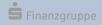


Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research



18 May 2022 ◆ 17/2022 Investment strategy recommendation and marketing communication (see disclaimer on the last pages)



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SSA/Public Issuers

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

Market overview Covered Bonds

Author: Dr Frederik Kunze

Primary market: eight deals issued across five trading days

As early as last Wednesday, Luminor Bank from Estonia (cf. also NORD/LB Issuer View from 10 May) reappeared on the market after an absence lasting more than two years. Back in March 2020, this issuer placed its inaugural EUR benchmark bond in the amount of EUR 500m (5y; re-offer spread: ms +25bp). For this latest deal (EUR 500m; 5.1y; WNG), the guidance was ms +24bp area. The final re-offer spread eventually came to ms +22bp (order book: EUR 600m). In the final allocation, investors from Germany (30%) as well as the Nordics (27%) took the largest shares. In terms of the breakdown by investor group, the category of Central Banks/OI dominated with a share of 44%. In our opinion, this value is also due to a significant allocation to central banks in the Nordics. The next day, ING Belgium and the Norwegian bank Eika Boligkreditt also approached investors. Both deals were issued in the form of soft bullets. For the Norwegian deal (EUR 500m; 8y; WNG), the books opened at ms +13bp area, which is precisely where the final re-offer spread was also fixed. The order books ultimately amounted to EUR 650m for this deal. ING Belgium's EUR benchmark with a term of 7y started out in the marketing phase at ms +9bp area. Eventually, a volume of EUR 1bn was issued at ms +5bp, while the order book totalled EUR 1.4bn. Raiffeisen Bank International (RBI) opted for a term of five years and a volume of EUR 500m (WNG) for its EUR benchmark announced on 10 May for the start of the new trading week. The books for this deal opened on Monday with guidance at ms +25bp area, although the final re-offer spread came in two basis points tighter at ms +23bp, with the order books totalling EUR 1.3bn. Yesterday, on Tuesday, four additional primary market appearances then followed. First, BPCE SFH from France offered what is now its third green benchmark to investors. For the deal with an initial term to maturity of ten years, the marketing phase started at ms +13bp area. The final bond volume came to EUR 1.95bn, with the re-offer spread tightening by four basis points against IPT to ms +9bp. Second, UniCredit Bank Austria went to market with a fresh benchmark (EUR 500m; 6y; WNG; green) and selected an initial guidance of ms +10bp area. The final re-offer spread was fixed at ms +6bp at the end of the marketing phase, while the order books amounted to EUR 1.3bn. Third, the sixth deal in 2022 from the Netherlands was placed by Achmea Bank. For its first primary market appearance since September 2021, the bank opted for a bond volume of EUR 500m (WNG) in addition to a term to maturity of seven years. The books opened with guidance stated at ms +13bp area before closing at a total of EUR 790m with a re-offer spread of ms +11bp. As such, narrowing of two basis points was observed for this deal. Up to this trading week, deals amounting to EUR 18.5bn (spread across 10 ISINs) had been placed from Canada. The fourth deal from yesterday saw this volume increased by HSBC Bank Canada, which issued just its second ever benchmark bond. For this bond worth EUR 1bn with a term of just over five years, the final re-offer spread came in at ms +13bp (guidance: ms +13bp area), while the order book volume amounted to EUR 1.2bn.

| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|------------------------|---------|--------|--------------|----------|--------|----------|------------|-----|
| HSBC Bank Canada | CA | 17.05. | XS2481285349 | 5.3y | 1.00bn | ms +13bp | AAA/Aaa/ - | - |
| BPCE SFH | FR | 17.05. | FR001400AJW4 | 10.0y | 1.00bn | ms +9bp | - /Aaa/AAA | Х |
| Achmea Bank | NL | 17.05. | XS2484321950 | 7.0y | 0.50bn | ms +11bp | - /AAA/Aaa | - |
| UniCredit Bank Austria | AT | 17.05. | AT000B049911 | 6.0y | 0.50bn | ms +6bp | - /Aaa/ - | Х |
| RBI | AT | 16.05. | XS2481491160 | 5.0y | 0.50bn | ms +23bp | - / Aa1/ - | - |
| ING Belgium | BE | 12.05. | BE0002859404 | 7.0y | 1.00bn | ms +5bp | AAA/Aaa/ - | - |
| Eika Boligkreditt | NO | 12.05. | XS2482628851 | 8.0y | 0.50bn | ms +13bp | - /Aaa/ - | - |
| Luminor Bank | EE | 11.05. | XS2480961015 | 5.1y | 0.50bn | ms +22bp | -/Aa1/- | - |
| | | | | | | | | |

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

The market remains receptive, but new issue premiums are needed again

The primary market activity seen over the past five trading days has brought the total volume of EUR benchmarks placed in the year to date to EUR 99.6bn, with the eight most recent deals accounting for a total volume of EUR 5.5bn. With regard to the primary market activities, we would speak of a more pronounced differentiation. This applies to both the structure of the deals as well as the dynamics at placement. For example, deals for which the issuance volume was communicated in advance of placement alongside the initial mandate announcement have dominated recently. In terms of maturities, some issuers have started to venture towards slightly longer structures again. Moreover, covered bonds have not been immune to the risk-off mode that has set in across the financial markets. However, we still see the benchmark segment as not being exposed to an above average extent, even though the new issue premiums have increased noticeably recently. In actual fact, however, it also shows that sufficient investor interest can be generated through certain concessions on spreads. Unsurprisingly, narrowing trends versus IPT have been less dynamic and uniform than was the case just a few trading weeks ago. Nevertheless, we would tend to regard this as a thoroughly healthy market development. Looking ahead to the coming weeks, geopolitical sentiment will certainly remain the decisive factor. However, the future course of inflationary developments and the associated monetary policy approaches adopted by the respective central banks will also continue to dictate market developments. Looking at the EUR benchmark segment, we take the view that market participants are right to focus on the Eurosystem's purchase behaviour, particularly on the primary market. We anticipate a gradual reduction in the Eurosystem order share and believe that two reductions of 10 percentage points in each case to be the most likely scenario here. We see an initial "bottom line" order share of 10% as sufficient for upcoming reinvestments even after the end of the net purchases. After the first cut in the ECB order share from 40% to 30% had little impact on the spread framework for EUR benchmarks, we would not rule out subtle widening in the wake of subsequent reductions. However, we do not anticipate major movements and sustained differentiations until the end of the first half of 2023 and link this in particular to pending maturities in connection with the Eurosystem's TLTRO III tenders.

EUR sub-benchmarks: Oma Savings Bank from Finland places deal worth EUR 350m

Oma Savings Bank (Oma Saastopankki) from Finland approached investors in the EUR subbenchmark segment. In fact, with a deal worth EUR 350m (4.6y; re-offer spread: ms +8bp; WNG), this was the largest transaction ever placed by this issuer. With an order book of EUR 600m, the deal generated a bid-to-cover ratio of 1.7x. This latest deal already brings the issuance volume in the EUR sub-benchmark segment to EUR 3.7bn for the current year, although based on the mandates already announced for fresh bonds within this submarket, it is a foregone conclusion that the momentum here will increase further.

Market overview SSA/Public Issuers

Authors: Dr Norman Rudschuck, CIIA // Jan-Phillipp Hensing

Promotional banks launch "Quick Response" for Ukrainian refugees

Five national promotional institutions, the European Investment Bank (EIB) and the European Association of Public National Promotional Banks and Financial Institutions (ELTI), have launched a joint initiative to support Ukrainian refugees with a total volume of at least EUR 2bn. The initiative, known as "Quick Response – Care for Ukrainian Refugees in Europe", aims to provide immediate relief to people who have fled Ukraine and to facilitate their rapid social integration into host EU member states. The national promotional banks involved are the French Caisse des Dépôts (CDC), the Italian Cassa Depositi e Prestiti (CDP), the Spanish Instituto de Crédito Oficial (ICO), Bank Gospodarstwa Krajowego (BGK) from Poland and KfW in Germany. The participants in the initiative will contribute directly or indirectly through their respective general programmes along with regional and local communities to provide for refugees and support their integration into local communities. The initiative could also finance education, healthcare and infrastructure needs.

Erste Abwicklungsanstalt: financial year 2021

Erste Abwicklungsanstalt (EAA) published its annual report for 2021 last month, which we would like to acknowledge briefly. The balance sheet total was reduced by EUR 8.0bn compared to the previous year, mainly due to scaling back the trading portfolio and the resulting decrease in cash collateral provided as well as the reduction of the banking book. The business volume, which also includes off-balance sheet components, dropped to EUR 25.7bn (EUR -8.4bn Y/Y). In contrast to the two previous years, EAA reported a positive net result of EUR 1.7m in 2021. This is, however, largely due to the capital repatriation of Erste EAA Ireland plc (formerly EAA CBB) and therefore represents a non-recurring effect. EAA states that its earnings are bound to decline at the well-advanced stage of the portfolio wind-up. Its equity as at year-end 2021 amounted to EUR 655m and the buffer of equity, equity capital drawing limit and risk provisions in relation to the remaining portfolio increased further by 1.6 percentage points to 13.9% compared with the previous year. The portfolio's investment grade share was around 75% and the portfolio of loans and securities was reduced by EUR 2.1bn to EUR 10.6bn as at year-end 2021. The coronavirus pandemic has hardly affected EAA and has not had any serious negative financial impacts to date. On the basis of current information, EAA does not expect the war in Ukraine to have any significant overall impact on credit risk and liquidity. As a result of the successful reduction in recent years, its direct net exposure to Russia is currently in the low single-digit millions.

