# NORD/LB Capital Market Conference

## Save the date!

**Thursday, 15 September 2022, 10.00–17.00**

**If interested in this event, please contact**
**events-markets@nordlb.de**


**Dear readers,**

Due to the upcoming holiday period, our weekly publication will be taking a summer break. Therefore, we wanted to let you know today that **no** edition of the Covered Bond & SSA View will be published on the next three Wednesdays.

We look forward to welcoming you back on **Wednesday, 24 August**, when this publication will be available again via the familiar channels.

**Your Markets Strategy & Floor Research team**

# Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

27 July 2022 ♦ 25/2022
Marketing communication (see disclaimer on the last pages)

# Agenda


Market overview

- Covered Bonds 3
- SSA/Public Issuers 5

ECB likes abbreviations: After OMT and SMP, we now have TPI 7

Covereds vs. Senior Unsecured Bonds 12

ECB tracker

- Asset Purchase Programme (APP) 17
- Pandemic Emergency Purchase Programme (PEPP) 22
- Aggregated purchase activity under APP and PEPP 25

Charts & Figures

- Covered Bonds 26
- SSA/Public Issuers 32

Overview of latest Covered Bond & SSA View editions 35

Publication overview 36

Contacts at NORD/LB 37



**Floor analysts:**

**Covered Bonds/Banks**

**Dr Frederik Kunze**
frederik.kunze@nordlb.de

**Melanie Kiene, CIIA**
melanie.kiene@nordlb.de

**SSA/Public Issuers**

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

**Jan-Phillipp Hensing**
jan-phillipp.hensing@nordlb.de


**NORD/LB:**
Markets Strategy & Floor Research

**NORD/LB:**
Covered Bond Research

**NORD/LB:**
SSA/Public Issuer Research

**Bloomberg:**
RESP NRDR <GO>

# Market overview Covered Bonds

Authors: Stefan Rahaus // Dr Frederik Kunze

**Primary market: still active despite the summer heat**

Despite the turbulent market conditions, more issuers have exploited investor interest in recent days and placed covered bonds successfully. The day before the ECB meeting last week, Canada's Toronto Dominion Bank (TD) placed a very respectably sized bond of EUR 2.5bn at a spread of ms +17bp and a maturity of three years. The highly attractive initial guidance compared with the bond yield curve of outstanding bonds of ms +20bp area generated an order book of EUR 3.25bn, resulting in a volume that was last seen in mid-March in another bond placed by this issuer. It is striking that all covered bonds with a volume of EUR 2bn or more issued so far this year have been Canadian bonds. It is therefore not surprising either that Canada currently occupies third place (EUR 23bn) in the country ranking behind France and Germany. On Monday this week, NORD/LB (NDB) approached investors for the first time since September 2021 with a mortgage Pfandbrief. The European covered bond (premium) with a maturity of 3.25 years was marketed with a guidance in the area of ms +8bp and a pre-set issue volume of EUR 500m (WNG). The order volume of over EUR 2.1bn resulted in a bid-to-cover ratio of 4.2x. The final issuance spread tightened by 5bp to ms +3bp. Incidentally, the ECB's initial order share for the NORD/LB bond with August settlement remained at 20%. To sum up, short maturities can be easily placed on the market with spread concessions in size or with a relatively small new issue premium in limited volume.

| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|---|---|---|---|---|---|---|---|---|
| NORD/LB | DE | 25.07. | DE000NLB3ZZ5 | 3.3y | 0.50bn | ms +3bp | - / Aa1 / - | - |
| TD | CA | 20.07. | XS2508690612 | 3.0y | 2.50bn | ms +17bp | - / Aaa / - | - |

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

**Secondary market: ECB decision has no impact on spreads**

Having widened significantly in the first half, spreads on the secondary market have at least stabilised in recent weeks and are even quoted slightly tighter in some cases in the core segment. Supported by further demand in new issues in the last two weeks, which are now quoted 2bp to 8bp tighter than the reoffer spread, the secondary market curves in German bonds are quoted slightly better. Covered bonds from the periphery and non-EEA countries have at least stabilised; only covered bonds from Canadian issuers are quoted slightly wider because of the substantial new issue premium on the TD issue. The decisions by the ECB's Governing Council last week had no impact on secondary market prices. Turnover remains below average for seasonal reasons and the ECB's purchase programme recently focused on Italian issuers, among others. Given the expected further decline in new issues at the beginning of August and EUR benchmark bonds totalling EUR 4.75bn maturing in August, we expect spreads to stabilise or consolidate slightly in the short term, before the issuance window from the end of August and into September could lead to the secondary market level being depressed by higher new issue spreads again.

**ECB key interest rates decision: July meeting only generates limited specific impetus for the covered bond segment**

Last week's ECB meeting definitely ensured an element of surprise (interest rate hike: +50bp) and spawned a new monetary policy instrument. While we discussed the decision on key interest rates within our NORD/LB Fixed Income Special in the previous week and comment on the meeting in greater detail in the SSA/Public Issuers Market Overview section of this issue of our weekly publication, we shall also present the new transmission protection instrument (TPI) in detail in a Cross Asset article included later on in this issue. As far as the covered bond market is concerned, we do not expect either the key interest rates decision or the TPI instrument to generate any further impetus. We would only consider Christine Lagarde's reference to the payment of interest on deposits in the context of TLTRO III during the press conference to be noteworthy. Accordingly, we see no need to adjust either our spread forecast for the rest of the year or our expected figure for the primary market issuance volume (EUR 156bn) across 2022 as a whole.

