | ABSPP | СВРР3 | CSPP | PSPP | APP |
|--------|--------|---------|---------|-----------|-----------|
| Jul-23 | 16,851 | 295,503 | 335,724 | 2,504,498 | 3,152,576 |
| Aug-23 | 16,441 | 295,503 | 334,738 | 2,487,900 | 3,134,582 |
| Δ | -411 | 0 | -986 | -16,598 | -17,995 |

Portfolio development

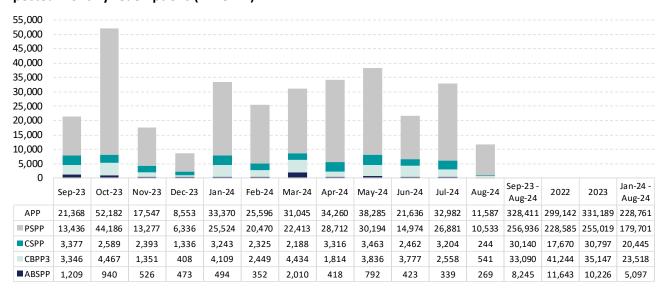
3,500 3,000 2,500 1,500 1,000 1,000 1,000 AHITITITE & STORY OF STORY

Portfolio structure



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

Expected monthly redemptions (in EURm)

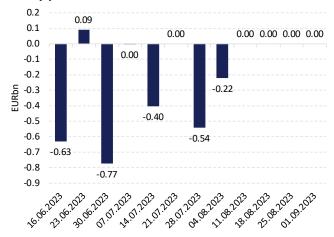


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

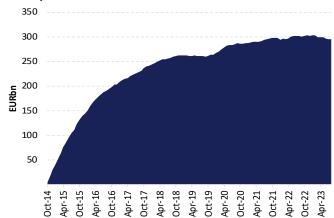


Covered Bond Purchase Programme 3 (CBPP3)

Weekly purchases



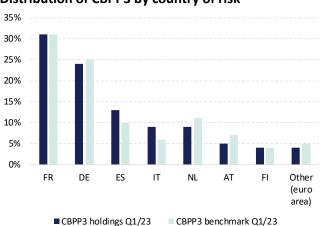
Development of CBPP3 volume



Change of primary and secondary market holdings

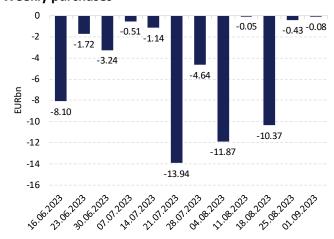


Distribution of CBPP3 by country of risk



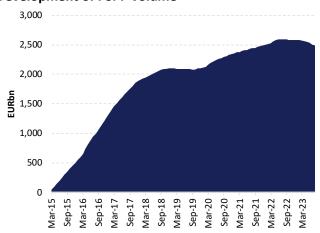
Public Sector Purchase Programme (PSPP)

Weekly purchases



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

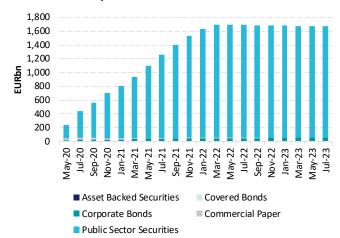
Development of PSPP volume



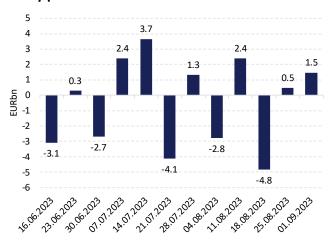


Pandemic Emergency Purchase Programme (PEPP)

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 key² | Current WAM ³ (in years) | WAM of eligible universe ⁴ (in years) |
|--------------|-----------------------|----------------------------|--|---------------|--|---|--|
| AT | 43,659 | -419 | 2.6% | 2.6% | 0.0% | 7.4 | 7.6 |
| BE | 56,468 | 653 | 3.3% | 3.4% | 0.1% | 6.1 | 9.8 |
| CY | 2,387 | 50 | 0.2% | 0.1% | 0.0% | 8.5 | 8.4 |
| DE | 397,585 | -2,475 | 23.7% | 23.9% | 0.2% | 6.7 | 7.0 |
| EE | 256 | 0 | 0.3% | 0.0% | -0.2% | 6.9 | 7.2 |
| ES | 191,589 | -1,567 | 10.7% | 11.5% | 0.8% | 7.3 | 7.4 |
| FI | 26,759 | -695 | 1.7% | 1.6% | 0.0% | 7.3 | 7.9 |
| FR | 296,673 | -1,934 | 18.4% | 17.9% | -0.5% | 7.5 | 7.7 |
| GR | 37,979 | 424 | 2.2% | 2.3% | 0.1% | 8.5 | 9.3 |
| IE | 25,413 | 176 | 1.5% | 1.5% | 0.0% | 8.9 | 9.5 |
| IT | 293,834 | 3,169 | 15.3% | 17.7% | 2.4% | 7.0 | 6.9 |
| LT | 3,235 | -68 | 0.5% | 0.2% | -0.3% | 9.2 | 8.8 |
| LU | 1,845 | 14 | 0.3% | 0.1% | -0.2% | 6.1 | 8.4 |
| LV | 1,824 | -154 | 0.4% | 0.1% | -0.2% | 8.0 | 7.6 |
| MT | 604 | 0 | 0.1% | 0.0% | -0.1% | 10.0 | 8.4 |
| NL | 79,687 | 340 | 5.3% | 4.8% | -0.5% | 7.8 | 9.1 |
| PT | 33,988 | -102 | 2.1% | 2.0% | -0.1% | 7.0 | 7.5 |
| SI | 6,450 | 63 | 0.4% | 0.4% | 0.0% | 8.6 | 9.0 |
| SK | 7,983 | 79 | 1.0% | 0.5% | -0.5% | 8.0 | 8.3 |
| SNAT | 152,090 | 2,002 | 10.0% | 9.2% | -0.8% | 10.0 | 9.0 |
| Total / Avg. | 1,660,308 | -443 | 100.0% | 100.0% | 0.0% | 7.4 | 7.6 |

