



Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

17 May 2023 ♦ 17/2023 Marketing communication (see disclaimer on the last pages)



Agenda

Market overview	
Covered Bonds	3
SSA/Public Issuers	7
ESG update 2023 in the spotlight	11
Development of the German property market	15
Transparency requirements §28 PfandBG Q1/2023	18
Charts & Figures	
Covered Bonds	22
SSA/Public Issuers	28
ECB tracker	
Asset Purchase Programme (APP)	31
Pandemic Emergency Purchase Programme (PEPP)	33
Overview of latest Covered Bond & SSA View editions	34
Publication overview	35
Contacts at NORD/LB	36

Floor analysts:

Covered Bonds/Banks

Dr Frederik Kunze frederik.kunze@nordlb.de

Melanie Kiene, CIIA melanie.kiene@nordlb.de

Stefan Rahaus stefan.rahaus@nordlb.de

SSA/Public Issuers

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

Valentin Jansen valentin.jansen@nordlb.de

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

Market overview Covered Bonds

Author: Dr Frederik Kunze

Primary market: Sparebank 1 Boligkreditt puts Norway back in business, Deutsche Bank makes the long end palatable...

At EUR 193.5bn for the full year 2023, we have an admittedly "progressive" forecast for the issuance volume in the EUR benchmark segment. In fact, we still feel quite comfortable with this expectation overall, which can also be justified by the current primary market activity. We would also not overrate the factor of a possible anticipation of covered bond placements in the run-up to the end of the ECB's secondary market purchases in the context of CBPP3. In the past five trading days, seven issuers from six jurisdictions have approached investors and placed a total of EUR 6.75bn (spread over eight bonds; see table). With its dual tranche (EUR 500m; WNG; 3.5y & EUR 500m; WNG; 10y), Deutsche Bank was already able to really shake up the primary market last Wednesday. Finally, the Pfandbrief issuer ventured into the "long maturity" of ten years and was able to generate a high level of investor interest for the long end with guidance (ms +26bp area) that was obviously perceived as attractive. The final spread (ms +20bp) still indicated a NIP of arithmetically eight basis points. The short maturity was placed at ms +5bp. The issuance yields of the deals were therefore at a very similar level of 3.179% (3.5y) and 3.188% (10y), respectively. On the same day, Skandinaviska Enskilda Banken (SEB) from Sweden and Danske Mortgage Bank (FI) also placed fresh benchmarks. SEB was able to raise EUR 1.75bn (2.5y) at ms +5bp, while Danske Mortgage Bank placed EUR 500m (3.7y) at ms +12bp. At this point, we would like to particularly highlight the fresh benchmark of Sparebank 1 Boligkreditt. After all, this is the first transaction from Norway in the current year. In addition, the green covered bond (EUR 750m; 7y; reoffer: ms +25bp) marked the thirteenth EUR benchmark in ESG format in 2023. In fact, Norway is also one of the countries from which some new volumes can still be expected in 2023.

... and new issue premiums are more heterogeneous again

In the new trading week, it was on Tuesday in the EUR benchmark segment that issuers chose to make their primary market appearances. With its deal, (EUR 750m; WNG; 7y; ms +9bp) BerlinHyp increased the number of ESG benchmarks in the current year to 14. The final reoffer spread was still two basis points below the initial guidance (ms +11bp area). Raiffeisen Bank International (RBI) started marketing its benchmark (EUR 500m; WNG; 4y) at ms +45bp area. The transaction was placed with investors at a final spread of ms +45bp at the guidance level. BNP Paribas Home Loan also approached investors with its second deal of 2023. For the benchmark, the marketing phase started at ms +20bp area. The deal was placed five basis points tighter at ms +15bp area and came to a final size of EUR 1.5bn. The average NIP for the placements of the past five trading days was 3.3bp. The picture at deal level is indeed comparatively heterogeneous. For example, while we derive a NIP of Obp for the Sparebank 1 Boligkreditt bond, we calculate a pick-up of +14bp for the RBI transaction.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
BNP Paribas Home Loan	FR	16.05.	FR001400I2W5	5.0y	1.50bn	ms +15bp	AAA / - / AAA	-
RBI	AT	16.05.	XS2626022656	4.3y	0.50bn	ms +45bp	-/Aa1/-	-
Berlin Hyp	DE	16.05.	DE000BHY0GT7	7.0y	0.75bn	ms +9bp	- / Aaa / -	Х
SpareBank 1 Boligkreditt	NO	11.05.	XS2624502105	7.0y	0.75bn	ms +25bp	- / Aaa / -	Х
Danske Mortgage Bank	FI	11.05.	XS2621830848	3.7y	0.50bn	ms +12bp	- / Aaa / -	-
Deutsche Bank	DE	10.05.	DE000A351TP5	10.0y	0.50bn	ms +20bp	- / Aaa / -	-
Deutsche Bank	DE	10.05.	DE000A351NR4	3.4y	0.50bn	ms +5bp	- / Aaa / -	-
SEB	SE	10.05.	XS2623820953	2.4y	1.75bn	ms +5bp	- / Aaa / -	-

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

Secondary market: Spreads with marginal widening tendencies

In terms of trading activity, there has definitely been a bit less customer demand over the last two weeks. This is also due to the fact that some investors are reducing their exposures in order to secure potentially rising new issue premiums on the primary market. The short maturity end remains in demand, while the prices in the medium maturity range are obviously lower. Longer maturities tend to be stable. Overall, spreads across the range of jurisdictions are stable to marginally upward, which fits well with our forecast, according to which we still expect slight widening until around mid-year.

New issuer in the EUR sub-benchmark segment: Bank für Tirol und Vorarlberg (BTV)

With Bank für Tirol und Vorarlberg (BTV), we welcome a new addition to the EUR subbenchmark segment. The Austrian issuer made its debut here on Monday. The deal (EUR 250m; WNG; 4y) entered the marketing phase with guidance of ms +40-42bp (WPIR). The spread was finally at the lower end of the range (ms +40bp). The order book totalled EUR 410m. The allocation was made to 40 investors, mostly in Austria (54%) and Germany (33%). By investor type, banks dominated (64%), followed by "Asset Managers & Funds" (29%) and "Insurance & Pension Funds" (7%). The business activities of the bank, which was founded in 1904, extend from Tyrol, Vorarlberg and Vienna through southern Germany and German-speaking Switzerland to South Tyrol (see also Investor presentation BTV). In Austria, it ranks fourteenth in terms of total assets (EUR 14.3bn in 2021) – behind Hypo Vorarlberg Bank and ahead of Raiffeisen Banking Group Carinthia. BTV's mortgage Pfandbrief has a top rating of AAA from S&P, is based on Austrian covered bond legislation and is marketed under the "European Covered Bond (Premium)" label. While the risk weighting under CRR is 10%, in the context of LCR management we believe that the recently placed sub-benchmark can be used as a Level 2A asset. The cover assets (EUR 752m as of 31 December 2022) are located exclusively in Austria. The character of the cover pool is expressed by the type of cover assets: the residential portion of the cover dominates with the two categories "Residential private use" (EUR 557m; share: 74.1%) and "Residential commercial" (EUR 39m; 5.2%). Commercial mortgage finance totalled EUR 156m (20.7%). The granularity of BTV's cover pool is expressed by the number of financings (4,289) and the share of the ten largest financings in the cover pool (10%). We welcome the new addition BTV in the EUR sub-benchmark segment and will be starting coverage of the issuer inter alia in the annual publication NORD/LB Issuer Guide Covered Bonds.

Sparkasse Hannover and Bausparkasse Wüstenrot also active on the market

Brisk trading activity in the EUR sub-benchmark segment too was already indicated in the previous week. With Sparkasse Hannover (DE) as well as Bausparkasse Wüstenrot (AT), two institutions who now count as established issuers approached their investors. On Wednesday, Sparkasse Hannover placed EUR 250m (WNG; 7y) at ms +18bp (guidance: ms +18bp area). The deal was allocated exclusively to investors in Germany (93%) and Austria (7%). This was followed on Thursday by Bausparkasse Wüstenrot, which also fixed the size at EUR 250m in advance. After an initial guidance of ms +35bp area, the final spread of the deal with a term of four years was ms +32bp. The majority of the allocation was also distributed between Germany (52%) and Austria (33%). In the current year, a total of EUR 4.375bn has now been placed on the market in the EUR sub-benchmark segment. The issuance volume for the full year 2022 was EUR 7.95bn.

Germany: Focus on Pfandbrief market and real estate market

In today's issue of our weekly publication, we focus with two articles in particular on the quarterly data on the German real estate market provided by the Association of German Pfandbrief Banks (vdp) and on the transparency disclosures under section 28 of the German Pfandbrief Act (PfandBG). We have been providing the relevant commentaries on a regular basis for a number of years and have published the <u>NORD/LB Covered Special on</u> <u>Section 28 of the German Pfandbrief Act (PfandBG)</u>, and we are convinced that this also adds value. However, in the current market environment, the importance of the specific information on the real estate market as well as the details of the cover pools appears to us to be even greater. This also applies in particular to providing improved clarity regarding the possible underlying risk factors for individual Pfandbrief programmes and to the general trends that also form the basis for real estate price developments.

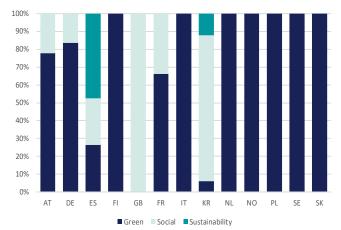
S&P: Covered bond study with reference to the CRE market

In a recent covered bond study, S&P's risk experts took an in-depth look at the commercial real estate (CRE) segment, including the specific characteristics in the jurisdictions of Austria, Germany, Denmark, Italy and Spain. In terms of implications for its own ratings assessments, S&P sees covered bond programmes as generally well positioned to withstand a correction in real estate prices. In addition, covered bonds are seen as a significant potential source of funding for the financing of commercial real estate. This is the bottom line of the study, even in the current market environment with high inflation rates and rising interest rates, which put a strain on the CRE segment, and, given the changing pool structures, would in turn be triggered by CRE repricing. S&P attributes the stable assessment with regard to covered bonds in particular to the risk diversification in the pools, comparatively low LTVs, high overcollateralization ratios and, in numerous cases, unused "uplifts" for covered bond ratings. In addition, the study also highlights the "green potential" of CRE covered bonds.