**Standard & Poor's presents covered bond outlook for the second half of the year**

Nearly three weeks ago, the risk experts at Moody's pointed out in the most recent Sector Update Q2/2022 that covered bonds should retain high credit quality even if conceivable downside scenarios were to materialise. The Standard & Poor's covered bond team has now reached a similar conclusion. In its covered bond outlook at the midway point of 2022, the risk analysts conclude, among other aspects, that the rating outlook for the covered bond programmes assessed will remain stable. S&P sees one reason for this in the available credit enhancement. In addition, S&P explains that the commercial real estate (CRE) programmes, for example, are by no means focused on the riskier sub-segments of this market. The fact that the rated programmes have an average of 2.3 unused notches remains a supporting element with regard to the rating assessments for covered bonds. Nevertheless, in this context, S&P makes a differentiation at country level, so that a comparatively high level of protection can be seen in the Netherlands, France and Belgium, for example. For Spanish and Italian programmes, on the other hand, the report points to a smaller buffer against issuer downgrades. In terms of stronger susceptibility to a sovereign downgrade, S&P also refers to non-core European issuers and public sector programmes. With regard to the issuance volume in the second half of the year, S&P assumes that the momentum will be more restrained. This is the same conclusion, i. e. that issuance activity will drop off somewhat, that we reached in our outlook for the months of July to December 2022 (cf. NORD/LB Covered Bond & SSA View from 06 July 2022). Looking at sustainable covered bond issues, the half-year report outlines challenges with regard to the availability of suitable assets, a limited greenium and unknowns in the context of the implementation of the EU taxonomy. However, the EU covered bond harmonisation project is still seen as an improvement in the area of credit quality.

# Market overview
# SSA/Public Issuers

Author: Dr Norman Rudschuck, CIIA

**Cheerio, negative interest rates – but it wasn't all bad**
As expected, comprehensive interest rate steps were agreed at last Thursday's meeting of the ECB Governing Council. In fact, the actions resolved went further than had generally been anticipated in the context of a 50:50 decision. From midday on Tuesday, the cat was out of the bag, so to speak: despite a rise of +25bp having essentially been predetermined, the possibility of an increase of +50bp was now on the table after the ECB had again been pulled in by the reality of the situation. Accordingly, the interest rates for the main refinancing operations, the marginal lending facility and the deposit facility were each raised by 50 basis points to 0.50%, 0.75% and 0.00% respectively. These were the first rate hikes implemented by the ECB for 11 years – welcome to the new normal!

**How much more do we know now in terms of pending reinvestments?**
You could be forgiven for thinking that the ECB is happy to remain silent. Our baseline scenario assumes that the Governing Council gives considerable thought to the scope of the maturities under its two asset purchase programs (APP and PEPP). While the ECB has clearly communicated that it will reinvest maturities under the PEPP until the end of 2024 at least, and will therefore not experience any balance sheet contractions, we currently have no idea of the exact amount of these maturities up to this end date. The suspicion is that the maturities here are similar in scope to those seen under the APP, which would mean that we are talking about an average of EUR 25-30bn per month to support spreads. However, in the case of the APP, the data is always available for the next 12 months. As such, a total of EUR 332.4bn is pending for this clearly defined time frame up to the end of June 2023. The Eurosystem is therefore still hoovering up all bonds eligible for purchase.

**Article on the new TPI in today's publication**
At 50 basis points, the ECB Governing Council did end up surprising us slightly. This suggests that the hawks have won the rate hike argument to carry out a degree of frontloading against the seemingly pre-determined measures. In contrast, the new mechanism added to the ECB's toolbox seems to be rather dovish, which suggests that a compromise of sorts has been struck (a "quid pro quo" situation). For example, the ECB agreed to less conditionality and unlimited scope (cf. Cross Asset article on the transmission protection instrument, TPI). Christine Lagarde, President of the European Central Bank, repeatedly emphasized during the press conference that the Governing Council's actual intention is to never actually have to use the tool. The actual end of the forward guidance is also noteworthy. Following this, the ECB is now making decisions on a monthly basis or from meeting to meeting, depending on the data situation. This is already leading to increased uncertainty ahead of the September meeting. After a rise of 50 basis points in July, an immediate train of thought might be that 25 basis points could be "enough" at the next meeting. However, continued high rates of inflation and further upward revisions to price projections could tip the scales in favour of another increase of 50 basis points, or perhaps even 75 basis points. Our expectation is that another rise of at least +50bp will be agreed in September.