KfW Sustainability Report 2021

KfW has published its Sustainability Report for 2021 under the motto "urban and rural sustainability". The report shows the progress on the road to sustainable urban and rural transformation. "This decade will determine the conditions under which our children and grandchildren will live in the future. The way we deal with climate change, digitalisation and the innovative capacity of our country will determine whether future generations are able to reconcile prosperity and sustainable economic activity," says Stefan Wintels, CEO of KfW Group. The sustainability report is divided into three sections: "Dialogue", "Discourse" and "Data". As part of our market overview, we take a look at the "Data" section. This section documents KfW Group's performance and results in sustainable development. The report meets the GRI standards (Global Reporting Initiative) and includes KfW Group's nonfinancial reporting in accordance with the German Commercial Code (Handelsgesetzbuch – HGB), climate-related reporting in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and reporting on human rights due diligence at KfW. The promotional bank states that the environmental share of promotional business has climbed to 53%. This is due, among other aspects, to the fact that demand for support in the fields of climate change and the environment has risen sharply, while at the same time there has been dwindling demand for coronavirus aid. The target of 38% was therefore clearly exceeded. In the context of gender equality, KfW pursues an Equal Opportunities Plan that has been in place since 2020 and sets targets until 2023. KfW already reports that the proportion of women on the Executive Board is 50%. KfW has also been mapping all of its new annual business to the 17 Sustainable Development Goals (SDGs) of the United Nations since 2019. KfW was able to contribute EUR 55.1bn to funding for sustainable cities and communities (SDG 11) in 2021, recording an increase of 23% (EUR 46.0bn) in this area compared with the previous year in the process. KfW has also devised a 'System of Strategic Objectives 2026', which will apply from the 2022 financial year. KfW states that its primary goal is the "transformation of the economy and society with the aim of improving economic, environmental and social living conditions around the world". The promotional principles are "subsidiarity" (promotional quality and moderate development of new commitment volume in line with the growth of nominal GDP), "focus on financing German SMEs", "focus on megatrends" (e.g. climate change and environment) and "sustainability" (e.g. SDG contribution of KfW's financing activities). The promotional principles include various secondary goals, such as "profitability and efficiency" or "risk and capital". KfW sees agile work as a prerequisite for goal achievement. Finally, let's turn our attention to KfW's refinancing: In 2021, the promotional bank issued a total of 37 green bonds with a volume equivalent to EUR 16.2bn. In 2022, KfW plans to issue at least EUR 10bn via large-volume green bond issues in various currencies. To recap, KfW's funding target is EUR 80-85bn and for strategic reasons KfW has already reached over 61% of its 2022 target (prefunding).

Primary market

There is plenty to report on this week, so let's not waste any time: last week we mentioned the planned issues by the European Union (ticker: EU), and in this issue we can comment on them in greater detail. The dual tranche was split into a new deal in the amount of EUR 6bn with a 3y term as well as a tap worth EUR 3bn to the existing bond EU 0.7% 07/06/51. The 3y bond came in at -41bp (guidance: ms -38bp area), the tap at ms +22bp (guidance: ms +24bp area). The order books were full to bursting - what else would you expect with the EU? The order book for the 3y bond totalled EUR 56bn, with the tap deal accounting for a further EUR 48bn. The bid-to-cover ratios therefore amounted to 9.3x and 16.0x respectively. Incidentally: the EUR 9bn raised will all go to the NGEU programme. Let's stay with the EU for a moment: Apart from the NGEU deals, a total of EUR 900m was raised in two tranches via private placement deals under the Macro-Financial Assistance Programme (MFA). Now is a good time to turn our attention to other issuers: the French development bank Agence Française de Développement (ticker: AGFRNC) was also active, raising a total of EUR 1.5bn in the form of a ten-year sustainability bond at OAT +33bp (guidance: OAT +34bp area). The order book for this deal was EUR 2.2bn. According to our calculations, the spread at the time of issue must have been approximately ms +6bp. The ESM was also active on the primary market for the first time this year with a EUR benchmark deal. Last week it was announced that an RfP had been sent to selected banks, and on Monday it had already appeared on screens: a volume of EUR 2bn (WNG) was selected for this deal with a 5y term to maturity. The guidance for the deal was ms -22bp area, and during the marketing phase a narrowing by three basis points to ms -25bp was possible. The order book amounted to EUR 12.7bn and the bid-to-cover ratio was therefore 6.4x. From the ranks of the supranationals we also witnessed a further deal: the European Investment Bank (ticker: EIB) issued a 10y Climate Awareness EARN Bond worth EUR 4bn yesterday at ms -19bp (guidance: ms -17bp area). There was a lot of interest here too, as can be seen from the order book of EUR 23bn. A rare guest also appeared this week with new EUR-denominated deals: the Export-Import Bank of Korea (ticker: EIBKOR), also known as Kexim, initially planned to issue three bonds (including a floater), but during the marketing phase, it opted for a dual tranche. This featured a 2y green bond with a volume of EUR 550m at 3mE +15bp (guidance: 3mE +20bp area; order book: EUR 650m) and a EUR 950m fixed rate bond with a maturity of 3.5 years at ms +20bp (guidance: ms +25bp area; order book: EUR 1.2bn). We must also mention that the Bundesland of Saxony-Anhalt has mandated for a two to three-year GBP bond and is holding investor talks in connection with this deal.

| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|--------|---------|--------|--------------|----------|--------|-----------|-----------------|-----|
| EIB | SNAT | 16.05. | XS2484093393 | 10.0y | 4.00bn | ms -19bp | AAA / Aaa / AAA | Х |
| ESM | SNAT | 16.05. | EU000A1Z99Q7 | 5.1y | 2.00bn | ms -25bp | AAA / Aa1 / AAA | - |
| EIBKOR | Other | 12.05. | XS2484106633 | 2.0y | 0.55bn | 3mE +15bp | AA- / Aa2 / AA | Х |
| EIBKOR | Other | 12.05. | XS2484106716 | 3.5y | 0.95bn | ms +20bp | AA- / Aa2 / AA | - |
| AGFRNC | FR | 11.05. | FR001400ADF2 | 10.0y | 1.50bn | ms +6bp | AA / - / AA | Х |
| EU | SNAT | 10.05. | EU000A3K4DJ5 | 3.1y | 6.00bn | ms -41bp | AAA / Aaa / AAA | Х |

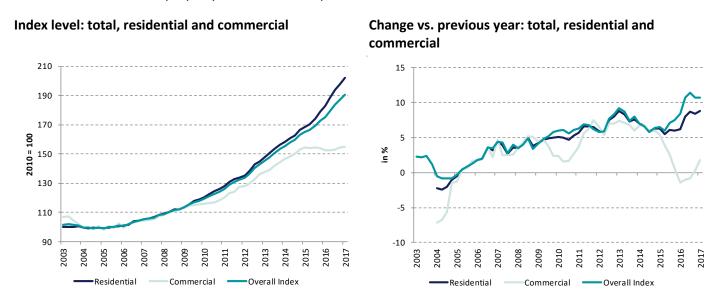
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research (Rating: Fitch / Moody's / S&P)

Covered Bonds Development of the German property market

Author: Stefan Rahaus

Property price index published by the Association of German Pfandbrief Banks: upward trend unbroken in Q1 2022

On 10 May, the Association of German Pfandbrief Banks (vdp) published the latest data on its property price index, which is calculated from the analysis of real estate transactions from more than 700 financial institutions (cf. also vdp press release dated 10 May). In the first quarter of 2022, the index as a whole rose by 8.8% compared with the same quarter in the previous year to reach a new high of 190.8 points (base year 2010 = 100 points). In the previous quarter, the index stood at 187.4 points (corresponds to growth of 1.8% Q/Q). Last year's trend therefore continued unabated in the first quarter of 2022 irrespective of the war in Ukraine and the restrictions resulting from COVID-19 measures. When looking at the various sectors, the difference in the trend in prices for residential as opposed to commercial property remains striking. While the price index for residential property has risen to 202.3 points (+10.7% Y/Y), indicating that prices for residential property have doubled since 2010, the trend for commercial property was far more subdued but stabilised further compared with 2021. Here, the price index rose to 155.2 points (+1.8% Y/Y), having posted declines on an annual basis in the first three quarters of 2021, with the index only returning to positive growth rates in the fourth quarter (+0.3% to 154.5 points). Overall, therefore, commercial property has been trading sideways since the beginning of 2020, while sharp growth from 168.5 to 202.3 points (+20%) has been recorded for residential property across the same period.



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

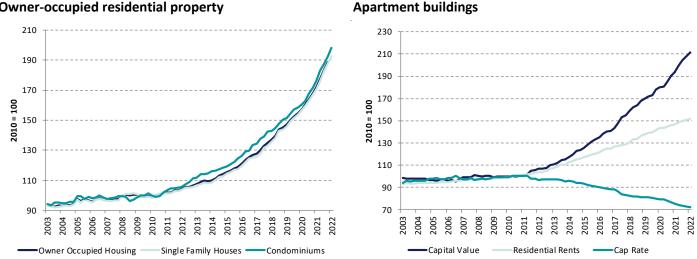
No signs of any slowdown in demand for residential property: double-digit increase for owner-occupied residential property for the fourth quarter in succession

In the sub-index for residential property, owner-occupied residential property again posted the strongest growth (price index as a whole +12.5% Y/Y to 193.6 points). Prices for owneroccupied houses and owner-occupied apartments increased at virtually the same rate (+12.6% and +12.5% Y/Y, respectively). Since 2010 (index level 100 points), owneroccupied apartments have been just ahead, at an index level of 198.3 points in the first quarter of 2022, of owner-occupied houses (192.4 points). The increase in prices for apartment buildings remained constant, at +9.1% Y/Y, compared with the growth reported in the fourth quarter of 2021 and showed that investor demand is still not matched by sufficient supply. At 211.3 points, the index for capital values has performed even more dynamically than owner-occupied apartments since 2010. However, it should be noted that the increases in rents under new tenancies also lagged behind the surging purchase prices significantly. In the first quarter of 2022, rents under new tenancies only grew by 3.7% Y/Y, which is just above the average since 2010 (3.5%). The index for rents under new tenancies has increased from 100 to 151.9 since 2010. In relation to the capital value index of 211.3 points (average annual increase of 6.1% since 2010), this means that profitability expressed in the cap rate again fell by 4.9% Y/Y in the first quarter of 2022. The index for the cap rate fell to 71.9 points.