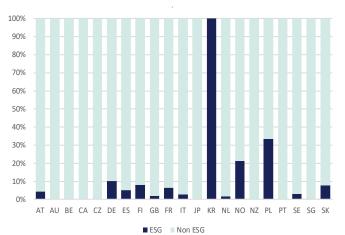
NORD/LB Fixed Income Special: ESG Update 2023

The fact that SpareBank 1 Boligkreditt has not only brought Norway back to the primary market, but at the same time breathed new life into this ESG submarket with the green benchmark, is explicitly to be welcomed. "ESG" is, after all, more than just a fad for the fixed income segment as a whole. It is fitting that this is the third edition of our Update on the ESG market. Here, we focus not only on bond issuance momentum in an ESG context, but also address significant regulatory developments. In today's issue, we present the "ESG Update 2023" in more detail in a Cross Asset article. As far as the covered bond market is concerned, issuance remains an important sub-segment, especially in the green and social sectors, and we continue to see significant catch-up potential here. This is evident not least from the - in most jurisdictions - still very low shares of ESG bonds in covered bonds in the EUR benchmark format. Despite the challenges for issuers and investors that may be associated with the ESG sub-segment in the future, it is hard to imagine the market without ESG covered bonds – and for good reason. In our view, however, it is also important to place a greater emphasis on the strengths of covered and, at the same time, ESGcompliant funding. After all, mortgage covered bonds, for example, can make a contribution in precisely the sector that "produces" a very high proportion of global CO_2 emissions.

ESG covered bonds: shares of active jurisdictions



ESG covered bonds: ESG market shares





Market overview SSA/Public Issuers

Authors: Dr Norman Rudschuck, CIIA // Valentin Jansen

Save the date: NORD/LB Capital Market Conference 2023

Under the motto "Back to the Future – let's take a look ahead together", we cordially invite you to Schloss Herrenhausen in Hanover on 30 and 31 August. Central banks in the canon of interest rate hikes, stubborn inflation data, and undeniable climate change: it's safe to say that the future has a lot to offer! What will happen next and how will the turning point in geopolitical and monetary policy affect the capital market in the future? At this conference, we intend to answer these questions and more. Please save the date and join us as we embark on a journey into the future: artificial Intelligence, energy supply, climate change and nutrition. As always, you can expect top-class external speakers in addition to stimulating panel discussions and valuable research impulses. Until then, we'll keep the flux capacitor on charge! Fasten your seatbelts and join us on our exciting journey through time with Joschka Fischer, former Foreign Minister and Vice Chancellor, whom we were able to win over for a keynote address. The future starts now!

KfW with Global Investor Broadcast and figures for Q1

According to the press release, KfW Bankengruppe, with a promotional and new business volume of EUR 40.0bn (previous year: EUR 41bn, -2%) started the new year well. This was due in particular to general promotional business, renewals of allocation transactions in the energy sector as well as increased international financing. With a commitment volume of EUR 32.8bn, domestic promotions and financing were slightly below the high level of the previous year (EUR 36.8bn; -11%). While federal subsidies for efficient buildings declined significantly due to changes in funding conditions as part of the shift from broadbased funding to focused top-level funding, renewals and the associated restructuring of existing energy allocation transactions totalling EUR 16.9bn again contributed to a high promotional and new business volume. Overall, there was also a clear normalisation of original business activities compared with the previous year. For example, the funding priorities of corporate investment, environment & sustainability as well as public infrastructure experienced significant demand. KfW raised EUR 28.1bn (Q1 2022: EUR 37.5bn) on the international capital markets to fund its promotional business in the first half of the year. This corresponds to around 34% of its planned refinancing volume of EUR 80-85bn. Q1 is usually the highest volume for refinancing. Especially in March, it was characterized by great nervousness and high volatility on the bond markets. A large part (68%) of the refinancing was in euros. KfW also issued bonds in six other currencies, including USD (13%) and GBP (11%). In addition to its regular capital and money market activities, KfW received new loans in Q1 with a volume of around EUR 5bn from the federally owned Economic Stabilization Fund (WSF) to refinance transactions related to the energy industry/supply assigned to it by the German government. The semi-annual Global Investor Broadcast was held last week on the entire range of topics.

Landwirtschaftliche Rentenbank: new promotional business up 17% in 2022

Landwirtschaftliche Rentenbank (ticker: RENTEN) recorded a significant increase in demand for its promotional loans last year. New business with concessional programme loans (EUR 6.9bn) grew by 23% compared with 2021 (EUR 5.6bn). The "Rural Development" division accounted for the largest share (EUR 2.1bn; +71% Y/Y) followed by "Agriculture" (EUR 2.0bn; -18% Y/Y) and "Renewable Energies" (EUR 1.6bn; +48% Y/Y). This development was driven primarily by a significant increase in demand from promotional institutions in the federal states for loans for infrastructure measures in rural areas and wind power financing. In the promotional segment "agricultural and food industry", Rentenbank increased new business from EUR 843.0m in 2021 to EUR 1.2bn in 2022, which is mainly due to an increased demand for machinery investments (EUR 717.1m). Total new promotional business increased by 17% to EUR 11.5bn, compared with EUR 9.8bn in the previous year. The significant expansion of new business was accompanied by an increase in total assets to EUR 97.4bn (2021: EUR 95.5bn). Despite a decrease in net interest income (EUR 268.8m; -6% Y/Y) due to increased subsidies compared to the previous year, net income reached EUR 36.0m (+4% Y/Y). Also worth mentioning is the new promotional programme "Focus on Future Fields", which addresses fields particularly worthy of support (including regional food production, agri-photovoltaic systems, environmentally friendly land management). By the end of 2022, EUR 2.1bn had already been awarded under this funding programme. The future fields addressed are also to be continuously expanded and adapted. On the funding side, Rentenbank expanded the funds raised in the medium and long maturity segments to a volume of EUR 11.8bn (2021: EUR 10.7bn). This also includes a green bond issue in benchmark format with a volume of EUR 1.0bn, with the issue proceeds incorporated exclusively into loans under the "Energy from the Land" promotional loan programme.

Hamburgische Investitions- und Förderbank: new business down significantly in 2022

In 2022, Hamburgische Investitions- und Förderbank (ticker: IFBHH) again supported the city of Hamburg in housing and urban development promotion as well as in the promotion of business, innovation and the environment. The greater planning uncertainty caused by the crisis, price increases associated with the shortage of materials and skilled labour, the dynamic interest rate environment and poorer federal funding conditions have had a particular impact on the largest funding area (housing). Although the largest share of new business volume in 2022 continued to be accounted for by Residential Construction (EUR 346.8m), it fell short of 2021 (EUR 575.1m). By contrast, grants approved were up on the previous year at a total of EUR 372.1m. The Economy and Environment business area was also characterized by an increase in grants accompanied by a decline in loans granted, whereas innovation support was expanded overall. In addition, coronavirus and economic stimulus payments of EUR 716.5m were made, focusing on the economy and the environment. In total, new business volume in 2022 of EUR 1.5bn (2021: EUR 3.3bn) was achieved. Total assets increased by around 10% to EUR 6.9bn at year-end 2022, which the company says is largely due to higher receivables from the Bundesbank (EUR +425m). New for 2022: in September, IFBHH, together with Investitionsbank des Landes Brandenburg and Investitions- und Strukturbank Rheinland-Pfalz, approached investors for the first time with a cross-state social bond (EUR 500m; seven-year term).

WIBank: new business rose to EUR 4bn in 2022; growth in almost all segments

In the past financial year, Wirtschafts- und Infrastrukturbank Hessen (ticker: WIBANK) increased its new promotional business from around EUR 3.4bn in 2021 to EUR 4.0bn. Total assets also increased by around EUR 1.0bn to EUR 27.5bn. The main reason for the yearon-year increase in the volume of new business by almost EUR 600m was the significant rise in demand for infrastructure financing. In this context, particular emphasis was placed on municipal financing (EUR 754.7m) and funding for hospitals (EUR 1.1bn). The two funding areas of "supply & modernise" and "educate & employ" showed the largest increases in new business in financial year 2022, with increases of 35% and 27%, respectively. The former is WIBank's largest business segment in terms of volume, which with a volume of EUR 2.6bn (2021: 2.0bn) achieved a share of new business of 66%. The increase in the "train & employ" business area was mainly due to two factors: on the one hand, to the start of the EU funding period 2021-2027 and, on the other hand, to the implementation of the REACT-EU package of measures to support crisis management in the context of the coronavirus pandemic. The share of new business in the "build & live" promotional segment amounted to EUR 623.8m (2021: 717.9m) or 16%. According to the issuer, the yearon-year decline is attributable to the temporary suspension or adjustment of federal subsidies for KfW loans to promote energy efficiency. In the "start-up and growth" funding segment (mainly traditional business development), new business totalled EUR 665.8m at the end of the financial year 2022, which was on a par with the previous year. The main income components, consisting of net interest income (EUR 76.1m) and net fee and commission income (EUR 66.1m), recorded a total volume of EUR 142.2m, an increase of EUR 12.8m compared to 2021. Net income amounted to EUR 23.9m in 2022 after EUR 16.6m in 2021.