**KfW claims that a sixfold rise in public expenditure is needed to achieve climate targets**

According to KfW, achieving the climate targets by 2045 will require significant investments, which it puts at a volume of EUR 500bn at Bund, Laender and municipality level. This equates to approximately EUR 20bn per year, while we would even take the view that this figure could well be on the low side given the acute need for action. This is shown by calculations from KfW Research on the basis of a study carried out by Prognos on behalf of KfW. The investment requirement is primarily attributable to the energy and transport sectors, and roughly corresponds in volume to the interest payments on government debt (at the current level). Around half (56%) of the investments have to be made anyway and must now be steered in a climate-neutral direction. Nevertheless, these sums represent a sixfold increase on current climate protection investments. At the same time, however, the realisation that these investments are necessary to achieve climate neutrality not only requires them to be prioritised within public budgets, but also demands that the tasks and financial flows between the Bund, Laender and municipalities are clarified properly. According to the study, at EUR 297bn, the largest public climate protection investment requirements are in the energy sector, of which the vast majority at EUR 249bn should be put towards developing renewable energy plants. This sum shows that, based on the amount of electricity generated, almost half of the largest electricity producers in Germany are owned by German regional authorities. Thereafter follows the transport sector at EUR 137bn. Infrastructure measures account for the largest share here, for example in the area of railways (EUR 51bn), charging infrastructure (EUR 34bn) and overhead lines on motorways (EUR 22bn), with the rest attributable to vehicles. In the trade, commerce and services sector, the public sector has the third-highest investment requirement of around EUR 47bn. This sum has been earmarked for energy upgrades of public buildings, with an additional EUR 3bn allocated for energy efficiency measures in public housing schemes. The public share in overall climate protection investments amounts to “only” around 10%. Looking at the economy as a whole, i.e. both the public sector and the private sector, investments totalling around EUR 5,000bn will be required by the middle of this century in order to achieve climate neutrality in Germany, according to the Prognos study for KfW. Converted to the remaining time up to the year 2045, this corresponds to investments of around EUR 190 billion per year or 5.2% of German GDP. At EUR 2.1tn, the majority of investments are attributable to the transport sector, followed by the energy sector (EUR 875bn), industry (EUR 620bn) and private households (EUR 636bn). The trade, commerce and services sector accounts for a total of EUR 237bn in this context. An additional sum of just under EUR 500bn is required for negative emission technologies (e.g. carbon capture and storage) because there will continue to be areas with greenhouse gas emissions that need to be offset in order to achieve the goal of climate neutrality.

**Primary market**

The previous calendar week was completely overshadowed by events in connection with the ECB meeting. It was only yesterday that Berlin emerged from the shadows to test the waters in the SSA segment. An order book of EUR 2.7bn at a spread of ms -10bp in the 10y segment meant that all those involved in this transaction were satisfied in the end. In comparison with the guidance (ms -8bp area), tightening of two basis points was recorded. There is a deal from NRWBK in the pipeline to discuss as well, with the issuer having signalled a volume of EUR 1bn (WNG) with a term of 10y in green format.

| Issuer | Country | Timing | ISIN | Maturity | Size | Spread | Rating | ESG |
|---|---|---|---|---|---|---|---|---|
| BERGER | DE | 25.07. | DE000A3MQYL0 | 10.0y | 0.50bn | ms -10bp | AAA / Aa1 / - | - |

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

# Cross Asset
# ECB likes abbreviations: After OMT and SMP, we now have TPI

Author: Dr Norman Rudschuck, CIIA

**Transmission Protection Instrument (TPI)**

Last Thursday, after much speculation plus an unscheduled special meeting, the ECB Governing Council launched an anti-fragmentation tool relatively quickly and immediately renamed it the Transmission Protection Instrument (TPI). According to the press release, the Governing Council had arrived at the conclusion that the introduction of the TPI was necessary to support the effective transmission of monetary policy. In particular, as the Governing Council continues normalising monetary policy, the TPI will ensure that the monetary policy stance is transmitted smoothly across all eurozone countries. The singleness of the Governing Council's monetary policy is a precondition for the ECB to be able to deliver on its price stability mandate. We believe that this could also have been solved via the reinvestment of PEPP and APP as well as OMTs that have never been used – but we shall delve deeper into this aspect later on.

**Where is the focus of the ECB? Not on the TPI**

The TPI will be an addition to the ECB's toolkit and can be activated to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the Eurozone as a whole. By safeguarding the transmission mechanism, the TPI will allow the Governing Council to more effectively deliver on its price stability mandate. But who actually decided that market dynamics are "unwarranted"? In this regard, the ECB may be on thin ice.

**Without volume restriction in advance**

Subject to fulfilling established criteria, the Eurosystem will be able to make targeted secondary market purchases of securities issued in jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals to counter risks to the transmission mechanism to the extent necessary. It begs the question, however, as to who decides whether the BTP widening last Thursday in the context of Draghi's resignation is still fundamentally warranted? Moreover, when and how do they reach this decision? And at what point is it no longer warranted? From 13 or only from 29 basis points? We are still none the wiser. According to the press release, the scale of TPI purchases would depend on the severity of the risks facing monetary policy transmission. For us, this answer was particularly important, i.e. purchases are **not** limited in volume at the start of the programme (i.e. ex ante).

**What parameters is the ECB setting itself?**

TPI purchases will primarily be focused on public sector securities (marketable debt securities issued by central and regional governments as well as agencies, as defined by the ECB) There should not be any major deviations from the PEPP or PSPP here - i.e. government bonds, supranational institutions, Bundeslaender as well as other regions, promotional banks and other European agencies. The remaining maturity is clearly limited to between one and ten years. Up to 31 years (minus one day) was possible under the PSPP and PEPP. Purchases of private sector securities could be considered (later), if appropriate.