 $^{^{\}mathrm{1}}$ Based on the ECB capital key, adjusted to include supras $^{\mathrm{2}}$ 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 |
|--------------------|--|
| 24/2023 ♦ 19 July | Banks in Europe: EBA Risk Dashboard in Q1 2023 |
| | ECB repo collateral rules and German Laender |
| 23/2023 ♦ 12 July | Covereds: Half-year review and outlook for the second half of 2023 |
| 22/2023 ♦ 28 June | Special publication on LCR classification and risk weights: a (regulatory) overview of the EUR benchmark segment |
| | ESG bonds of German Laender – significant further development |
| 21/2023 ♦ 21 June | ESG covered bonds: a look at the supply side |
| | Increasing exposure of E-supras to Ukraine |
| 20/2023 ♦ 14 June | Moody's covered bond universe – an overview |
| | Beyond Bundeslaender: Spanish regions |
| 19/2023 ♦ 07 June | ■ ECB Preview: ECB's 25th anniversary and is still going strong |
| | Focus on legal requirements for covered bonds |
| 18/2023 ♦ 24 May | Repayment structures on the covered bond market: an update |
| | Stability Council convenes for 27th meeting |
| 17/2023 ♦ 17 May | ESG update 2023 in the spotlight |
| | Development of the German property market |
| | Transparency requirements §28 PfandBG Q1/2023 |
| 16/2023 ♦ 10 May | The ECB and the covered bond market: influences old and new |
| | Update: Joint Laender (Ticker: LANDER) |
| 15/2023 ♦ 26 April | ECB preview: caught in two minds? |
| | EBA Risk Dashboard paints solid picture of Q4 2022 |
| 14/2023 ♦ 19 April | Lending in the Eurozone and Germany |
| | ■ The French agency market – an overview |
| 13/2023 ♦ 05 April | Supply forecast requires no great adjustment |
| | Current risk weight of supranationals & agencies |
| 12/2023 ♦ 29 March | ■ The Moody's covered bond universe – an overview |
| | NGEU: Green Bond Dashboard |
| 11/2023 ♦ 22 March | Covered Bonds: Under the spell of the banking crisis and ECB hawks? |
| | ESG: EUR-benchmarks 2023 in the SSA segment (ytd) |
| 10/2023 ♦ 15 March | ■ Transparency requirements §28 PfandBG Q4/2022 |
| | Credit authorisations of the German Laender for 2023 |
| 09/2023 ♦ 08 March | ■ ECB preview: Soft landing lets ECB play hard ball with key rates |
| | • Where does the Pfandbrief stand within the covered bond universe? |
| 08/2023 ♦ 01 March | ■ The covered bond market and the ECB: a gradual farewell? |
| | Beyond Bundeslaender: Focus on Greater Paris (IDF and VDP) |
| NORD /LD. | NORD (I.B. |

NORD/LB: Markets Strategy & Floor Research NORD/LB: Covered Bond Research NORD/LB: SSA/Public Issuer Research Bloomberg: RESP NRDR <GO>



Appendix Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2023

Covered Bond Laws

Covered Bond Directive: Impact on risk weights and LCR levels

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

<u>Transparency requirements §28 PfandBG Q2/2023</u> (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

<u>Issuer Guide – German Laender 2023</u>

<u>Issuer Guide – German Agencies 2022</u>

<u>Issuer Guide – Dutch Agencies 2022</u>

<u>Issuer Guide – European Supranationals 2023</u>

<u>Issuer Guide – French Agencies 2023</u>

Beyond Bundeslaender: Belgium

Beyond Bundeslaender: Greater Paris (IDF/VDP)

Beyond Bundeslaender: Spanish regions

Fixed Income Specials:

ESG-Update 2023

ECB: From the bottom to the top time to stop? Nobody knows it

ECB rates: We can fly so high we can touch the sky

ECB interest rate decision: All new in May Or: The force of past rake hikes



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, CIIA 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, CIIA SSA/Public Issuers

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



Christian Ilchmann SSA/Public Issuers

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

| Sales |
|-------|
|-------|

| Institutional Sales | +49 511 9818-9440 | Co |
|-----------------------------------|-------------------|----|
| Sales Sparkassen & Regionalbanken | +49 511 9818-9400 | Fi |
| Sales MM/FX | +49 511 9818-9460 | G |
| Sales Europe | +352 452211-515 | Lä |
| | | |

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 |
| Liquidity Management | +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, 06 September 2023 (08:47)

Distribution: 06.09.2023 16:30:53