Svensk Exportkredit: New business volume up 73% year on year in financial year 2022

Sweden's Svensk Exportkredit (ticker: SEK) issued government-subsidised loans in the export finance sector in Q4 2022 amounting to the equivalent of EUR 3.1bn, bringing new business in 2022 to a new record of EUR 11.7bn (+73% Y/Y). In particular, the Russian war of aggression on Ukraine had led to a significant increase in financing requirements in the Swedish export industry as a result of the difficult market environment. SEK's lending is heavily based on guarantees from export credit agencies such as Euler Hermes or Coface. Strategically, SEK continued to focus on expanding its customer portfolio, enabling more Swedish companies to access export promotion. Year-on-year growth of 15% was therefore generated in the loan portfolio (total lending portfolio 2022: EUR 24.1bn). The share of green assets, which also rose from 7.5% in 2021 to 9.5% today and is expected to continue to grow in the future, is also highlighted. In terms of key earnings figures, net interest income (EUR 192.1m; +14% Y/Y) on the one hand and also operating income (EUR 129.7m; +12.7%) on the other were expanded, sometimes significantly. In addition, total assets increased from EUR 29.4bn in 2021 to EUR 33.1bn in the past financial year (+12.6%). In order to meet the increased financing requirements, SEK issued a three-year USD bond – with an issue size of USD 1.75bn in benchmark format – in the fourth guarter of 2022 alone, in addition to a EUR bond with a volume of EUR 1.0bn (five-year maturity).

KfW Sustainability Report: EUR 50bn in green bond issuance volume exceeded

At the beginning of May, KfW (ticker: KFW) reported on its sustainability-related activities on the capital market, among other things, in its Sustainability Report 2022. In 2022, KfW issued a total of 20 "Green Bonds - Made by KfW" in ten currencies with a volume equivalent to EUR 10.6bn (including seven taps of existing bonds). Measured against the total volume of new issues in financial year 2022, this corresponds to a share of 12%. With its green bonds, KfW pursues the goal of promoting investments in sustainable and climatefriendly projects as part of its public mandate, as well as generating a measurable contribution to climate protection. In addition, the EUR 50bn mark in total issuance volume of green bonds was exceeded last year. In addition to primary market activities, KfW also reports on the direct environmental impact of issue proceeds. According to the report, the investments in the amount of the net proceeds from the green bonds (EUR 16.5bn) led to a saving of 2.4 million tons of CO_2 equivalents per year. This corresponds to the annual CO_2 emissions of 1.6 million passenger cars or a 60% share of new passenger cars registered in Germany in 2022. Climate and environmental protection is a key focus of business activities overall. On the assets side, new commitments in this area last year accounted for EUR 60.5bn (2021: EUR 56.4bn) or around 36% of the total promotional volume.

Primary market

Fresh goods were brought to market by KOMINS, ESM, KFW, EIB and KDB. The mandate or RfP (ESM) had mostly already taken place last week, but all deals went through on Monday or Tuesday of this week. Kommuninvest kicked off with EUR 500m (7y) as a green bond. The deal was priced at ms +1bp after guidance started at ms +5bp area. The deal was around five times oversubscribed. The ESM opted for a somewhat non-conventional maturity of 10.25 years – EUR 2bn was raised at ms +7bp. The books were more than 12 times oversubscribed at over EUR 24bn. The guidance had started at ms +9bp area for this deal. KfW's green bond was also heavily oversubscribed: EUR 3bn (7y) came to ms -13bp. Guidance at the outset was ms -11bp, and the book was well filled with more than EUR 6.4bn. The largest deal of the trading week under review was made yesterday by the EIB with EUR 5bn in EARN format. The investment bank chose a seven-year term and was able to market the deal at ms -4bp. Narrowing compared to the guidance (ms -2bp area) was no problem with an order book of more than EUR 35.5bn. The Korean Development Bank also brought a benchmark (EUR 750m) to market (5y). Demand stood at more than EUR 1.25bn. The guidance started at high 40bp area but was able to increase to ms +43bp. From the "third to fourth row" came the city of Dortmund: EUR 110m should be the final figure for eight years at ms +35bp. Here, the guidance was ms +38bp area. DRTMND was back in the primary market for the first time since 2019. We always welcome deals from German municipalities! In addition, the state of North Rhine-Westphalia mandated for several investor calls in both German and English for an upcoming sustainability bond.

		0		0	,		
Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
Other	15.05.	XS2623871196	5.0y	0.75bn	ms +43bp	AA- / Aa2 / AA	-
SNAT	15.05.	XS2626024868	7.2y	5.00bn	ms -4bp	AAA / Aaa / AAA	-
DE	15.05.	XS2626288760	7.0y	3.00bn	ms -13bp	- / Aaa / AAA	Х
SNAT	15.05.	EU000A1Z99S3	10.3y	2.00bn	ms +7bp	AAA / Aaa / AAA	-
Nordics	15.05.	XS2625986836	7.0y	0.50bn	ms +1bp	- / Aaa / AAA	х
	Other SNAT DE SNAT	Other 15.05. SNAT 15.05. DE 15.05. SNAT 15.05.	Other15.05.XS2623871196SNAT15.05.XS2626024868DE15.05.XS2626288760SNAT15.05.EU000A1299S3	Other 15.05. XS2623871196 5.0y SNAT 15.05. XS2626024868 7.2y DE 15.05. XS2626288760 7.0y SNAT 15.05. EU000A1299S3 10.3y	Other 15.05. XS2623871196 5.0y 0.75bn SNAT 15.05. XS2626024868 7.2y 5.00bn DE 15.05. XS2626288760 7.0y 3.00bn SNAT 15.05. EU000A1Z99S3 10.3y 2.00bn	Other 15.05. XS2623871196 5.0y 0.75bn ms +43bp SNAT 15.05. XS2626024868 7.2y 5.00bn ms -4bp DE 15.05. XS2626288760 7.0y 3.00bn ms -13bp SNAT 15.05. EU000A1Z99S3 10.3y 2.00bn ms +7bp	Other 15.05. XS2623871196 5.0y 0.75bn ms +43bp AA- / Aa2 / AA SNAT 15.05. XS2626024868 7.2y 5.00bn ms -4bp AAA / Aaa / AAA DE 15.05. XS2626024868 7.0y 3.00bn ms -13bp - / Aaa / AAA SNAT 15.05. XS2626288760 7.0y 3.00bn ms -13bp - / Aaa / AAA SNAT 15.05. EU000A1Z99S3 10.3y 2.00bn ms +7bp AAA / Aaa / AAA

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

Cross Asset ESG update 2023 in the spotlight

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

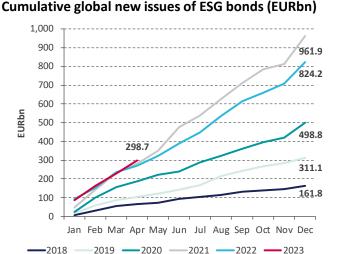
ESG Update 2023 for the first time also looks at the ECB's "green monetary policy"

In the updated version of our <u>NORD/LB Fixed Income Special - ESG update 2023</u>, we once again focus on current developments in the market for ESG bonds in addition to ongoing regulatory activities. Starting with a review of the global ESG primary market in 2022 in the segments green, social, sustainable, and sustainability-linked bonds, we then focus on covered bonds and SSA (excluding sovereigns) in the EUR benchmark segment. This is followed by the fundamentals and latest developments regarding the EU taxonomy and the EU green bond standard. For the first time in this issue, we also take a look at the ECB's "green monetary policy" on the basis of the first climate-related reporting on corporate bond holdings in the Eurosystem's balance sheet. We also take a separate look at recent developments in the ICMA Bond Principles and Guidelines due to their relevance to the market. Rating agencies are another important factor, to which we also devote a separate chapter. Finally, we provide an outlook on issuance dynamics in the light of regulatory, economic and geopolitical uncertainty. In today's teaser, we want to whet your appetite for more and summarize the key theses as follows:

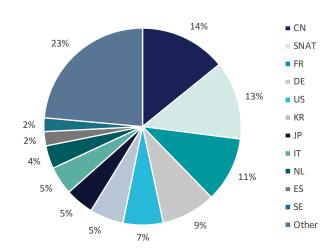
- Growth in the global ESG bond market lost momentum in 2022, which is reflected in a decline in new issue volumes across all ESG segments we consider. Compared to the previous year, economic and geopolitical uncertainty continued to worsen, which also impacted primary market activity in addition to subsiding extraordinary factors such as (supra-)national aid programs in the wake of the Corona pandemic. At the current level, however, issuance in 2023 (globally) has so far been promisingly above the previous year and the record year of 2021.
- II. Dynamic regulatory activity especially in the EU continues to attract a great deal of attention and is generating impulses on the markets, some of which are viewed ambivalently. With the recent draft on the technical design of the remaining four environmental objectives covered in the EU taxonomy, the EU Commission intends to extend the scope to further economic sectors. Taking the SFDR as an example, this also closely links growing ESG-related reporting obligations. The EU green bond standard, which is based on the EU taxonomy, reached a further milestone in February of this year with a provisional agreement between the EU Parliament and Council on the way to the first legally valid version, which is expected in the first half of 2024 at the earliest.
- III. Further impetus for ESG bond markets is coming from the monetary authorities. The ECB already announced the inclusion of climate risks in the balance sheet of the Eurosystem in 2021 and published a report on the climate impact of corporate bond holdings for the first time last March. The current approach does not go far enough for all members of the ECB's Executive Board, who believe that it could be extended to public sector holdings and that more drastic measures could be taken than simply a greener tilting of reinvestments.