**Eligibility**
The Governing Council will, for whatever reason, consider a partially non-public but cumulative list of criteria to assess whether the jurisdictions in which the Eurosystem may conduct purchases under the TPI pursue sound and sustainable fiscal and macroeconomic policies. These criteria will be input into the Governing Council's decision-making process and will be dynamically adjusted to the unfolding risks and conditions to be addressed. The publicly available criteria include: (1) **compliance with the EU fiscal framework:** not being subject to an excessive deficit procedure (EDP), or not being assessed as having failed to take effective action in response to an EU Council recommendation under Article 126 (7) of the Treaty on the Functioning of the European Union (TFEU). (2) **absence of severe macroeconomic imbalances:** not being subject to an excessive imbalance procedure (EIP) or not being assessed as having failed to take the recommended corrective action related to an EU Council recommendation under Article 121 (4) TFEU. (3) **fiscal sustainability:** in ascertaining that the trajectory of public debt is sustainable, the Governing Council will take into account, where available, the debt sustainability analyses by the European Commission, the European Stability Mechanism, the International Monetary Fund and other institutions, together with the ECB's internal analysis. (4) **sound and sustainable macroeconomic policies:** complying with the commitments submitted in the recovery and resilience plans for the Recovery and Resilience Facility and with the European Commission's country-specific recommendations in the fiscal sphere under the European Semester.

**Activation of the TPI**
According to Christine Lagarde, President of the European Central Bank, a decision by the Governing Council to activate the TPI will be based on a comprehensive assessment of market and transmission indicators, an evaluation of the eligibility criteria and a judgement that the activation of purchases under the TPI is proportionate to the achievement of the ECB's primary objective (2% inflation). Purchases would be terminated either upon a durable improvement in transmission, or based on an assessment that persistent tensions are due to country fundamentals.

**Creditor treatment**
The Eurosystem accepts the same (pari passu) treatment as private or other creditors with respect to bonds issued by eurozone governments and purchased by the Eurosystem under the TPI, in accordance with the terms of such bonds.

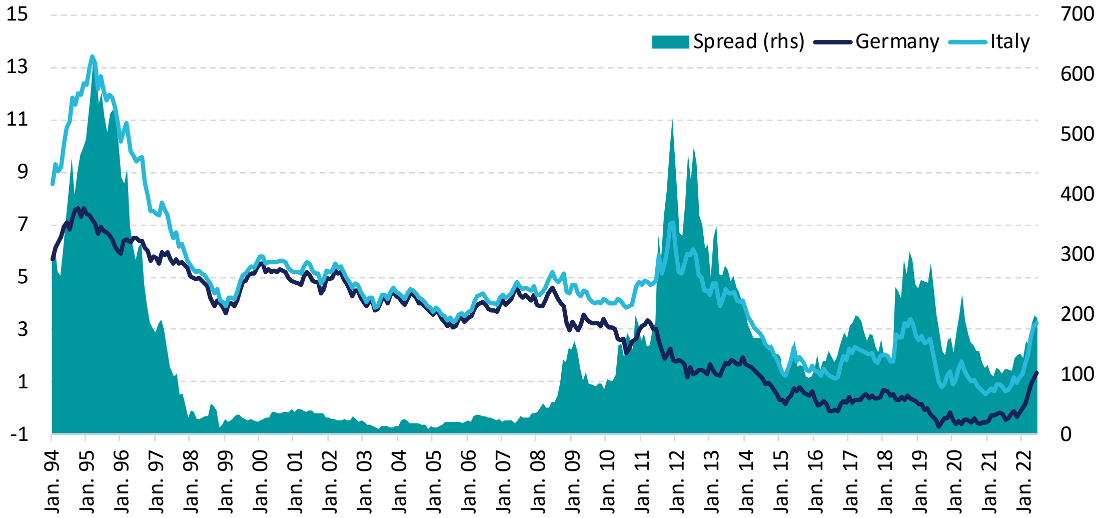
**How does the TPI fit with the ECB's monetary policy course?**
In order to avoid potential interference with the appropriate monetary policy course, should the TPI be activated, the Governing Council will assess the impact of TPI purchases on the scale of the aggregate Eurosystem monetary policy debt security portfolio and the level of excess liquidity. Purchases under the TPI would be conducted such that they cause no persistent impact on the overall Eurosystem balance sheet and hence on the monetary policy course.

**Important focus remains on the PEPP**
In any case, according to President Lagarde, PEPP (Pandemic Emergency Purchase Programme) reinvestment flexibility will continue to be the first line of defence to counter risks to the transmission mechanism related to the pandemic. So why the need for a new TPI programme?

**ECB and tilting at windmills?**

We do not normally comment specifically on government bond spreads, as our coverage is primarily focused on supranationals, sub-sovereigns and agencies (SSAs for short) on the one hand and covered bonds on the other. But now the ECB is forcing us to do so with this new tool. Accordingly, we firstly looked at the long-term chart since 1994 and noted that Italy was already paying over 13% interest on its ten-year securities before the introduction of the euro. The odd market player may also have suppressed and/or overlooked the rate of nearly 8% in Germany. In anticipation of the decision to introduce the euro, we saw an unhealthy alignment of interest rates across Europe. It was assumed that Germany would help everyone out if things got out of hand. How is that supposed to work with the mountains of debt that continue to grow? Until the 2010s, Germany was also the sick man of Europe and had enough on its plate with reforms of its own. This was successful and the euro crisis in particular (keyword: PIIGS) showed a clear spread differentiation analogous to risk (flight-to-quality and flight-to-safety). Incidentally, the average monthly spread of the two countries since 1994 is 147.9bp. For 2022, this ytd stands at 173.8bp on a daily basis. So what was the healthiest time or fair value? Did the values before the single currency represent the benchmark or was it during the euro crisis? Or perhaps during the alignment from 1998 until shortly before Lehman's collapse in 2008?