Commercial property market remains divided

While the sub-index for commercial property trended sideways, greater differences have now emerged in the prices for office property and retail property. Having recorded slight declines in 2020 and 2021, prices for office property and property rents continued the incipient recovery from the fourth quarter of 2021 in the first few months of 2022. The capital value for office property therefore increased by 3.9% Y/Y to 186.5 points, while the index for office rentals increased to 135.5 points at the same time (+1.6% Y/Y). Since prices for office property again rose faster than office rentals, the cap rate remained at a low level, at 72.6 points. According to vdp, the strong labour market and the prospect of a marked reduction in the restrictions caused by COVID-19 are more than offsetting the trend towards increased working from home. It is a different picture for retail properties in Germany. Despite the prospect of an end to the coronavirus restrictions, both prices (-3.2% Y/Y) and rents under new tenancies (-2.0% Y/Y) for retail properties were depressed further. The index for the capital value was only 8.2 points above the base value of 100 points from 2010, while rentals only improved to 101.8 points in these twelve years. The extent to which the currently brightening pandemic situation will have a positive impact on the trend in prices remains to be seen. The structural change to online trading will certainly have a negative impact here in the future too.



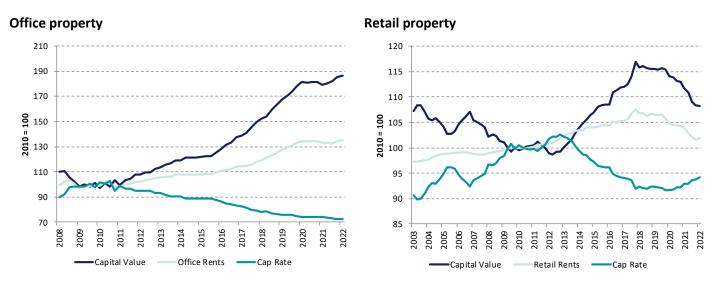


Owner-occupied residential property

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

Top 7 housing market: prices continue rising significantly in urban areas

The separate index showing the performance of the residential property market in the top 7 cities, hit a new all-time high at 259.6 points (+11.2% Y/Y), whereby owner-occupied housing performed better, at +12.0% Y/Y, than the market for apartment buildings, at +10.9% Y/Y. The latter was supported by further increases in the rents under new tenancies, which increased by 4.9% year on year. Among single-family houses, Cologne was the front runner in the last quarter (+16.8% Y/Y), while below-average price increases, at +8% Y/Y, were recorded in Stuttgart. Among owner-occupied apartments, Berlin led the field, with an increase in prices of +13.2% Y/Y, with the capital also taking top spot for apartment buildings (+12.3% Y/Y) and rents under new tenancies (+5.9% Y/Y).



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

Conclusion and outlook

The performance of the index shows that prices on the German real estate market also rose sharply in the first quarter of 2022. Given the prevailing supply and demand situation, Jens Tolckmitt, Chief Executive of the vdp, expects this trend to continue over the next few quarters, albeit at a slower rate and referred to the existing uncertainties resulting from the repercussions of the Russian invasion of Ukraine. This perspective is clearly comprehensible for us. In fact, additional cause and effect correlations can be identified to explain the slowdown. The methodology of the property price index also implies a retrospective view for demonstrable reasons. Since decisions to buy or sell property are usually made long term and with a significant lead time, the extraordinary developments since the war started on 24 February 2022 are not yet likely to be fully reflected in the figures from the first guarter of 2022. Looking at the supply side and construction activity, we see obstacles caused by disruptions to supply chains, a shortage of transport and material bottlenecks as well as the shortage of specialist staff. Together, these factors are making new buildings more expensive which in turn is likely to support prices for existing buildings. On the demand side, mortgage interest rates have become significantly more expensive since the beginning of the year. Having stood at close to an effective annual interest rate of 1% at the beginning of 2022, the current interest rates for ten-year construction loans are between 2.70% and 2.8%. A large part of this increase in rates has only occurred since the beginning of March. Looking at capital market rates, the ten-year yield on Bunds was still negative in the first week of March and increased by 1.3 percentage points within two months to an interim high of 1.2% at the beginning of May. These increases in the cost of borrowing will naturally only be gradually reflected in the vdp's future figures. Further developments with regard to borrowers' ability to service their debt should also be considered on the demand side, with the cost of living having recently become far more expensive, for example. The inflation rate in Germany recently stood at 7.4%. Generally, disposable incomes currently cannot keep pace with inflation rates, which is reducing private households' ability to service their debts. Investors are also likely to have increasing difficulty in passing on increased costs as higher rents in the current environment. To sum up, in our view property has therefore become increasingly less affordable for households in recent months. Generally, we consider a probable scenario to be one in which shortages on the supply side are more than offset by the factors depressing demand. In turn, this would support the vdp's perspective and should initially lead to the upward trend in prices levelling off. Looking forward, we do not by any means rule out prices falling in some subsegments or regions either. With regard to mortgage Pfandbriefe, we do not believe that this will result in any significant change in credit quality. Both the requirements of the German Pfandbrief Act and the associated requirements, such as those for overcollateralisation, maximum loan-to-value ratios and for property valuations as well as the composition of cover pools should preclude fundamental changes here.

SSA/Public Issuers The SSA market in 2022 – a review of the first four months

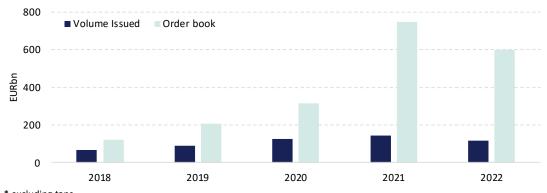
Authors: Dr Norman Rudschuck, CIIA // Jan-Phillipp Hensing

As expected, the first four months of the year were extremely active

Having already looked at January, which is always a very active month, in our <u>weekly publication</u> on 2 February, we would now like to extend the timescale to the first four months of this year. Up to the end of April 2022, for the SSA segment as defined by us – supranationals, sub-sovereigns and agencies, i.e., excluding sovereigns – EUR benchmarks totalled EUR 116.0bn (2021: EUR 144.8bn; 2020: EUR 126.6bn; 2019: EUR 87.9bn). At EUR 600.1bn, the order books were almost twice as high as those seen in 2020, when they reached EUR 316.5bn. However, as expected, 2022 could not build on the record year of 2021 (EUR 750.6bn).

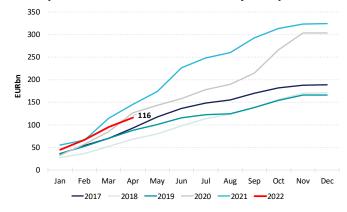
Market environment

Many people would certainly have expected the year to date to have played out very differently: high numbers of coronavirus cases during the Omicron wave, shocking geopolitical news from Ukraine are – unfortunately – (almost) becoming customary, while inflation and speculation about imminent key rate hikes are also hot topics. It is therefore not surprising that capital investors are increasingly investing in safe haven bonds. Net purchases under the pandemic purchase programme, the PEPP, were suspended as planned at the end of March. In return, the APP (asset purchase programme) has been providing support in place of the defunct PEPP since Q2 with net purchases of EUR 40bn in April, EUR 30bn in May and (once more) EUR 20bn in June. It should be noted that the Eurosystem (ECB plus the associated central banks) cannot make purchases on the primary market under the PSPP and PEPP. The ECB aims to implement the expected hike in interest rates once net purchases are brought to an end. While some market participants are even speculating that there will be up to three interest rate hikes in 2022, our estimate is not that bullish for now, whereby not only the amount of hikes are relevant, but also the size of the steps (10bp, 25bp or even 50bp as a starting point). Anybody who expected a return to normality following the pandemic in 2020 and 2021 was mistaken unfortunately – or are we already experiencing the "new" normality?



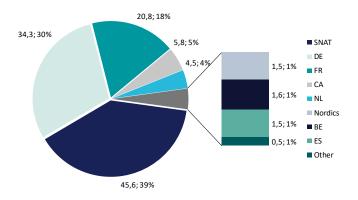
EUR benchmarks (in bn) in the first four months of the respective years vs. order books*

^{*} excluding taps Source: Bloomberg, NORD/LB Markets Strategy & Floor Research



Primary market: EUR BMK issuance trajectory

Primary market: EUR BMK issues



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

The bigger picture

Let's kick off our review by comparing issuance volumes in previous years: up to the end of April, we recorded EUR BMK issues totalling EUR 116.0bn in the SSA segment, as defined by us above. The figure is, admittedly, below those during the pandemic years of 2020 and 2021 but is nevertheless a significantly larger total than in the years before the pandemic. The largest share was attributable to supranationals: in total 17 bonds worth EUR 45.6bn were issued in this segment. In this year, the order books of supranationals have always been full to bursting so far: added together across all issues, we reach a figure of EUR 322.1bn – more than in the other sub-segments put together. We noted the largest number of bonds from Germany (23), however, at EUR 34.3bn, the total amount lags behind the supranationals – the latter naturally issue larger bonds than regional promotional banks or even German Laender. Nevertheless, the aggregate order book volume of EUR 171.3bn was respectable. With an aggregated issuance volume of EUR 20.8bn, France ranked third on our list. Eleven bonds were issued across the first four months of the year, whereby CADES, the deficit and/or debt repayment fund, always attracted the greatest interest in the form of order book entries in the French SSA segment. In the year to date, we have reported on EUR BMK issues from Canada (not just from the provinces we cover) totalling EUR 5.8bn, whereby more than half come from pension funds that we do not analyse at all. Bonds worth EUR 4.5bn in total were printed in the same period last year. We also identified an increase on the previous year in bonds from the Netherlands: having issued bonds amounting to EUR 4.0bn in 2021, the volume in the same period for 2022 came to EUR 4.5bn. At EUR 1.6bn, our coverage of bonds from Belgium came in just ahead of the Nordics, where we observed two bond issues totalling EUR 1.5bn. A few weeks ago, we recorded MADRID and BASQUE on the primary market; here, too, the volume amounted to EUR 1.5bn in total.

| Issuer | # Benchmark deals | Issuer | EUR benchmarks (in bn) |
|--------|----------------------|--------|---------------------------|
| KFW | 5 | EU | 20.4 |
| EU | 4 | KFW | 20.0 |
| NIESA | 3 | CADES | 13.0 |
| EIB | 3 | EFSF | 8.5 |
| CADES | 3 | EIB | 8.0 |
| NRWBK | 3 | IDAWBG | 4.0 |
| COE | 3 | COE | 3.0 |
| EFSF | 3 | BNG | 2.8 |
| BERGER | 2 | EDC | 2.5 |
| RHIPAL | 2 | Q | 2.3 |

Overview of issuers with the most transactions and the largest volume

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

A glance at Germany: who has been active, and who has been absent so far?