New issues of ESG bonds in 2022 fell short of record 2021 levels

The global market for sustainable bonds – by our definition covering bonds in the green, social, sustainable and sustainability-linked categories – reached a high level by historical standards last year with a new issuance volume equivalent to EUR 824.2bn. Nevertheless, the primary market fell short of expectations, with the volume of new issues still around EUR 961.9bn in 2021 – albeit largely due to one-off effects resulting from the coronavirus crisis. Expectations for 2022 were correspondingly high among many market participants, as the volume of new ESG issues had risen steadily in the past decade. The fact remains that a cumulative volume of around EUR 2,900bn has been issued in the last five years. In 2022, China led the rankings, although it should be noted that it was not until an overhaul of the Chinese regulations in mid-2022 that green bonds were required to be aligned completely with the globally established ICMA Bond Principles (previously it was about 70%). Incidentally, for state-owned enterprises, the requirement remains at 50%. Large portions of China's new issues of ESG bonds in 2022 are therefore not on a par with European issuance. With regard to the EU, it has become a major player in the global market for ESG bonds, especially in the social and green segments. Under the SURE programme (Support to Mitigate Unemployment Risks in an Emergency) alone, social bonds with a volume of EUR 98.4bn had been issued by the end of the programme in 2022. With the NGEU (NextGenerationEU) stimulus package – for a sustainable recovery of the Eurozone with a volume of more than EUR 800bn (at current prices, of which up to 30% in green bonds) – the EU is expected to become the largest green bond issuer worldwide by 2026. Among the member states themselves, France in particular stood out, with an 11% share of global new issues of ESG bonds in 2022, followed by Germany with 9%.



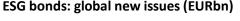
New issues of ESG bonds by jurisdiction (2022)



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research; data as of 28 April 2023 eod

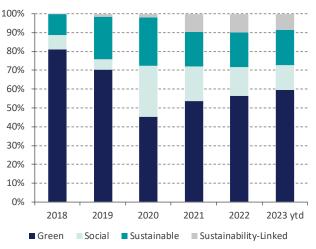
New issues of ESG bonds in 2022: decline in all sub-segments

The volume of new ESG bonds brought to market last year fell short of the previous year's final figure for the first time in the last ten years. According to our definition, this applies to each sub-segment. Nevertheless, green bonds were once again the strongest performers with a new issuance volume of EUR 453.9bn (-11% Y/Y). Sustainable bonds (EUR 149.1bn; -15% Y/Y) ranked second, followed by social bonds (EUR 124.7bn; -29% Y/Y) and sustainability-linked bonds (EUR 81.0bn; -13%). The decline in social bonds, which is largely attributable to the special measures taken by the EU in 2021 in the wake of the coronavirus crisis described above, is particularly striking. Instruments suitable for transition finance (sustainability-linked bonds), which are not linked to the use of proceeds but to environmental performance indicators defined ex ante and are therefore particularly suitable for small issuers, were unable to maintain the momentum of previous years last year, also as a result of the volatile market environment. While there was a tenfold increase in new issues of sustainability-linked bonds in 2021, there was a 13% decline at year-end 2022. As a result of the general issuance activity in the ESG segment, there were also shifts in relative market shares in 2022. At the end of December, green bonds once again accounted for the lion's share (56%). In contrast to the previous year, sustainable bonds (18%) were now in second place, followed by social bonds (15%). Sustainability-linked bonds again had a market share above the 10% mark despite the negative growth rate. Overall, they still make the smallest issuance contribution, but in general the global market for ESG bonds has seen a significant increase in granularity in recent years.





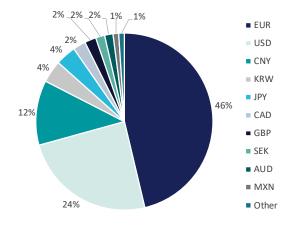
ESG bonds: relative market shares of new issues



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research; data as of 28 April 2023 eod

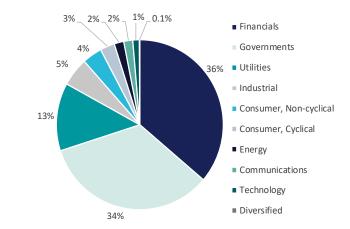
Financials and public issuers account for largest new issuance volume

Around 36% of the green, social, sustainable and sustainability-linked bonds issued in 2022 are attributable to the "Financials" segment and 34% to the "Governments" segment. Compared with the previous year, the rankings here have changed. In 2021, the shares were still 27% (Financials) and 41% (Governments). A glance at the industrial sectors shows that utilities continue to play an important role in the universe of sustainable bonds. In 2022, utilities accounted for a new issuance volume of EUR 103bn (previous year: EUR 108bn), ranking third with a share of 13%.



ESG bonds: distribution of globally outstanding volume by currency (year-end 2022)

ESG bonds: distribution of globally outstanding volume by sector (year-end 2022)



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

EUR and USD remain leading currencies: EUR market share increases; USD loses out

Bonds denominated in euros account for almost half of the outstanding volume worldwide, by our definition (45%, previous year: 43%). USD makes up a quarter (25%), compared with 33% in the previous year. In Asia, on the other hand, CNY (12%) and KRW (4%) continue to dominate, which now add up to 16% (previous year: 8%). In Europe, aside from the single currency, the most common currency of choice is GBP (2%; previous year: 5%) and SEK (2%; previous year: 1%). In our view, the pace of regulation by the EU Commission in the EU taxonomy on the one hand and the accompanying special programmes such as NGEU on the other should continue to secure the euro's supremacy.

EU taxonomy overview

Within the framework of the <u>European Green Deal</u> and the <u>Paris Agreement</u> on climate protection goals, the European Commission introduced a uniform market standard for the financing of sustainable economic activities in the form of the EU taxonomy. The latter is a central component of the <u>Action Plan</u> published by the European Commission in March 2018 for financing sustainable growth. Essentially the EU taxonomy is a classification system designed to channel capital flows into environmentally sustainable activities. The creation of a uniform market standard for sustainable financing and investment will also boost defragmentation of the investment landscape in the area of ESG and curb "greenwashing".

Development of the EU taxonomy over time

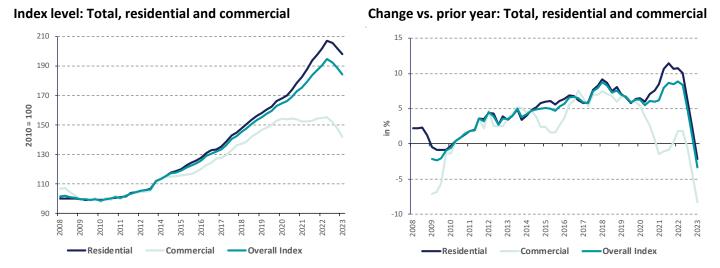


Covered Bonds Development of the German property market

Author: Dr Frederik Kunze

vdp property price index – correction continues as expected in the first quarter of 2023

The German property market has been affected by the change in general conditions on the financial and capital markets. In our view, the latest figures published for the widely recognised vdp property price index also confirm this. The dataset presented by the Association of German Pfandbrief Banks (vdp, cf. press release), which is based on an evaluation of the property transaction data of more than 700 financial institutions, indicated a decline in all sub-segments in terms of the price trend. It is evident that property prices were down both on the previous quarter and year on year. In its press release, the vdp also highlighted that the sharpest decreases since index values were first recorded have been determined for the first quarter of 2023 – both over the twelve-month period and quarter-on-quarter. The overall index was down by 3.3% on the first quarter of 2022 and by 2.3% on the previous quarter. The trend reversal in the German property market is also obvious to see from the charts. In the following, we will provide details on the vdp property price index, as usual, as well as examining segment-specific factors in detail.



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

Details on the trend in residential property prices – relatively robust trend

Current prices in the segment of residential property have been supported by ongoing high demand for housing and limited construction activity. Consequently, the index trend for residential property (-2.1% Y/Y and -2.0% Q/Q) can still be described as robust in relative terms. With regard to owner-occupied housing, the extent of the setback varied depending on the type of use. The price of owner-occupied homes fell by 1.0% year on year and by 2.4% quarter on quarter while that of rented property was down 3.1% year on year and -2.2% quarter on quarter.

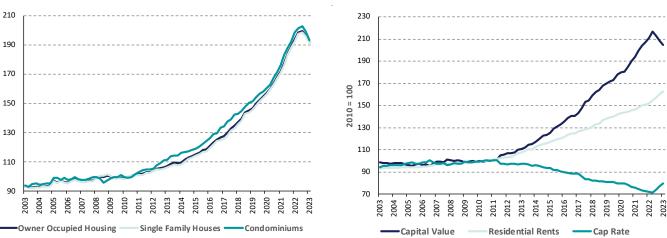
Rent continues to rise

The forces which have been impacting the property segment for some time emanate to a considerable extent from the capital market. Demand for housing has remained at a high level. However, in view of the high cost of capital, for some households this no longer translates into demand for a new owner-occupied home. As a result, the focus is shifting to the trend in rent. With regard to rent under new contracts, growth of 7.4% year on year and 1.2% quarter on quarter was recorded. For multi-family dwellings, yields increased significantly as a result of the trend in prices and/or rent. The property yield (Liegenschaftszins) rose by 10.9% year on year and by 3.5% quarter on quarter.