**German and Italian yields (10y in %) incl. spread (in bp)**

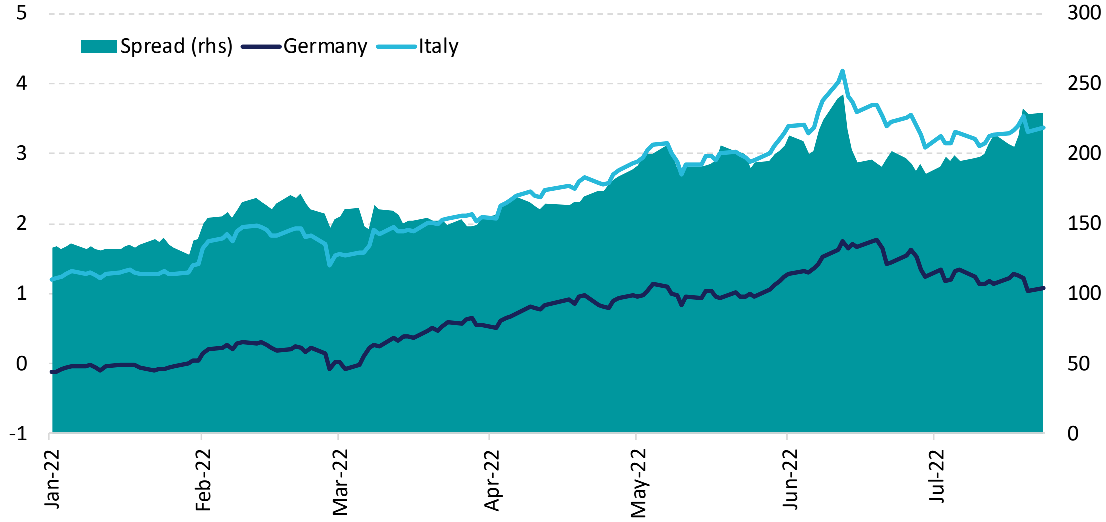



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

**Draghi's resignation last Thursday**

Fittingly, life writes its own stories, and so it was that the Italian prime minister and former head of the ECB laid a rotten egg in his successor's nest with his resignation. In any case, there is now a widespread belief on the market that the "I" in TPI stands for Italy and not for Instrument. The strained spread situation is again almost as high as before the special meeting in June. Under Draghi, Italy submitted a reform package of EUR 191.5bn to the EU, which it would like to take from the NGEU programme. New elections are set to take place in September. Who knows whether a new government will stick to this reform commitment? Brussels will almost certainly already be watching the forthcoming election campaign with an eagle eye, as the EU has been the target for dissenting voices from Rome often enough in the past.

**Chart since the beginning of the year on a daily basis (in line with the above)**




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

**SMP and OMTs**

Let's take a quick trip down memory lane: "The ECB Governing Council's decision of 6 September 2012 to conduct OMTs marked the end of the securities markets programme (SMP). Given the acute tension observed in certain market segments, the ECB Governing Council decided on 10 May 2010 to carry out the SMP. This programme permitted interventions in the public and private debt securities markets to ensure depth and liquidity in those markets. The programme, which was a temporary component of the Eurosystem's single monetary policy, was designed to remedy malfunctions in securities markets and restore an appropriate monetary policy transmission mechanism. The SMP did not affect the Eurosystem's monetary policy stance. To ensure that this was the case, targeted operations were conducted each week in order to reabsorb the liquidity provided by the SMP (by offering time deposits). The programme was conducted without defining an intervention volume upfront. The liquidity provided as part of the SMP was absorbed by 10 June 2014, following discontinuation of the programme. The securities in the SMP portfolio are held to maturity." That is what the Bundesbank still says today. And it goes on: "To safeguard an appropriate monetary policy transmission and the singleness of monetary policy, the ECB Governing Council specified, on 6 September 2012, a set of technical features for outright monetary transactions (OMTs) in the secondary sovereign bond markets. A necessary condition for conducting OMTs is **strict and effective conditionality** attached to an appropriate European Financial Stability Facility/European Stability Mechanism (EFSF/ESM) programme. Such programmes can take the form of a full EFSF/ESM macroeconomic adjustment programme or a precautionary programme (enhanced conditions credit line, or ECCL), provided that they include the possibility of EFSF/ESM primary market purchases and that a Member State has bond market access." We see initial parallels (scope) with the TPI and significant differences compared to the new decision, especially with regard to conditionality, as we explain in the next paragraph.