At this point, we shall take a look at the deals from Germany in greater detail. Of the "17" Bundeslaender (including the joint "Laender jumbo" issuance vehicle known as the Gemeinschaft deutscher Laender), we have so far added EUR BMK issues amounting to EUR 9.0bn according to our database. Both in terms of volume and the number of bonds, it was not North Rhine-Westphalia that was most active, but rather the State of Lower Saxony: in total, it issued three bonds amounting to EUR 2.0bn. To date, the following Laender have not ventured on to the market with EUR BMK bonds: Bavaria, Baden-Wuerttemberg, Hesse, Saxony, Schleswig-Holstein, Hamburg, Mecklenburg-Western Pomerania and Saarland. However, it should be noted that the federal states SCHHOL, HAMBRG, MECVOR and SAARLD participated in the Laender jumbo deal. So far this year, a handful of the regional promotional institutions included in our coverage have also been absent: in the first four months of the year, only L-Bank and NRW.BANK issued bonds of more than EUR 500m here. It remains to be seen which issuers will break cover this year and issue an EUR BMK bond.

E-supras well ahead

In the supranationals sub-segment, E-supras (EU, EIB and EFSF) stood out especially; on the basis of four issues (excluding auctions and taps), we identified EUR BMK issuance volume of EUR 20.4bn from the mega-issuer, the EU. Order books totalling EUR 191.3bn overall clearly reflect the popularity of this issuer. We identified issuances amounting to EUR 8.5bn and EUR 8.0bn from the EFSF and the EIB, respectively. On average, the EIB was almost ten times oversubscribed, its order books totalled EUR 79.5bn. Outside the E-supras, we recorded issues by the African Development Bank (EUR 1.3bn), the Council of Europe Development Bank (EUR 3.0bn), the International Development Association (EUR 4.0bn) and the Nordic Investment Bank (EUR 0.5bn). In contrast, the ESM did not place any new deals in the first four months of the year. We are expecting to see further activity within the supranationals segment in 2022, not just on account of the EU: as you can see from our primary market section, further EUR BMK issues are ongoing this week, including from ESM.

ESG gaining further momentum

It is worth looking at the issue of sustainability again: in the first four months of the year, we added nine green bonds in total to our database. The aggregate total of these bonds came to EUR 14.6bn. This was exceeded by social bonds where we recorded a total volume of EUR 19.5bn based on eight bonds. In this segment, the French agency CADES is (naturally) particularly prominent. In the period under consideration, CADES issued three social bonds totalling EUR 13.0bn. We identified a total of seven bonds in the sustainability format totalling EUR 9.0bn. To give ESG benchmarks their due significance, we shall devote a separate article to them within this publication in the near future. Until then, please refer to our <u>NORD/LB Fixed Income Special – ESG Update</u> from the spring.

Taps also of relevance

Before we reach the conclusion, we should like to look briefly at taps. These were not included in the data considered above, as they do not constitute new EUR BMK bonds. Nevertheless, we do not wish to sweep them under the carpet. Overall, we identified 25 taps in our coverage over the course of the first four months of 2022, which amounted to EUR 29.3bn in total. The European Union accounted for the lion's share of these, at close to EUR 15.0bn.

Conclusion

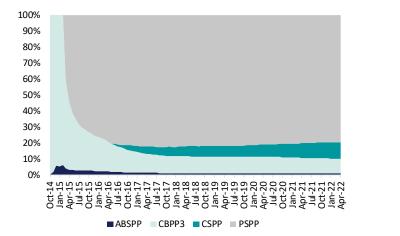
Up to now, the year 2022 will already be going down in history due to the various events seen across the globe. While the aid programmes to contain the coronavirus pandemic are slowly dissipating, issuers are now faced with new challenges in light of Russia's war of aggression against Ukraine. This is also clearly reflected on the primary market: the German Laender are finding their way back to "normality", although it should be noted that some of them have not even ventured onto the primary market at all so far this year. Attention is therefore likely to be focused on the ECB over the rest of the year: until the next scheduled meeting of the ECB Governing Council, the key question will be when and by how much it will raise interest rates later this year.

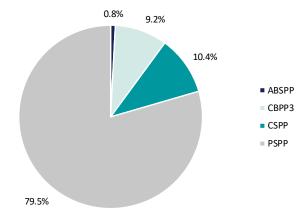
ECB tracker

Asset Purchase Programme (APP)

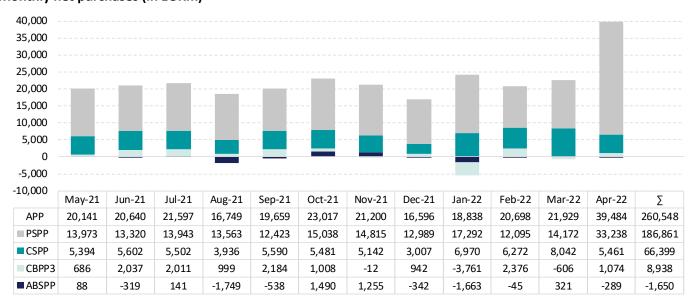
| | ABSPP | СВРРЗ | CSPP | PSPP | АРР |
|--------|--------|---------|---------|-----------|-----------|
| Mar-22 | 26,979 | 295,849 | 330,605 | 2,525,610 | 3,179,043 |
| Apr-22 | 26,691 | 296,924 | 336,066 | 2,558,848 | 3,218,529 |
| Δ | -289 | +1,074 | +5,461 | +33,238 | +39,484 |

Portfolio structure

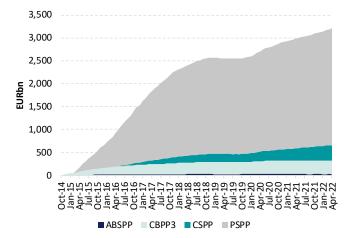




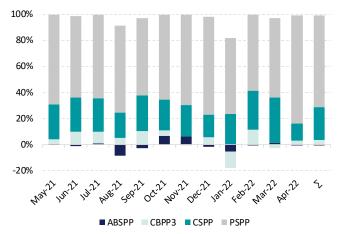
Monthly net purchases (in EURm)



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

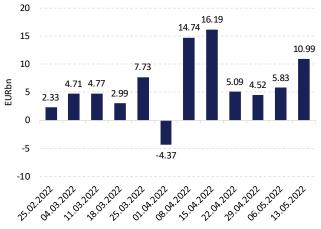


Distribution of monthly purchases



Weekly purchases

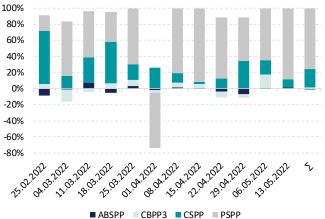
Portfolio development

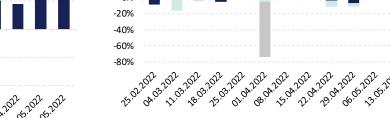


Expected monthly redemptions (in EURm)

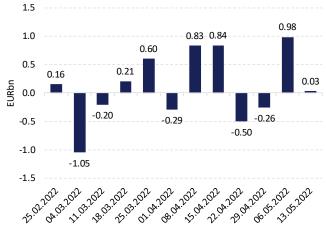
50,000 45,000 40,000 35,000 30,000 25,000 20,000 15,000 10,000 5,000 0 May-22 lan-23 -May-22 Jun-22 Jul-22 Aug-22 Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 Apr-23 2021 2022 - Apr-23 Apr-23 18,833 APP 23,867 16,424 25,834 7,640 44,401 36,993 15,640 29,260 22,434 42,048 29,692 313,066 247,069 297,726 123,434 32,033 PSPP 18,778 12,638 22,304 4,841 34,354 34,003 14,669 12,016 19,469 13,705 23.376 242,186 188,494 228,491 88,583 CSPP 1,502 1,237 961 96 2,564 674 1,557 1,266 2,899 2,158 3,752 2,217 20,883 17,134 16,785 11,026 CBPP3 1,866 1,582 1,629 2,227 6,873 1,648 2,165 1,485 4,786 5*,*938 5,631 2,903 38,733 30,143 41,237 19,258 ABSPP 2,106 1,721 967 940 476 668 442 873 633 632 1,196 11,264 11,298 11,213 4,567 610

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







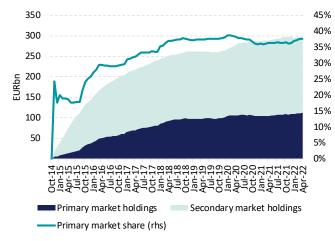


Covered Bond Purchase Programme 3 (CBPP3)

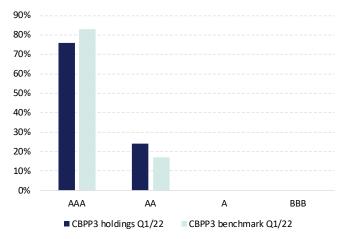
Weekly purchases



Primary and secondary market holdings

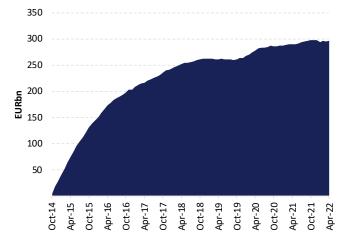


Distribution of CBPP3 by credit rating



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

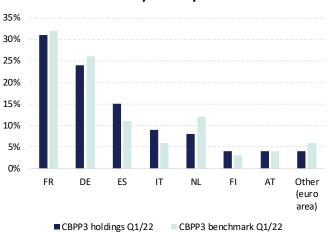
Development of CBPP3 volume

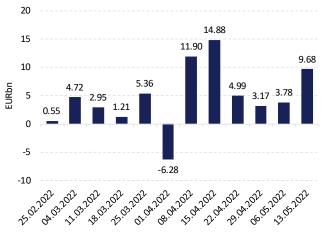


Change of primary and secondary market holdings



Distribution of CBPP3 by country of risk





Public Sector Purchase Programme (PSPP)

Weekly purchases

Jurisdiction

SI

SK

SNAT

Total / Avg.