Owner-occupied residential property

2010 = 100

Multi-family dwellings



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

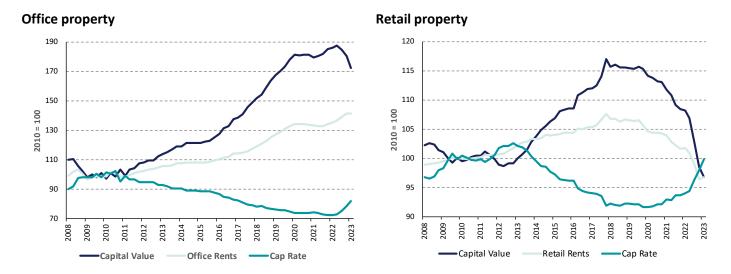
Top 7 housing markets also affected by the general trend

The separate index reflecting the trend in the housing markets of the top 7 cities fell (-1.4% Y/Y and -1.3% Q/Q) and did not therefore break the general trend. Analysing the trend in residential property prices, the top 7 cities ranged from the still relatively robust Berlin (+1.0 Y/Y and -1.3% Q/Q) to Frankfurt/Main, which saw a marked price reduction (-6.4% Y/Y and -2.2% Q/Q).

vdp: "possible signs that retail property prices are finding a stable base"

Financial market participants have specifically been observing commercial property financing for several weeks. The fact that the vdp now sees "possible signs" of retail property prices finding a stable base may be received favourably by some market observers. However, this stabilisation has yet to be confirmed in the coming weeks and quarters. Besides, the negative price trend for retail property has not yet been broken, although there was a weakening recently at -1.7% quarter on quarter (vs -10% Y/Y). The increase in rent under new contracts of 0.3% quarter on quarter (vs -5.0% Y/Y) also provides a glimmer of hope. In terms of the price of office property, a decline of 7.0% year on year and 5.0% quarter on quarter was recorded. At the same time, the level of rent in this segment changed +4.4% year on year and -0.9% quarter on quarter. Overall, these two sub-segments within commercial property financing were subject to a differing dynamic, according to the latest dataset.





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

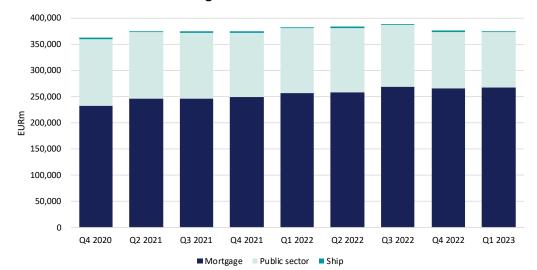
Conclusion

It is hardly surprising that the picture which emerges from the latest vdp information on the German property market reflects the global trend. As part of our weekly publication, we have repeatedly addressed the low level of demand from private households for property loans, which is likely to be a result of high mortgage interest. In the meantime, banks have adjusted lending rates, partly to take account of the change in affordability. These and other factors are reflected by the vdp index in that a significantly lower number of transactions are reported. Jens Tolckmitt, Chief Executive of the vdp, is certain that "like every other market, the property market is also cyclical. We expect prices to continue to fall in the next few quarters, to varying degrees in the various property categories. Yet, we see no indication of a sudden collapse of prices." We go along with this line of reasoning, particularly because the current wait-and-see phase – both on the vendor and buyer sides cannot continue forever. Neither do we believe that an abrupt trend reversal is to be expected, which would put the German property market on a new dynamic path of price increases. There is another significant factor which we do not want to omit: the stability of the German property market (returning in line with expectations) should also be seen partly as a result of the robust labour market. In essence, we see an important parallel with the cover pools of national and international covered bond issuers. In this regard, employment and therefore the ability to service mortgage obligations constitute the basis for what has continued to be very high asset quality.

Covered Bonds Transparency requirements §28 PfandBG Q1/2023

Transparency requirements pursuant to Section 28 PfandBG: a glance at the German Pfandbrief market

We are of the opinion that transparency in the international capital markets and consequently also the covered bond market absolutely is a valuable asset. We would additionally emphasise its importance for the Pfandbrief segment in the current market climate. In fact, we have observed that a growing number of investors are focusing on the composition of the cover funds of German issuers. The main attention is on the type of cover (residential vs commercial property) and the geographical distribution of properties. In this context, the transparency provisions of Section 28 PfandBG (German Pfandbrief Act) represent an important input variable. The reporting requirements in this connection, which were expanded once more in the wake of implementing the EU's covered bond directive, are presented on a quarterly basis for the majority of issuers by the Association of German Pfandbrief Banks (vdp) as part of the transparency reports. This data also forms the basis of our NORD/LB Covered Bond Special on the Transparency requirements §28 PfandBG Q1/2023 that we published in the last trading week. It provides cover pool data for 37 mortgage Pfandbrief programmes and 21 public sector Pfandbrief programmes as well as two ship Pfandbrief programmes. For the quarter currently under review, we have again manually added the data on the cover funds of Deutsche Bank, which is not reported on the vdp website. In the following, we have summarised the fundamental developments and key statements of the transparency reports as at the end of the first quarter of 2023.



Trend in the volume of outstanding Pfandbriefe

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

Further decrease in total volume of Pfandbriefe outstanding

At EUR 376.0bn worth of Pfandbriefe outstanding, the total volume again decreased compared with the previous quarter (cut-off date of 31 December 2022: EUR 376.4bn). However, the reduction was very modest. At present, the volume of mortgage Pfandbriefe outstanding is up Q/Q by EUR 2.4bn, or 0.9%, to EUR 268.4bn, following a setback in the previous quarter. A further substantial reduction was recorded in the volume of public sector Pfandbriefe (EUR -2.7bn, or -2.5% Q/Q) to EUR 105.8bn. The volume of ship Pfandbriefe (Schipfe) outstanding was down by EUR 70m to EUR 1.9bn.

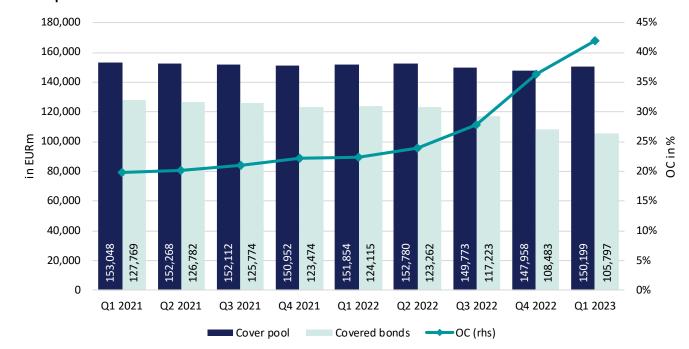


Trend in mortgage Pfandbriefe

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

Mortgage Pfandbriefe – overcollateralisation ratio increases to 33.3%

The volume of mortgage Pfandbriefe totalled EUR 268.4bn. At the same time, the volume of cover funds amounted to EUR 357.7bn, which produced calculated overcollateralisation of EUR 89.3bn, or 33.3% (previous quarter: EUR 85.9bn, or 32.3%). In our opinion, this average does not yet indicate a shortage of cover assets, which would have an adverse impact on potential bond issues in the coming quarters. Based on the cut-off date, growth of EUR 1,469m in the volume outstanding at BerlinHyp was noted. However, the decrease of EUR 344m on the previous year's figure puts this into perspective. The situation is different for LBBW, where in terms of figures a huge reduction was reported on the previous quarter (EUR 1,059m) while growth of EUR 3,011m was achieved year-on-year. Similarly, BayernLB recorded a decrease on the previous quarter (EUR 203m) but a significant increase year-on-year (EUR 2,660m). Bausparkasse Schwäbisch Hall was among the growth candidates: compared with the fourth quarter of 2022, growth amounted to EUR 518m. At the same time, the financial institution has recorded an increase in the volume of Pfandbriefe of EUR 1,523m since the first quarter of 2022.



Trend in public sector Pfandbriefe

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

Public sector Pfandbriefe - volume continues to decrease

In the segment of public sector Pfandbriefe, the downward trend persisted. The volume of bonds totalled EUR 105.8bn in the current reporting period (previous quarter: EUR 108.5bn). Conversely, the volume of cover assets rose perceptibly to total EUR 150.2bn (previous quarter: EUR 148.0bn). This means that at 42.0%, the upward trend in the calculated overcollateralisation ratio continued. If considered in isolation, we interpret this growth in cover funds observed as an indication of sufficient potential for future bond issues. At any rate, we confirm our assessment that the decrease in the volume of public sector Pfandbriefe outstanding will not necessarily continue to the same extent we have observed in recent years. This is also likely to be linked to the fact that the provision of public sector cover provides certain advantages, particularly in the context of ESG, and may include utilisation of the issuing proceeds for both social and green purposes. However, such a trend is not yet evident from the current analysis. At issuer level, UniCredit Bank stands out with growth of EUR 1,328m compared with the previous quarter. In contrast, significant decreases were recorded for the same period under review at Helaba (EUR 1,522m) and DKB (EUR 1,220m) amongst others.

Ship Pfandbriefe remain a niche product

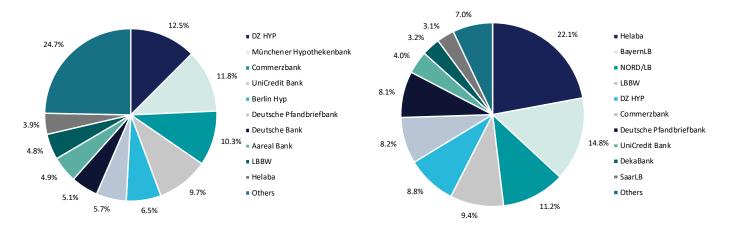
With a share of 0.5% in relation to the total volume, the segment of ship Pfandbriefe (Schipfe) continues, unchanged, to represent a niche market within the German Pfandbrief market. The volume of Schipfe outstanding decreased from EUR 2,088m in the previous quarter to EUR 2,038m (-2.4% Q/Q). Only two financial institutions currently have ship Pfandbriefe outstanding: Commerzbank (EUR 79m, or 3%) and HCOB (EUR 2,317m, or 97%).