**Was this instrument really necessary?**

In conclusion: “The ECB Governing Council will consider OMTs to the extent that they are warranted from a monetary policy perspective as long as programme conditionality is fully respected. Following a thorough assessment, the Governing Council will decide on the start, continuation and suspension of OMTs in full discretion and acting in accordance with its monetary policy mandate. Any transactions will be focused on the shorter part of the yield curve and, in particular, on sovereign bonds with a maturity of between one and three years. **No ex ante quantitative limits are set** on the size of OMTs, yet the liquidity they generate is to be fully reabsorbed by means of targeted operations. To date, the Eurosystem has not conducted any OMTs.” Therefore, OMTs have neither been used to date nor are they to be used in the future, as the required conditionality is obviously too strict. This is more than unfortunate because within the framework of reinvestment (both PEPP and APP) there are currently enough billions for micromanagement to operate flexibly within the ECB mandate and not be vulnerable. We are sure that after lawsuits against SMP and OMTs, there will also be lawsuits in or from Germany against the ECB in the case of TPI.

**Conclusion and comments**

Although President Lagarde openly admitted that reinvestment was the first line of defence to counter pandemic-related risks to the monetary policy transmission mechanism, the ECB Governing Council came up with a Transmission Protection Instrument (TPI). It looked like horse-trading between doves and hawks, on the other side of which was the rate hike of 50 basis points, although a “binding” increase of +25bp had been announced. The ECB is regularly caught up or even overtaken by reality. This is how the ECB got behind the curve. We doubt that the new tool in the toolbox is necessary. Due to reinvestment and the OMT never having been used, there would have been alternatives. We think that the ECB will be willing to use this tool in a timely manner when the first applicant comes around the corner. However, it is up to governments to apply and at the same time fulfil the above criteria. Consequently, we are not following in Mario Draghi’s footsteps here, who calmed the entire market with his “Whatever it takes” speech, but expect the new anti-fragmentation tool to be used. During the euro crisis, the spread of 10y German and Italian bonds was around 500bp. Hence Draghi's full and helpful quote: “And believe me, it will be enough.”

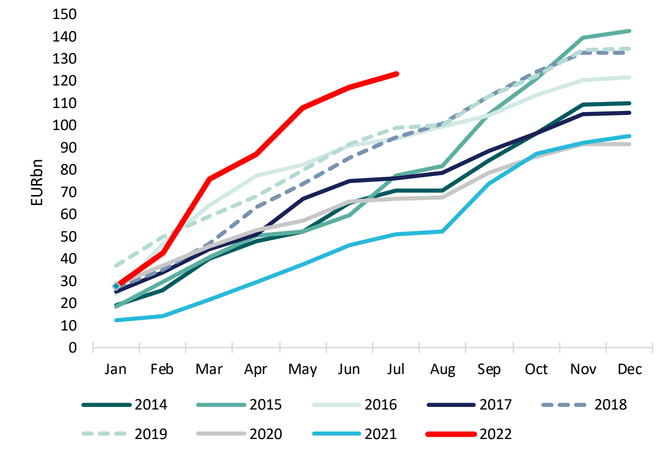
# Covered Bonds
# Covereds vs. Senior Unsecured Bonds

Author: Dr Frederik Kunze

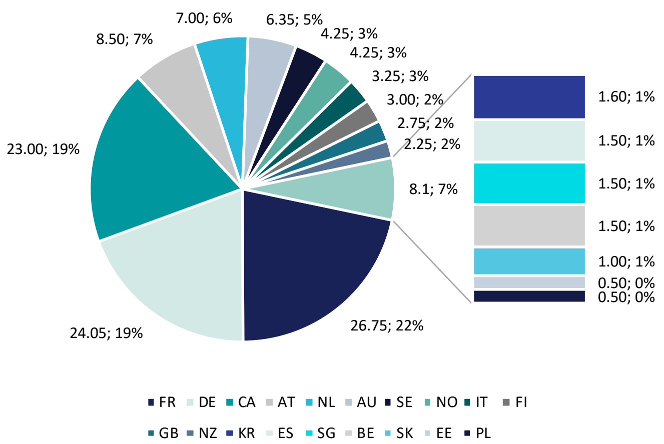
**Refinancing in times of crisis**

As part of our weekly publication, we regularly report on issuance activity on the covered bond primary market. Contrary to the previous lean years in 2020 and 2021, issues of new bonds in the EUR benchmark segment have been and remain buoyant in 2022. In July, it is Pfandbrief issuers, in particular, that have sought funding from their investors to date. In the context of the overlapping crises and the massive interventions in part by the ECB but also the financial and regulatory decision-makers in market activity, funding requirements and conditions also have been significantly affected on a sustained and regular basis in recent months and years. This was not least evident from the market-based refinancing of commercial banks in the single currency area and beyond. Here, particular influence must be attributed to the TLTRO tenders falling due in the coming quarters or the first half of 2023. Besides the general conditions resulting from monetary and fiscal policy as well as the regulatory environment, the general risk appetite of financial market participants also plays a significant role with regard to funding in times of crisis. Finally, geopolitical shocks, such as the Russian invasion of Ukraine, have really brought the primary market to a standstill at times. At the same time, covered funding started up significantly faster than funding via senior unsecured bonds. Just before the summer break starts, we would like to take the opportunity to compare the key framework parameters of these two asset classes and summarise covered bond developments before finally touching upon events in the area of unsecured bank bonds.