Holdings

(EURm)

Adjusted

distribution

key¹

2,500 2,000 EURbn 1,500 1,000 500

Current WAM

of portfolio³

(in years)

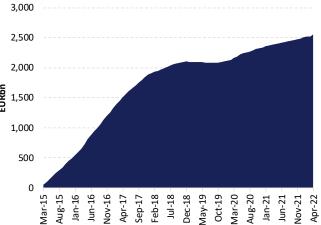
9.7

8.1

8.2

7.3

Development of PSPP volume



WAM of

eligible universe⁴

(in years)

9.9

8.8

9.4

8.4

Difference

(in years)

-0.2

-0.7

-1.2

-1.1

| AT | 2.7% | 75,622 | 73,141 | 2,481 | 7.3 | 8.1 | -0.8 |
|----|-------|---------|---------|---------|------|------|------|
| BE | 3.4% | 92,910 | 91,042 | 1,868 | 7.5 | 9.9 | -2.4 |
| CY | 0.2% | 4,446 | 5,377 | -931 | 8.5 | 8.9 | -0.5 |
| DE | 24.3% | 655,956 | 658,753 | -2,797 | 6.7 | 8.0 | -1.3 |
| EE | 0.3% | 429 | 7,039 | -6,610 | 8.1 | 8.1 | 0.0 |
| ES | 11.0% | 314,676 | 297,986 | 16,690 | 8.0 | 8.2 | -0.2 |
| FI | 1.7% | 42,502 | 45,902 | -3,400 | 7.9 | 8.9 | -1.0 |
| FR | 18.8% | 528,080 | 510,388 | 17,692 | 6.9 | 8.4 | -1.5 |
| GR | 0.0% | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| IE | 1.6% | 41,333 | 42,316 | -983 | 8.4 | 10.1 | -1.7 |
| IT | 15.7% | 442,389 | 424,530 | 17,859 | 7.2 | 7.8 | -0.7 |
| LT | 0.5% | 5,786 | 14,463 | -8,677 | 10.6 | 10.4 | 0.1 |
| LU | 0.3% | 3,680 | 8,232 | -4,552 | 5.8 | 6.1 | -0.3 |
| LV | 0.4% | 3,661 | 9,737 | -6,076 | 9.5 | 9.4 | 0.1 |
| MT | 0.1% | 1,411 | 2,621 | -1,210 | 11.1 | 9.8 | 1.3 |
| NL | 5.4% | 129,120 | 146,448 | -17,328 | 7.7 | 9.3 | -1.6 |
| PT | 2.2% | 53,800 | 58,487 | -4,687 | 7.5 | 7.9 | -0.4 |

-1,461

-10,818

12,942

0

Difference

(EURm)

Expected

holdings

(EURm)²

12,032

28,618

270,790

2,707,903

2,707,903 ¹ Based on the ECB capital key, adjusted to include supras and the disqualification of Greece

10,571

17,800

283,732

² Based on the adjusted distribution key

³ Weighted average time to maturity of PSPP portfolio holdings

⁴ Weighted average time to maturity of the bonds eligible for purchasing under the PSPP

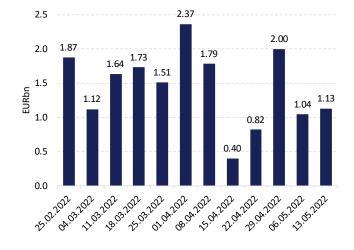
Source: ECB, NORD/LB Markets Strategy & Floor Research

0.4%

1.1%

10.0%

100.0%

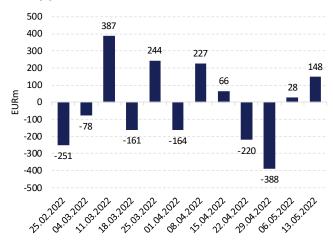


Corporate Sector Purchase Programme (CSPP)

Weekly purchases

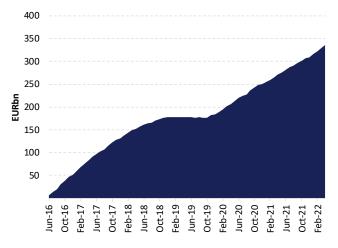
Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases

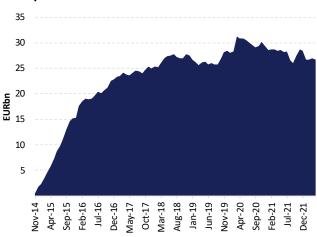


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Development of CSPP volume

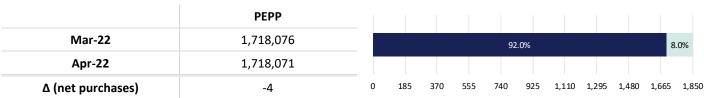


Development of ABSPP volume

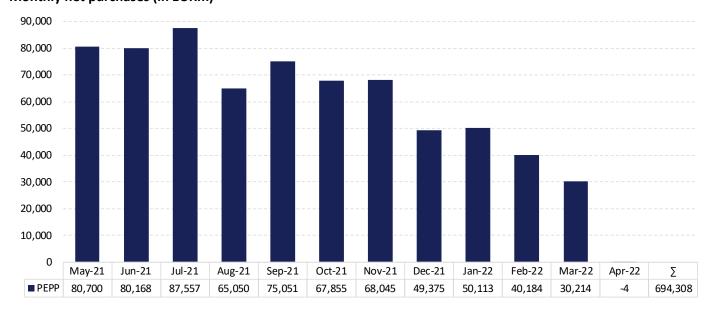


Pandemic Emergency Purchase Programme (PEPP)

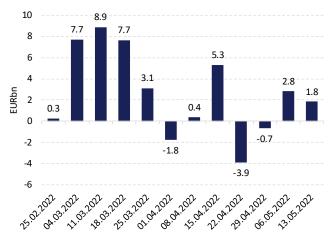
Holdings (in EURm)





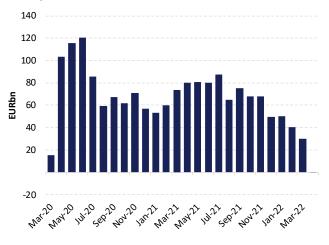


Weekly purchases



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

Development of PEPP volume



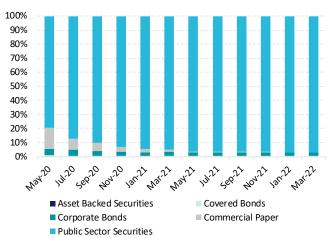
Invested share of PEPP envelope (in EURbn)

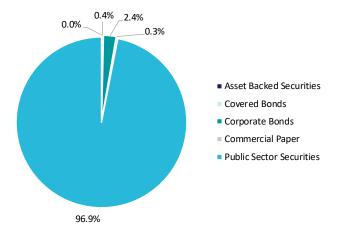
NORD/LB

Holdings under the PEPP (in EURm) Accet backed

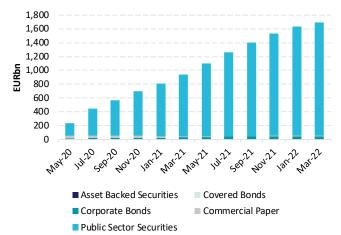
| | Asset-backed Securities | Covered Bonds | Corporate Bonds | Commercial Paper | Public Sector Securities | PEPP |
|--------------------------|----------------------------|------------------|--------------------|---------------------|-----------------------------|-----------|
| Jan-22 | 0 | 6,073 | 40,301 | 3,857 | 1,580,547 | 1,630,779 |
| Mar-22 | 0 | 6,067 | 40,313 | 5,862 | 1,644,247 | 1,696,489 |
| Δ (net purchases) | 0 | 0 | +48 | +2,007 | +68,342 | +70,398 |

Portfolio structure

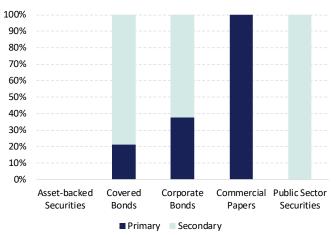




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

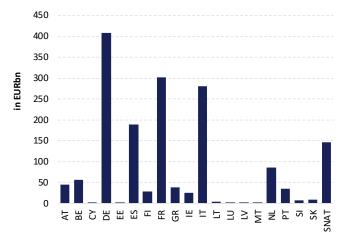
| Mar 22 | Asset-backed securities | | Covered bonds | | Corporate bonds | | Commercial paper | |
|------------------|-------------------------|-----------|---------------|-----------|-----------------|-----------|------------------|-----------|
| Mar-22 | Primary | Secondary | Primary | Secondary | Primary | Secondary | Primary | Secondary |
| Holdings in EURm | 0 | 0 | 1,298 | 4,769 | 15,162 | 25,151 | 5,862 | 0 |
| Share | 0.0% | 0.0% | 21.4% | 78.6% | 37.6% | 62.4% | 100.0% | 0.0% |