Top 10 issuers at a glance – minor changes on the previous quarter

With regard to the ranking of the six biggest mortgage Pfandbrief issuers, there were no changes at all. Accordingly, DZ HYP remained the biggest issuer in the sub-market of mortgage Pfandbriefe, followed by Münchener Hypothekenbank and Commerzbank. In the current quarter under review, Deutsche Bank was in seventh place (previously eighth place). Aareal Bank, LBBW and Helaba rank in the next three places. The combined share of the ten biggest issuers in relation to the total volume outstanding amounted to 75.3%. With regard to public sector Pfandbriefe, this share was 93.0%. In this segment, Helaba, BayernLB, NORD/LB, LBBW and DZ HYP remained unchanged in the top five places. Commerzbank and Deutsche Pfandbriefbank swapped places – next two – in the ranking. DKB (volume of EUR 2.9bn, share of 2.8%) fell out of the top 10 in the first quarter of 2023 and was replaced by UniCredit Bank (volume of EUR 4.2bn, share of 4.0%).

Mortgage Pfandbriefe – market shares

Public sector Pfandbriefe – market shares



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

Important information at cover pool level – Section 28 study

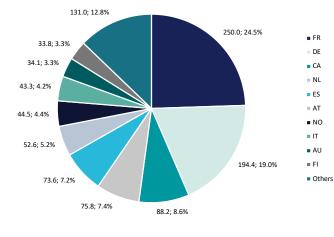
In addition to the present analysis, which is mainly at overall level, the perspective at the level of individual cover pools and/or programmes must not be neglected. We mentioned this above, using the examples of geographical distribution and type of cover assets. For these more detailed descriptions with regard to the German market, please refer to our <u>Section 28 study</u>. It illustrates, for example, in the overview in table format on page 5, which of the mortgage cover pools comprise a high share of commercial assets. With regard to a "more international perspective", please refer to the <u>NORD/LB Issuer Guide Covered Bonds 2022</u>.

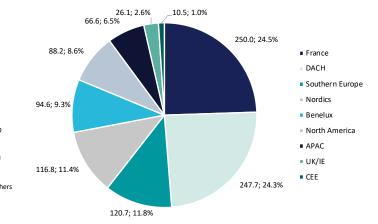
Conclusion

The German Pfandbrief market recently recorded a further decline in terms of the Pfandbrief volume outstanding. At the same time, an upward trend in the volume of cover assets was evident, which we interpret as an indicator of future bond issues. Pertaining to the German EUR benchmark bond segment, we are happy to confirm our forecast for the 2023 issuance volume and expect fresh bonds worth EUR 33bn to be issued (volume issued in the year to date: EUR 21.75bn).

Charts & Figures Covered Bonds

EUR benchmark volume by country (in EURbn)





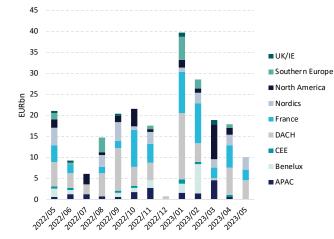
EUR benchmark volume by region (in EURbn)

Top-10 jurisdictions

Rank	Country	Amount outst. (EURbn)	No. of BMKs	There of ESG BMKs	Avg. issue size (EURbn)	Avg. initial maturity (in years)	Avg. mod. Duration (in years)	Avg. coupon (in %)
1	FR	250.0	240	16	0.97	9.6	5.2	1.17
2	DE	194.4	277	32	0.65	8.0	4.3	0.97
3	CA	88.2	66	0	1.31	5.5	2.9	0.91
4	NL	75.8	75	2	0.94	11.0	6.6	0.99
5	ES	73.6	59	6	1.14	11.1	3.6	1.93
6	AT	52.6	89	4	0.58	8.4	5.2	1.25
7	NO	44.5	53	12	0.84	7.3	3.9	0.57
8	IT	43.3	54	2	0.78	9.2	3.7	1.19
9	AU	34.1	33	0	1.03	7.3	3.6	1.35
10	FI	33.8	37	3	0.89	7.2	3.8	1.02

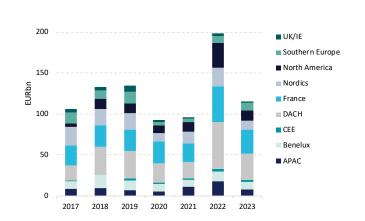
250

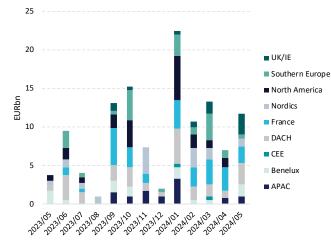
EUR benchmark issue volume by month



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

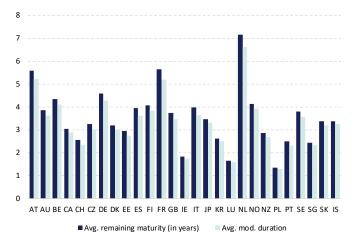
EUR benchmark issue volume by year



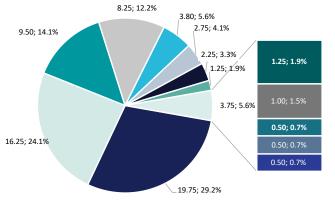


EUR benchmark maturities by month





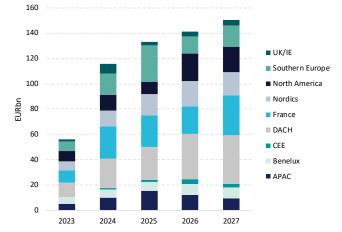
EUR benchmark volume (ESG) by country (in EURbn)



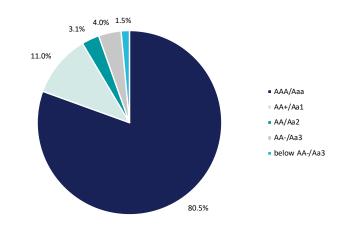
• DE = FR • NO = KR • ES = FI • AT • NL • IT • SE • SK • GB • PL

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

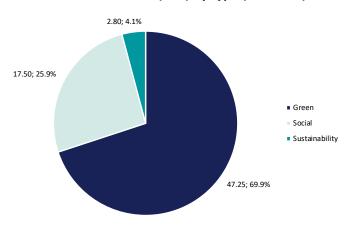
EUR benchmark maturities by year

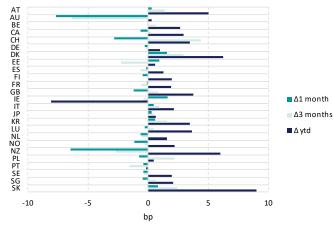


Rating distribution (volume weighted)



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

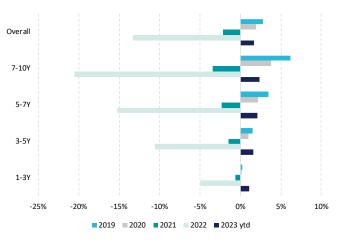




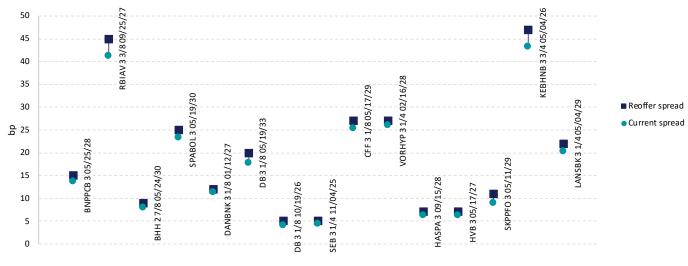
Spread development by country

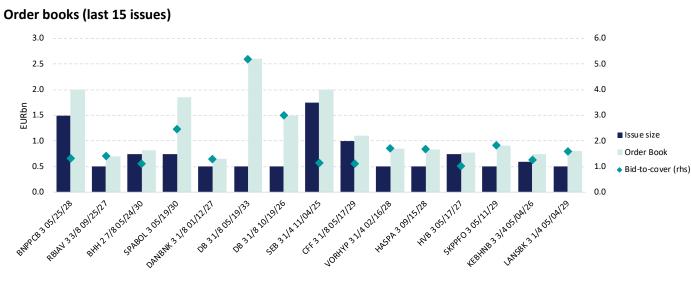


Covered bond performance (Total return)



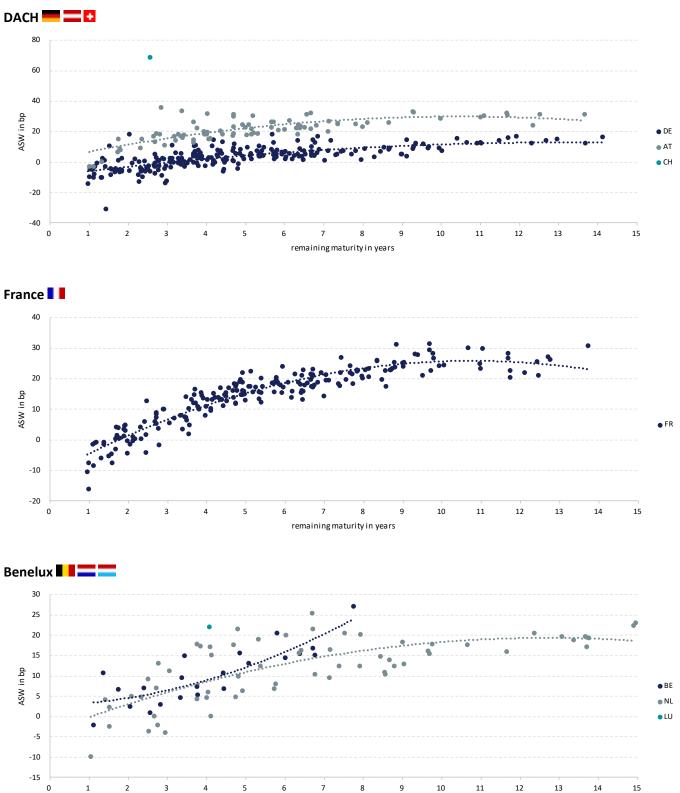
Spread development (last 15 issues)