**EUR BMK covered bonds: issue trend (EUR bn)**




**EUR BMK Covered Bonds: issues (ytd; EUR bn)**

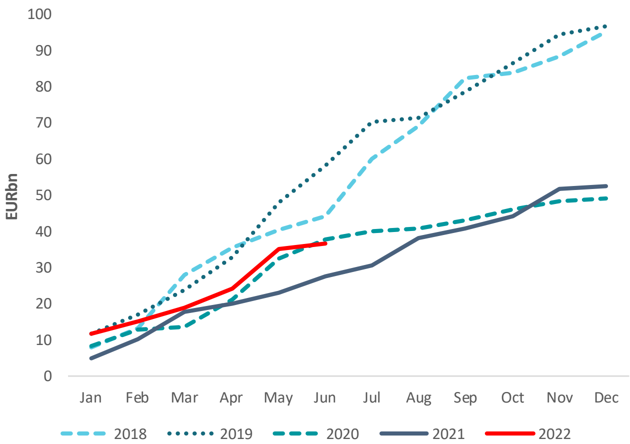



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

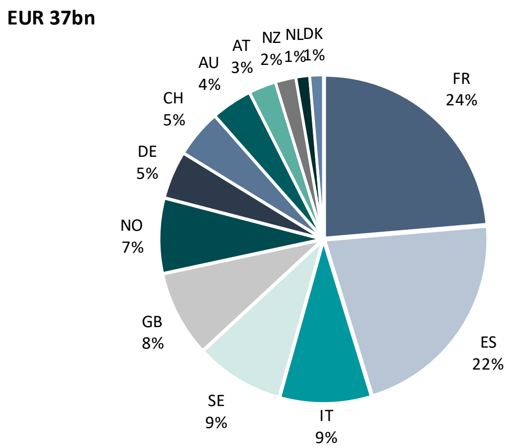
**Covered bonds: EUR benchmark issues total EUR 123.5bn**

The dynamism on the covered bond primary market referred to above is apparent from the issuance volume to date of EUR 123.5bn spread across 131 bonds. We presented details of developments in the first six months a few weeks ago in our half-year review. The sustained issuance activity on the part of Pfandbrief issuers has to be emphasised at present. In the current year, EUR benchmarks from Germany now account for an issuance volume of EUR 24.05bn (share: 19.5%). With regard to the number of bonds, the institutions in question even account for the largest share with 31 issues. With regard to the year as a whole, we still expect a primary market volume of EUR 156bn, which would be the largest amount for more than eight years.

**EUR BMK SP: issue trend (EUR bn)**




**EUR BMK SP: issues (ytd; EUR bn)**

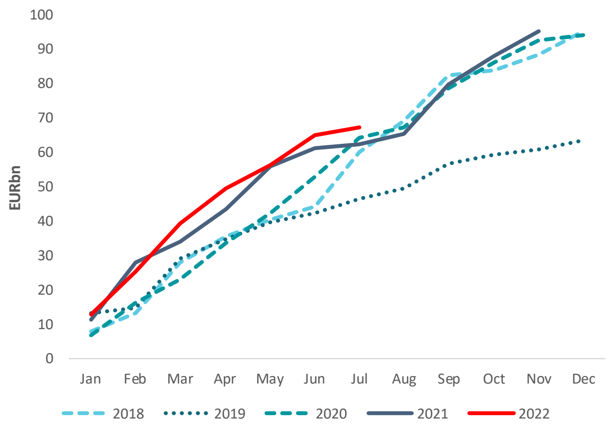



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

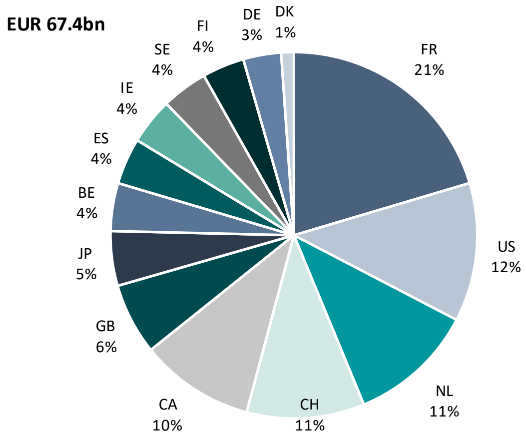
**Senior preferred market: issuance pattern resembles that of previous years, but the attack on Ukraine is intermittently putting the primary market on ice**

With regard to senior unsecured bonds in preferred format (SP), the current issuance year stands out far less than our observations for the covered bond segment. With an issuance volume to date of EUR 37bn spread across 46 bonds, a figure of just below the level of 2020 (EUR 38.1bn), albeit above the figure for 2021 (EUR 27.9bn), is all that could be achieved in the first half of the year. In the current year, issuers from France (EUR 8.75bn; 9 bonds) and Spain (EUR 8bn; 8 bonds) featured most prominently, ahead of Italy (EUR 3.35bn; 5 bonds). They were followed on the primary market by issuers from non-EUR and non-EEA countries in the shape of Sweden, the UK and Norway. The last issuer to approach investors in the senior preferred segment before the Russian invasion of Ukraine was a UK issuer, namely NatWest. The bond worth EUR 1bn (5y; reoffer-spread: ms +78bp) was followed by a “primary market break”, which lasted until 14 March 2022. On that date, Crédit Agricole (FR) placed a bond worth EUR 1.25bn (3,5y; reoffer-spread: ms +45bp). When compared directly, the break on the covered bond primary market was significantly shorter, with the Canadian issuer CIBC approaching investors with a benchmark (final volume of EUR 2.5bn; 4y; reoffer-spread: ms +6bp) as early as 3 March 2022. This market opener was followed by numerous deals in the subsequent trading week, with seven issues totalling EUR 10.25bn placed on 8 and 9 March 2022 alone.