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

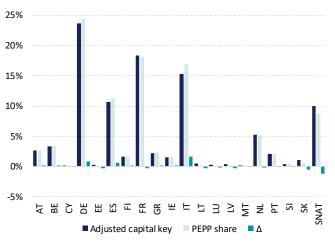
| Jurisdiction | Holdings (in EURm) | Adj. distribution key ¹ | PEPP share | Deviations from the adj. distribution key ² | Current WAM ³ (in years) | WAM of eligible universe ⁴ (in years) | Difference (in years) |
|--------------|-----------------------|--|---------------|--|---|--|--------------------------|
| AT | 43,980 | 2.6% | 2.6% | 0.0% | 7.9 | 7.1 | 0.8 |
| BE | 56,797 | 3.3% | 3.4% | 0.1% | 6.6 | 9.1 | -2.5 |
| CY | 2,633 | 0.2% | 0.2% | 0.0% | 8.6 | 8.5 | 0.1 |
| DE | 408,941 | 23.7% | 24.6% | 0.8% | 6.3 | 6.8 | -0.4 |
| EE | 256 | 0.3% | 0.0% | -0.2% | 8.2 | 6.6 | 1.6 |
| ES | 189,664 | 10.7% | 11.4% | 0.7% | 7.7 | 7.6 | 0.1 |
| FI | 28,183 | 1.7% | 1.7% | 0.0% | 6.8 | 8.0 | -1.2 |
| FR | 302,287 | 18.4% | 18.1% | -0.2% | 8.0 | 7.6 | 0.4 |
| GR | 38,504 | 2.2% | 2.3% | 0.1% | 8.7 | 9.5 | -0.7 |
| IE | 25,532 | 1.5% | 1.5% | 0.0% | 9.2 | 9.3 | -0.1 |
| IT | 281,026 | 15.3% | 16.9% | 1.6% | 7.1 | 6.9 | 0.1 |
| LT | 3,215 | 0.5% | 0.2% | -0.3% | 10.3 | 9.9 | 0.4 |
| LU | 1,833 | 0.3% | 0.1% | -0.2% | 6.5 | 6.2 | 0.3 |
| LV | 1,887 | 0.4% | 0.1% | -0.2% | 8.7 | 8.9 | -0.2 |
| MT | 610 | 0.1% | 0.0% | -0.1% | 11.1 | 9.2 | 1.9 |
| NL | 85,172 | 5.3% | 5.1% | -0.2% | 7.8 | 8.4 | -0.6 |
| РТ | 34,742 | 2.1% | 2.1% | 0.0% | 6.8 | 7.2 | -0.3 |
| SI | 6,499 | 0.4% | 0.4% | 0.0% | 9.3 | 9.3 | -0.1 |
| SK | 7,966 | 1.0% | 0.5% | -0.6% | 8.9 | 8.3 | 0.6 |
| SNAT | 145,950 | 10.0% | 8.8% | -1.2% | 10.3 | 8.5 | 1.8 |
| Total / Avg. | 1,665,676 | 100.0% | 100.0% | 0.0% | 7.6 | 7.5 | 0.1 |

Breakdown of public sector securities under the PEPP





Deviations from the adjusted distribution key



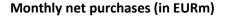
 $^{\rm 1}$ Based on the ECB capital key, adjusted to include supras $^{\rm 2}$ Based on the adjusted distribution key

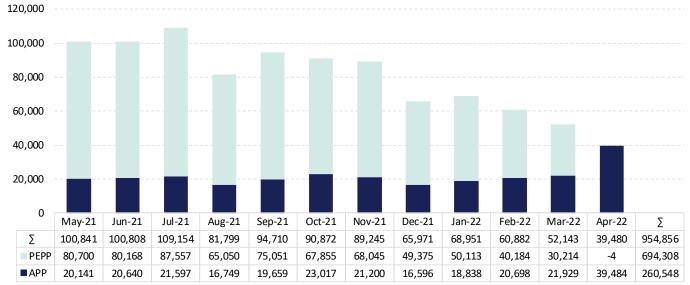
³ Current WAM of public sector securities holdings under the PEPP ⁴ WAM of eligible universe of public sector securities holdings under the PEPP Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

| | АРР | PEPP | APP & PEPP |
|--------|-----------|-----------|------------|
| Mar-22 | 3,179,043 | 1,718,076 | 4,897,119 |
| Apr-22 | 3,218,529 | 1,718,071 | 4,936,600 |
| Δ | +39,484 | -4 | +39,480 |

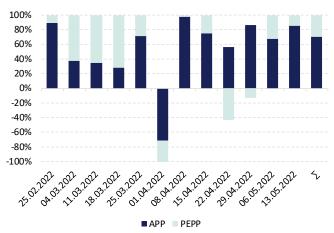




Weekly purchases



Distribution of weekly purchases

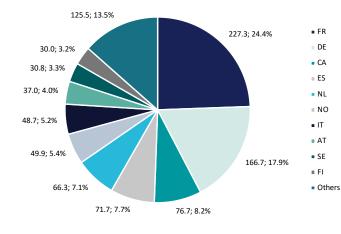


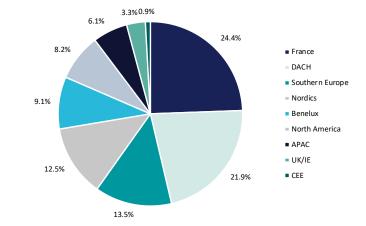
NORD/LB

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

Charts & Figures Covered Bonds

EUR benchmark volume by country (in EURbn)



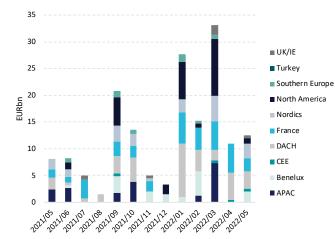


EUR benchmark volume by region (in EURbn)

Top-10 jurisdictions

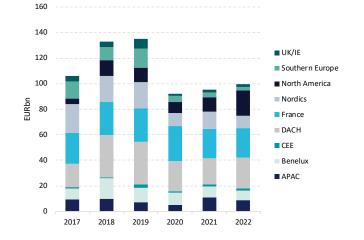
| Rank | Country | Amount outst. (EURbn) | No. of BMKs | There of ESG BMKs | Avg. issue size (EURbn) | Avg. initial maturity (in years) | Avg. mod. Duration (in years) | Avg. coupon (in %) |
|------|---------|--------------------------|----------------|----------------------|-------------------------------|--|-------------------------------------|-----------------------|
| 1 | FR | 227.3 | 217 | 13 | 0.95 | 10.0 | 5.6 | 0.82 |
| 2 | DE | 166.7 | 241 | 19 | 0.63 | 8.4 | 4.6 | 0.44 |
| 3 | CA | 76.7 | 60 | 0 | 1.24 | 5.9 | 3.2 | 0.27 |
| 4 | ES | 71.7 | 58 | 5 | 1.13 | 11.8 | 3.8 | 1.73 |
| 5 | NL | 66.3 | 67 | 1 | 0.93 | 11.6 | 7.7 | 0.75 |
| 6 | NO | 49.9 | 59 | 9 | 0.84 | 7.4 | 4.1 | 0.40 |
| 7 | IT | 48.7 | 58 | 2 | 0.81 | 9.3 | 4.3 | 1.25 |
| 8 | AT | 37.0 | 68 | 3 | 0.54 | 9.5 | 6.1 | 0.58 |
| 9 | SE | 30.8 | 36 | 0 | 0.85 | 7.6 | 3.5 | 0.46 |
| 10 | FI | 30.0 | 32 | 2 | 0.94 | 7.7 | 3.9 | 0.40 |

EUR benchmark issue volume by month

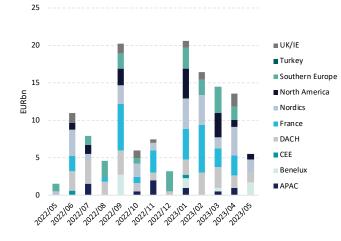


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

EUR benchmark issue volume by year

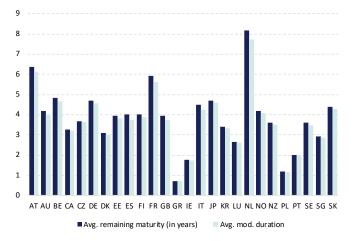




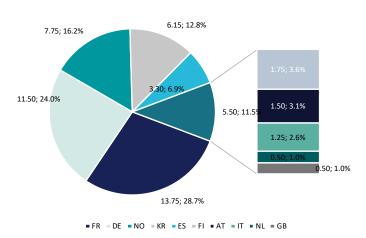


EUR benchmark maturities by month

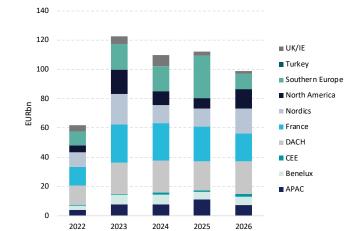
Modified duration and time to maturity by country