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



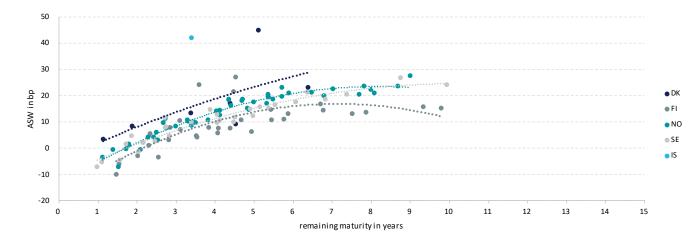


remaining maturity in years

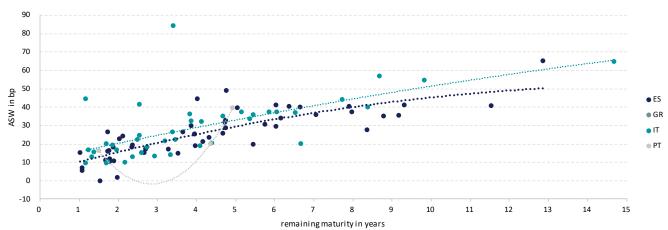
Spread overview¹



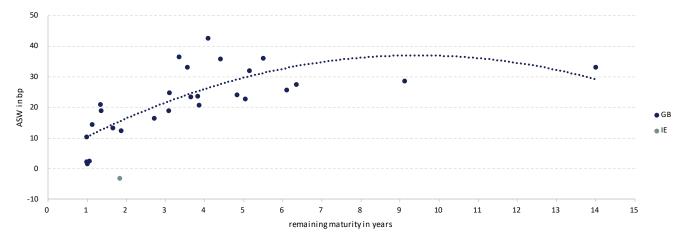




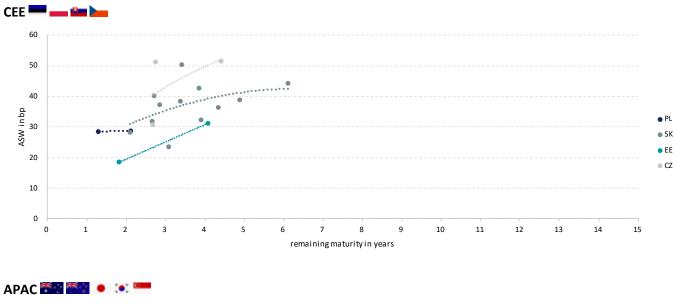


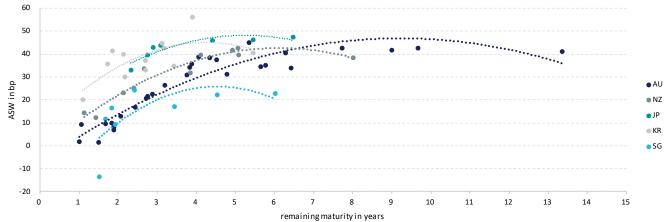




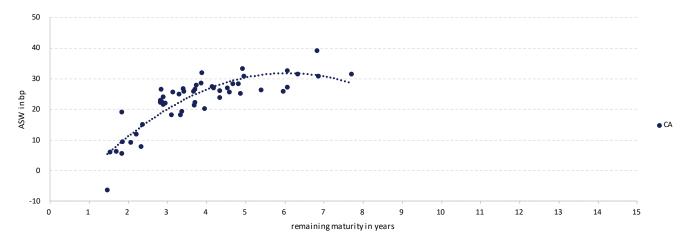


Source: market data, Bloomberg, NORD/LB Markets Strategy & Floor Research





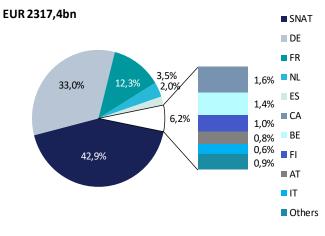
North America 🕨



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

Charts & Figures SSA/Public Issuers

Outstanding volume (bmk)



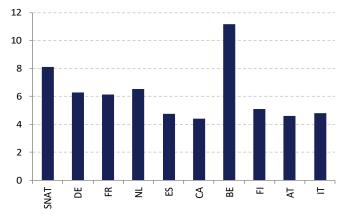
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	994,3	228	4,4	8,1
DE	763,9	564	1,4	6,3
FR	286,0	189	1,5	6,1
NL	81,0	71	1,1	6,5
ES	47,4	64	0,7	4,8
CA	36,4	25	1,5	4,4
BE	31,5	35	0,9	11,2
FI	22,6	25	0,9	5,1
AT	17,8	21	0,8	4,6
IT	15,0	19	0,8	4,8

Issue volume by year (bmk)



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

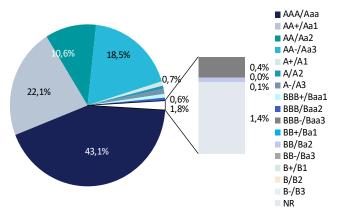


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Maturities next 12 months (bmk)

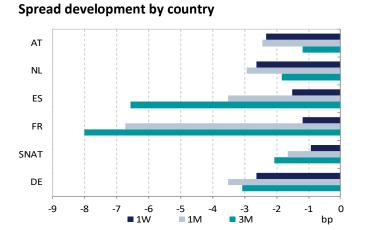


Rating distribution (vol. weighted)

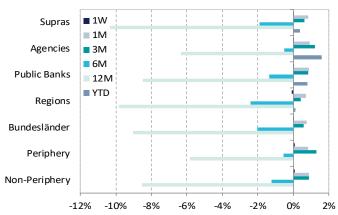


Reoffer Spread / DM Current ASW / DM KOMMUN 3 3/8 04/26/43 (fixed) 3/8 05/23/28 (fixed 60 EU 3 3/8 10/04/38(fixed) 50 40 SFILFR 3 1/4 11/25/30 (fixed) 30 3 08/23/33 (fixed SCHHOL 2 7/8 05/10/28 JNEDIC 3 1/8 04/25/33 KUNTA 3 1/8 07/29/30 KDB3 KOMINS 2 7/8 05/23/30 (fixed) 20 LANDER 3 04/26/30 (fixed) ٠ EIB 2 3/4 07/30/30 (fixed þ BERGER 3 05/04/28 (fixed) 10 <FW 2 3/4 05/15/30 (fixed) (fixed) (fixed) (fixed) EU 2 3/4 10/05/26 (fixed) ٠ 0 HESSEN Float 10/27/26 ٠ -10 ESM (floating) -20 -30 -40

Spread development (last 15 issues)

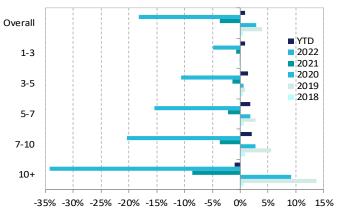


Performance (total return) by segments

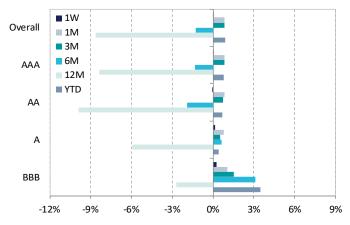


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

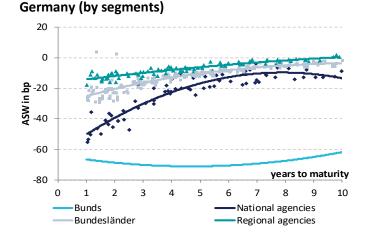
Performance (total return)



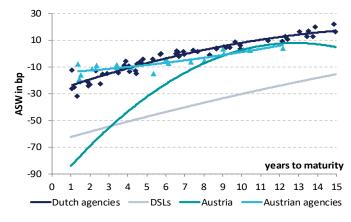
Performance (total return) by rating

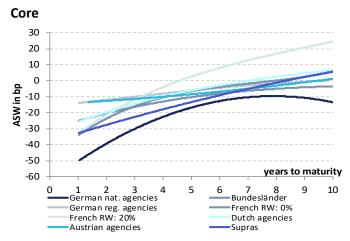


NORD/LB

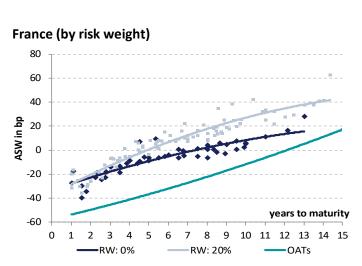


Netherlands & Austria

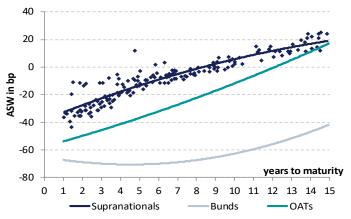




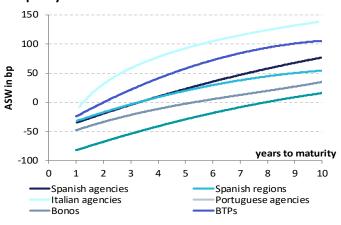








Periphery

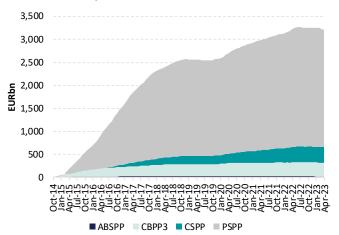


ECB tracker

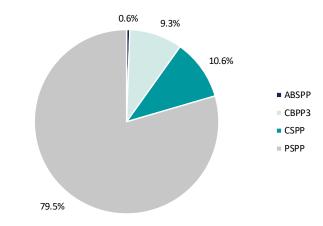
Asset Purchase Programme (APP)

	ABSPP	СВРРЗ	CSPP	PSPP	APP
Mar-23	19,464	299,707	341,974	2,569,835	3,230,980
Apr-23	18,491	298,627	341,574	2,557,798	3,216,490
Δ	-973	-1,080	-400	-12,037	-14,490