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

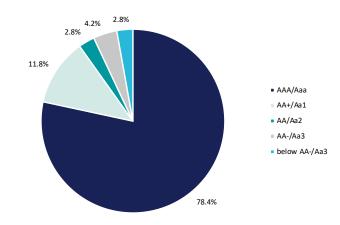


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

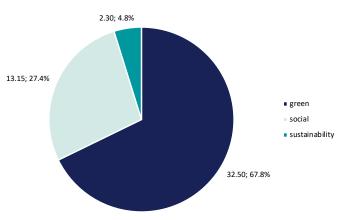


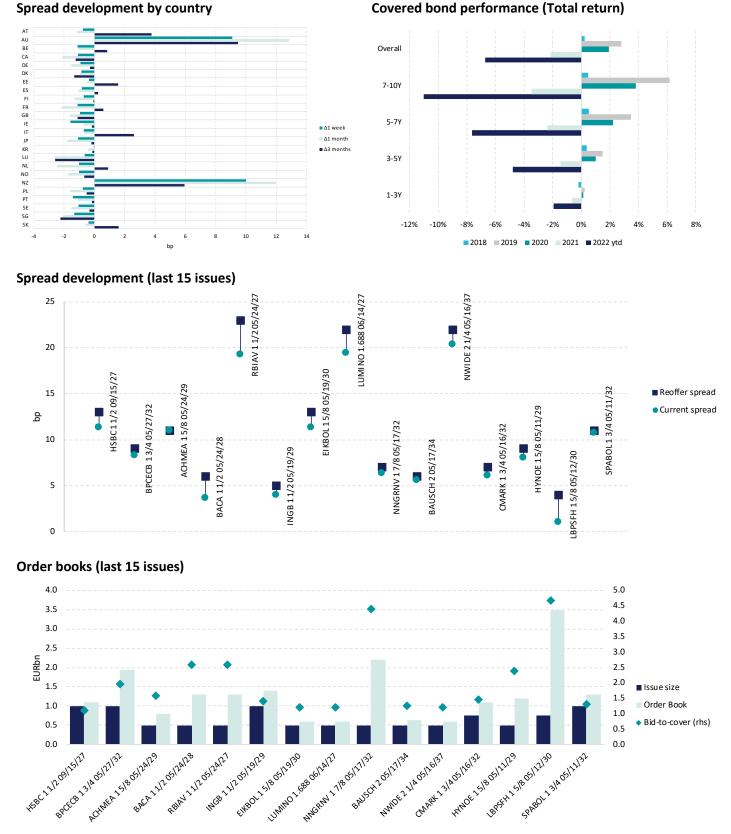
EUR benchmark maturities by year

Rating distribution (volume weighted)



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



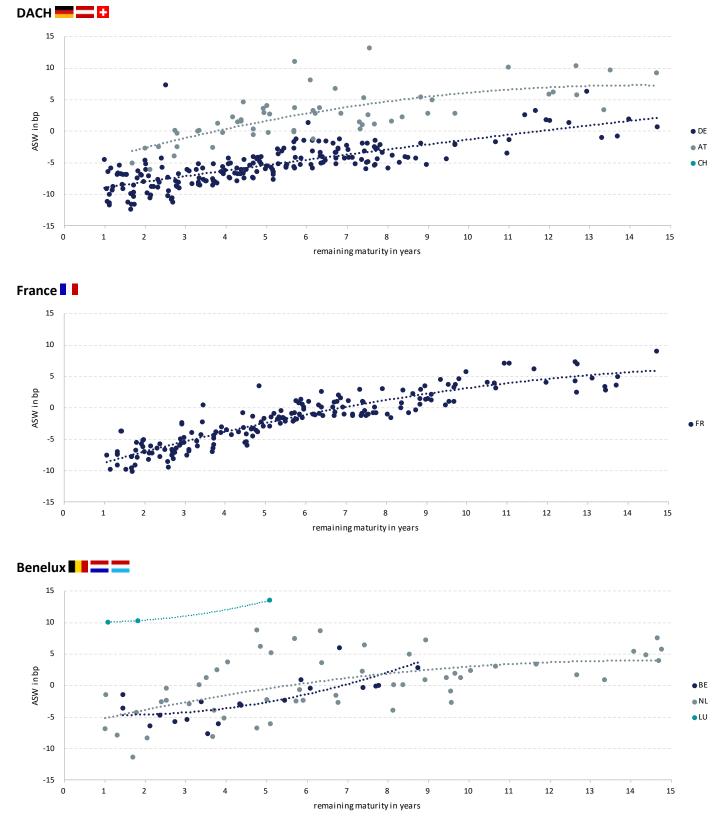


Spread development by country

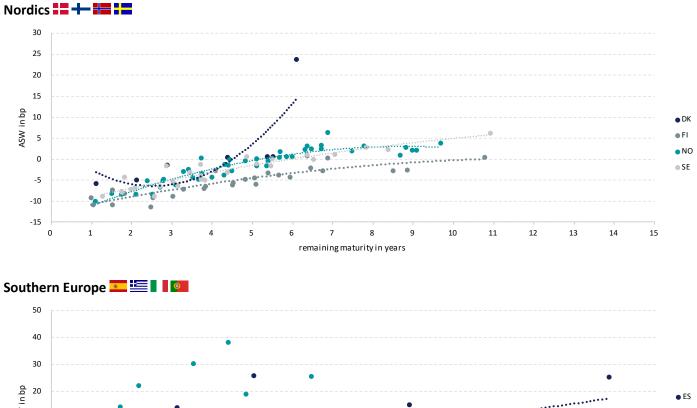
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

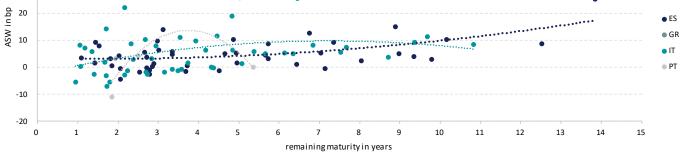


Spread overview¹

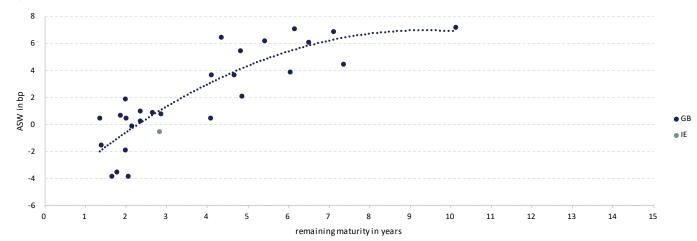


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research ¹Time to maturity $1 \le y \le 15$

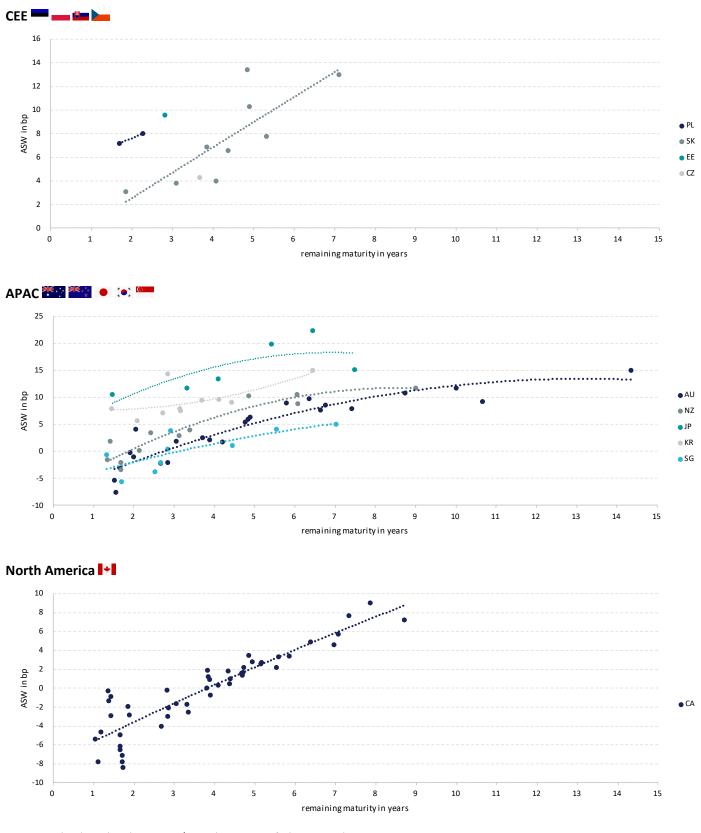




UK/IE 😹



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



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

Charts & Figures SSA/Public Issuers

Outstanding volume (bmk)

EUR 2117,1bn SNAT DE 12,6% FR 35,8% 3,6% 2,1% 1,6% 🗖 NL ES 1,2% CA 6,0% 1,0% BE 0,9% AT 0,8% 🔳 FI 0,6% IT 39,9% Others

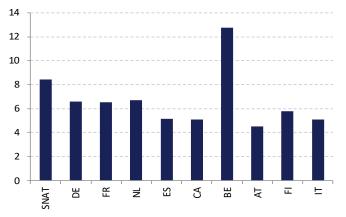
Top 10 countries (bmk)

| - | | | | |
|---------|------------|-----------------|----------------|----------------------------|
| Country | Vol. (€bn) | No. of bonds | ØVol. (€bn) | Vol. weight. ØMod. Dur. |
| SNAT | 844,9 | 207 | 4,1 | 8,5 |
| DE | 757,6 | 571 | 1,3 | 6,6 |
| FR | 267,8 | 184 | 1,5 | 6,6 |
| NL | 75,9 | 68 | 1,1 | 6,7 |
| ES | 44,8 | 57 | 0,8 | 5,1 |
| CA | 33,2 | 22 | 1,5 | 5,1 |
| BE | 24,5 | 28 | 0,9 | 12,8 |
| AT | 21,2 | 23 | 0,9 | 4,5 |
| FI | 18,0 | 22 | 0,8 | 5,8 |
| IT | 16,8 | 20 | 0,8 | 5,1 |

Issue volume by year (bmk)



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

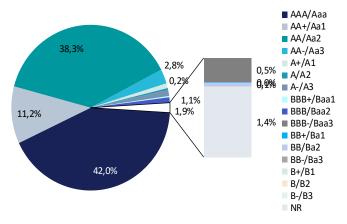


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

Maturities next 12 months (bmk)



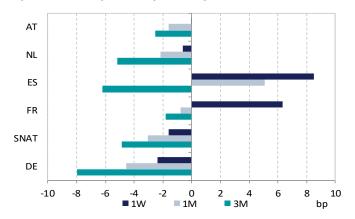
Rating distribution (vol. weighted)

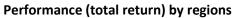


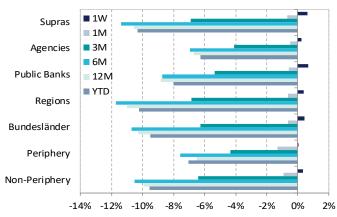
Reoffer Spread / DM Current ASW / DM EIBKOR 1 3/8 11/24/25 (fixed) EIBKOR Float 05/24/24 30 CFB 1 5/8 05/03/32 (fixed) DAWBG 1 3/4 05/05/37 (fixed) AGFRNC 1 5/8 05/25/32 (fixed) (floating) 20 SFILFR 1 1/2 03/05/32 JNEDIC 1 3/4 11/25/32 CADES 1 1/2 05/25/32 10 KUNTA 1 1/2 05/17/29 NIESA 1 1/2 10/17/29 (fixed) LANDER 1 1/4 05/04/29 (fixed) (fixed) ElB 1 1/2 06/15/32 (fixed) 0 KFW 1 3/8 06/07/32 (fixed) (fixed) 1 06/23/27 (fixed) (fixed) දු -10 (fixed) EU 0.8 07/04/25 (fixed) -20 • -30 ESM 1 -40 -50 -60

Spread development (last 15 issues)



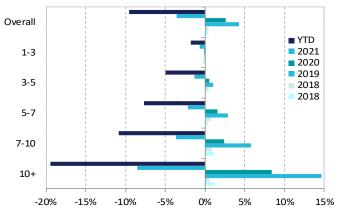




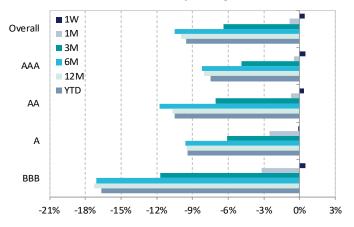


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

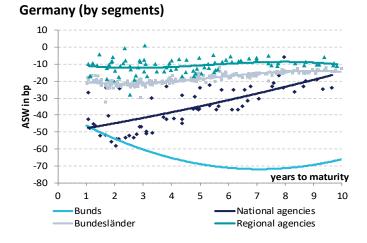
Performance (total return)



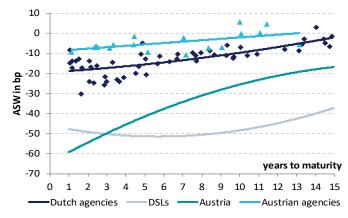
Performance (total return) by rating



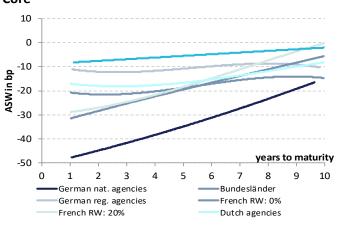
NORD/LB



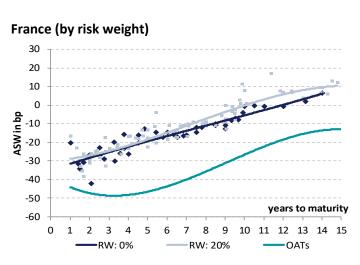
Netherlands & Austria



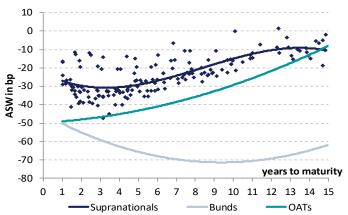
Core



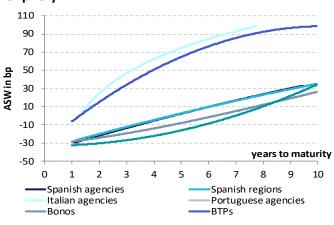








Periphery



Appendix Overview of latest Covered Bond & SSA View editions

| Publication | Topics | | | | |
|--------------------------|--|--|--|--|--|
| <u> 16/2022 ♦ 11 May</u> | Focus on covered bond jurisdictions: a look at Austria | | | | |
| | Update on DEUSTD – Joint German cities (bond No. 1) | | | | |
| 15/2022 ♦ 04 May | Focus on covered bond jurisdictions: Spotlight on Sweden | | | | |
| | ESG covered bonds from Germany: DKB issues social Pfandbrief in the form of a "Berlin Social Housing Bond" | | | | |
| | Issuer Guide SSA 2022: The Spanish agency market | | | | |
| 14/2022 🔶 13 April | First ECB meeting after the end of the PEPP: (Not) a non-event!? | | | | |
| | PEPP reporting: (Not) an obituary | | | | |
| 13/2022 🔶 06 April | ECB adjusts order behaviour in time for the new quarter | | | | |
| | United Kingdom: spotlight on the EUR benchmark segment | | | | |
| | Issuer Guide SSA 2022: the Nordic agency market | | | | |
| 12/2022 ♦ 30 March | An overview of the market for ESG covered bonds | | | | |
| | Issuer Guide SSA 2022: the Austrian agency market | | | | |
| 11/2022 | ESG update 2022 in the spotlight | | | | |
| | The ratings approach of DBRS | | | | |
| 10/2022 | What does the recent ECB meeting mean for covered bonds? | | | | |
| | Credit authorisations of the German Laender for 2022 | | | | |
| 09/2022 | Transparency requirements § 28 PfandBG Q4/2021 | | | | |
| | Issuer Guide SSA 2022: The Dutch agency market | | | | |
| 08/2022 ♦ 02 March | ECB: Not everyone can get their act together at a turning point | | | | |
| | Welcome expansion of the covered bond ESG universe: Banco BPM green covered bond | | | | |
| | War in Ukraine and sanctions on Russia: spotlight on the European banking landscape | | | | |
| 07/2022 | ECB banking regulator also views the residential real estate market as a potential risk driver for banks | | | | |
| | Development of the German property market | | | | |
| | Beyond Bundeslaender: Paris metropolitan area (IDF and VDP) | | | | |
| 06/2022 	♦ 16 February | PEPP reporting: Finish line in sight, but no photo finish expected | | | | |
| | DZ HYP issues inaugural green Pfandbrief: ESG market in Germany continues its growth trajectory | | | | |
| 05/2022 | ECB: full speed, throttling, U-turn – or wrong turn? | | | | |
| | Insurance companies as covered bond investors: the bank-insurer nexus | | | | |
| 04/2022 | Covered Bonds – Review of January 2022: a reversion to old patterns does not always have to be bad | | | | |
| | SSA – New year, new hope? Less oomph to kick off the new year | | | | |
| 03/2022 ♦ 26 January | ECB preview: 10y Bund spotted in positive terrain. What's next? | | | | |
| | EUR benchmark segment in Canada: our supply forecast already null and void | | | | |
| 02/2022 ♦ 19 January | Spotlight on the EUR benchmark segment: a look at the covered bond markets in Belgium and the Nether lands | | | | |
| | 24th meeting of the Stability Council (Dec. 2021) | | | | |
| NORD/LB: | NORD/LB: NORD/LB: Bloomberg: | | | | |
| Markets Strategy & Floc | | | | | |

Appendix Publication overview

Covered Bonds:

<u>Issuer Guide Covered Bonds 2021</u> <u>Risk weights and LCR levels of covered bonds</u> (updated semi-annually) <u>Transparency requirements §28 PfandBG</u> (quarterly update) <u>Covered bonds as eligible collateral for central banks</u>

SSA/Public Issuers:

<u>Issuer Guide – German Laender 2021</u> Issuer Guide – Canadian Provinces & Territories 2020 Issuer Guide – Supranationals & Agencies 2019 (update planned for 2022) Issuer Guide – Down Under 2019

Fixed Income Specials:

ESG-Update 2022

Face-saving ECB decision: Hawks have won – for now

ECB decision: PEPP benched for now, APP comes in as Point Guard

ECB holds course, but ups the ante – PEPP running until 2022

ECB launches PEPP (Pandemic Emergency Purchase Programme)

Appendix Contacts at NORD/LB

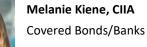
Markets Strategy & Floor Research



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| Sales MM/FX | +49 511 9818-9460 | | |
| Sales Europe | +352 452211-515 | | |

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

Sales Wholesale Customers

Origination & Syndicate

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

Firmenkunden

Asset Finance

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Treasury

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

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NORD/LB

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Additional information

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Disclosure of possible conflicts of interest at NORD/LB in accordance with Section 85 (1) of the German Securities Trading Act (WpHG) in conjunction with Article 20 of the Market Abuse Regulation (EU) No. 596/2014 and Articles 5 and 6 of Regulation (EU) 2016/958. None

Sources and price details

For the preparation of investment recommendations, we use issuer-specific financial data providers, our own estimates, company information and publicly available media. Unless otherwise stated in the information, price information refers to the closing price of the previous day. Fees and commissions are incurred in connection with securities (purchase, sale, custody), which reduce the return on the investment.

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For the preparation of investment recommendations, we use company-specific methods from fundamental securities' analysis, quantitative / statistical methods and models as well as from technical information processes. It should be noted that the results of the information are snapshots and past performance is not a reliable indicator of future returns. The basis of valuation may change at any time and in an unforeseeable manner, which may lead to divergent assessments. The recommendation horizon is 6 to 12 months. The above information is prepared on a weekly basis. Recipients have no right to publish updated information. For more detailed information on our assessment bases, check under: www.nordlb-pib.de/Bewertungsverfahren.

| Recommendation system | Breakdown of recommendations (12 months) | | |
|---|--|-----|--|
| Positive: Positive expectations for the issuer, a bond type or a bond placed by the | Positive: | 37% | |
| issuer. | Neutral: | 55% | |
| Neutral: Neutral expectations for the issuer, a bond type or a bond of the issuer. Negative: Negative expectations for the issuer, a type of bond or a bond placed by the issuer. Relative Value (RV): Relative recommendation to a market segment, an individual issuer or a range of maturities. | Negative: | 8% | |

Recommendation record (12 months)

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| Issuer / security | Date | Recommendation | Bond type | Cause |
|-------------------|------|----------------|-----------|-------|
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