Portfolio development

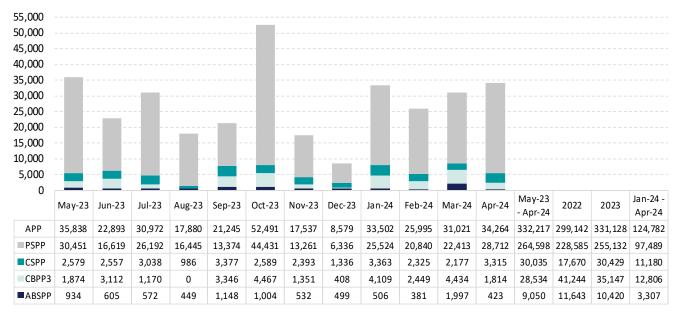


Portfolio structure

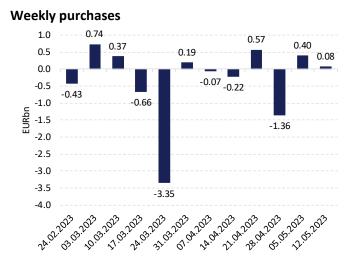


Source: ECB, NORD/LB Markets Strategy & Floor Research

Expected monthly redemptions (in EURm)

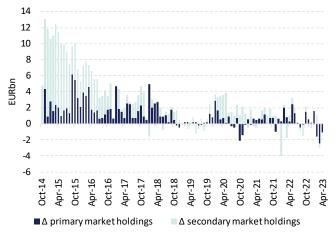


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

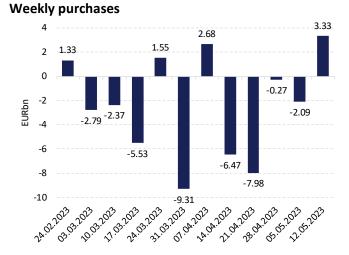


Covered Bond Purchase Programme 3 (CBPP3)





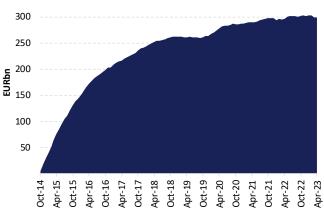
Public Sector Purchase Programme (PSPP)



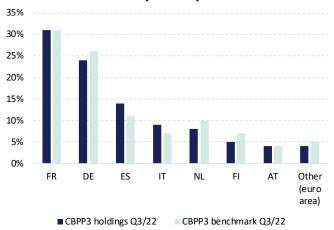
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Development of CBPP3 volume

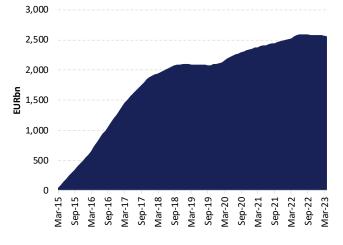
350



Distribution of CBPP3 by country of risk

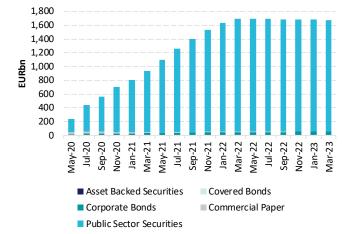


Development of PSPP volume

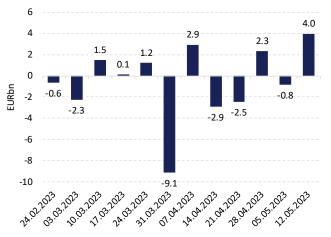


Pandemic Emergency Purchase Programme (PEPP)

Portfolio development



Weekly purchases



NORD/LB

Breakdown of public sector securities under the PEPP

Jurisdiction	Holdings (in EURm)	∆ Holdings previous period	Adj. distribution key ¹	PEPP share	Deviations from the adj. distribution key ²	Current WAM ³ (in years)	WAM of eligible universe ⁴ (in years)
AT	45,107	588	2.6%	2.7%	0.1%	7.3	7.5
BE	56,425	-380	3.3%	3.4%	0.1%	6.3	9.2
CY	2,493	6	0.2%	0.2%	0.0%	8.1	8.0
DE	398,924	593	23.7%	24.0%	0.3%	6.8	7.1
EE	256	0	0.3%	0.0%	-0.2%	7.2	7.2
ES	195,878	-1,382	10.7%	11.8%	1.1%	7.3	7.4
FI	26,890	745	1.7%	1.6%	0.0%	7.5	7.9
FR	296,890	2,093	18.4%	17.9%	-0.5%	7.7	7.8
GR	37,726	-1,847	2.2%	2.3%	0.0%	8.6	9.3
IE	25,104	173	1.5%	1.5%	0.0%	9.2	10.0
IT	289,726	631	15.3%	17.4%	2.2%	7.2	6.9
LT	3,305	34	0.5%	0.2%	-0.3%	9.2	8.8
LU	1,941	23	0.3%	0.1%	-0.2%	5.8	7.9
LV	1,954	20	0.4%	0.1%	-0.2%	7.7	7.9
MT	607	1	0.1%	0.0%	-0.1%	10.3	8.6
NL	81,616	-1,171	5.3%	4.9%	-0.4%	7.8	8.7
PT	33,964	-516	2.1%	2.0%	-0.1%	7.0	7.5
SI	6,344	41	0.4%	0.4%	-0.1%	8.9	9.3
SK	7,839	65	1.0%	0.5%	-0.6%	8.3	8.5
SNAT	148,088	1,173	10.0%	8.9%	-1.1%	10.2	8.9
Total / Avg.	1,661,078	892	100.0%	100.0%	0.0%	7.6	7.6

¹ Based on the ECB capital key, adjusted to include supras ² Based on the adjusted distribution key

³ Current WAM of public sector securities holdings under the PEPP ⁴ WAM of eligible universe of public sector securities holdings under the PEPP Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Appendix Overview of latest Covered Bond & SSA View editions

Publication	Topics		
<u>16/2023 ♦ 10 May</u>	The ECB and the covered bond market: ir	fluences 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 the second s	f 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 adjustn 	ient	
	 Current risk weight of supranationals & a 	gencies	
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 ba	nking crisis and ECB hawks?	
	ESG: EUR-benchmarks 2023 in the SSA se	-	
10/2023 15 March	 Transparency requirements §28 PfandBG 	Q4/2022	
	 Credit authorisations of the German Laer 		
09/2023	 ECB preview: Soft landing lets ECB play has 	ard ball with key rates	
	 Where does the Pfandbrief stand within the standard stand standard standard stand standard standard stand standar		
08/2023	The covered bond market and the ECB: a	gradual farewell?	
	Beyond Bundeslaender: Focus on Greater	-	
07/2023 22 February	The Italian market for EUR benchmark co	vered bonds	
	European supranationals – an overview		
06/2023 ♦ 15 February	 Maturity premiums on covered bonds 		
	 Development of the German property ma 	irket	
	Spotlight on the EU: a mega issuer spawn	ed by the crisis	
05/2023	 January 2023: record start to the new conditional start to th	vered bond year	
	 SSA monthly review: dynamic issuance ad 		
04/2023	Focus on covered bond jurisdictions: Can	ada in the spotlight	
	 Focus on covered bond jurisdictions: Slov 		otlight
	 26th meeting of the Stability Council (Dec 	ember 2022)	
03/2023	ECB preview: all eyes and ears on the pre	ss conference	
	 Successful start to the year for EUR sub-b 		
	 ESG covered bonds from France: La Banq 	ue Postale SFH issues inaugural s	ocial covered bond
02/2023 18 January	 Focus on covered bond jurisdictions: Belg 	ium in the spotlight	
	 The Moody's covered bond universe: and 		
	 Beyond Bundeslaender: focus on Belgian 	issuers	
01/2023 11 January	 ECB review: 2022 entailed all manner of r 	nonetary policy action	
	 Covered Bonds Annual Review 2022 		
	 SSA: Annual review of 2022 		
			Bloomberg:

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

Appendix Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2022

Covered Bond Directive: Impact on risk weights and LCR levels

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

Transparency requirements §28 PfandBG Q1/2023 (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

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

Issuer Guide – German Agencies 2022

Issuer Guide – Dutch Agencies 2022

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

Issuer Guide – French Agencies 2023

Beyond Bundeslaender: Belgium

Beyond Bundeslaender: Greater Paris (IDF/VDP)

Spotlight on Spanish regions (Update planned in 2023)

Fixed Income Specials:

ESG-Update 2023

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

ECB interest rate decision: Backbone in times of turmoil?!

ECB interest rate decision: Roadmap to QT

Appendix Contacts at NORD/LB

Markets Strategy & Floor Research



Dr Frederik Kunze Covered Bonds/Banks

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



Melanie Kiene Covered Bonds/Banks

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



Stefan Rahaus Covered Bonds/Banks

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



Dr Norman Rudschuck SSA/Public Issuers

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

Valentin Jansen SSA/Public Issuers

+49 157 8516 7232 valentin.jansen@nordlb.de

Sales		Trading	
Institutional Sales	+49 511 9818-9440	Covereds/SSA	+49 511 9818-8040
Sales Sparkassen & Regionalbanken	+49 511 9818-9400	Financials	+49 511 9818-9490
Sales MM/FX	+49 511 9818-9460	Governments	+49 511 9818-9660
Sales Europe	+352 452211-515	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 **Relationship Management** Collat. Management/Repos +49 511 9818-9200 Institutionelle Kund +49 511 9818-9620 Liquidity Management Öffentliche Kunden +49 511 9818-9650

len	rm-vs@nordlb.de
I	<u>rm-oek@nordlb.de</u>

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, b ut 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 <u>www.nordlb.de</u>.

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 AUS-TRALIAN 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 there-to, 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 within the meaning of the Danish Securities Trading Act or any executive orders issued pursuant there-to, 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, 17 May 2023 (08:48)