**EUR BMK NPS: issue trend (EUR bn)**




**EUR BMK NPS: issues (ytd; EUR bn)**




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

**Market for senior non-preferred bonds: EUR 67.4bn in new benchmarks placed to date in 2022**

On the contrary, the market for senior non-preferred bonds (NPS) is definitely keeping pace with the years 2018-2021. The issuance volume of EUR 67.4bn either matches or exceeds the levels seen in these previous years. Toronto Dominion, a Canadian issuer, ventured on the market recently, choosing to offer a dual tranche of EUR 1bn (5y) and EUR 1.25bn (10y). Consequently, Canada's share of the issuance volume to date increased to 10% (EUR 6.8bn or 6 bonds). With a share of 21%, France is the jurisdiction with the most substantial presence in the NPS segment. It has EUR 13.75bn spread across a total of 14 bonds. Issues from the USA (EUR 8.25bn; 5 bonds) follow in second place, while the Netherlands ranks third (EUR 7.5bn; 7 bonds). The primary market for senior non-preferred bonds also came to a standstill in the wake of the attack on Ukraine. After BPCE (FR) approached investors with a bond worth EUR 750m (7y; reoffer-spread: ms +110bp) on 21 February, no issuer offering a new bond was seen on the market until 14 March, when Switzerland's UBS chose a maturity of three years for a new NPS benchmark and placed EUR 1.5bn at ms +80bp on the market.

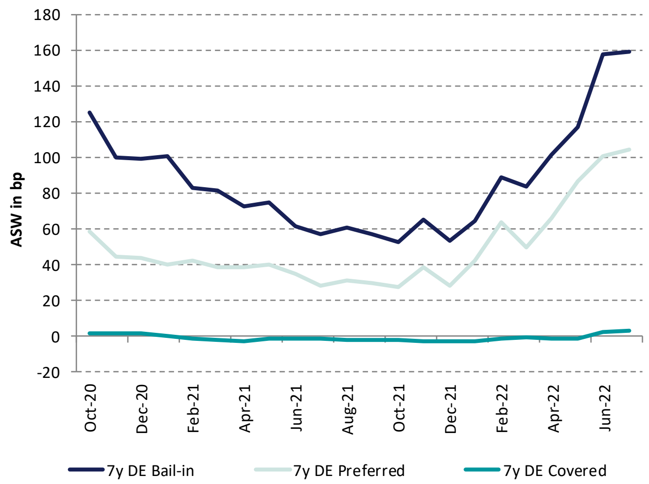
**Secondary market activity sluggish in both covered bonds and senior unsecured bonds**

Secondary market activities slowed perceptibly in the wake of recurring crises and in the context of increased uncertainties both for covered bonds and in relation to senior unsecured bonds. In part, investors focused on newly placed bonds, which can also be seen, in our opinion, as a consequence of increased or persistently high new issue premiums. The gap between "fair value" and issue spread must, however, also be interpreted in the context of sluggish trading activities. In this respect, the repricing triggered by new issues is not fundamentally surprising either. However, a sustained change in market sentiment (key word: risk-off) must also be included in the equation. In our opinion, this also explains the significant divergence in the price premiums of unsecured vs. secured bank bonds. In this context, however, it would be remiss of us not to mention that the price differences between covered bonds and seniors remained at an excessively low level, which we also view as an explanation for the weak covered bond primary markets in 2020 and 2021.

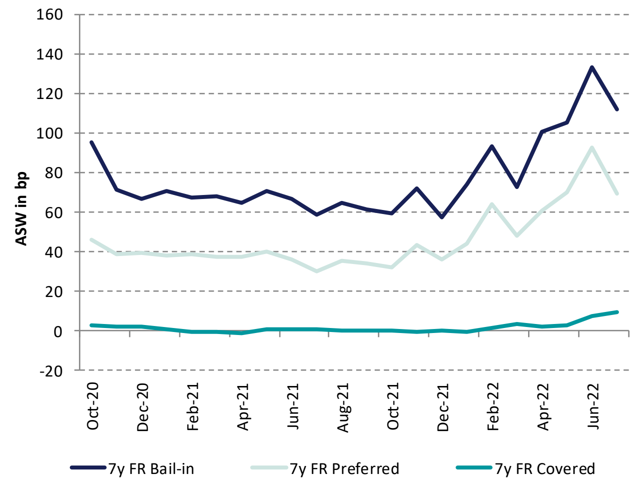
**Secondary market comparison at country level: senior preferreds and senior non-preferreds widening markedly compared with covered bonds**

In actual fact, the widening between senior preferred and senior non-preferred bonds has by no means only been apparent since Russia invaded Ukraine. Among other things, expectations regarding a reorientation of ECB monetary policy against the backdrop of rising inflation has led to corresponding reactions among market participants. A near mirror image of this new perception of risk could also be seen in the synthetic indices. Below, we present some examples of the trend in spreads for the generically determined ASW spread in the 7y maturity range for Germany, France, Italy and Spain.

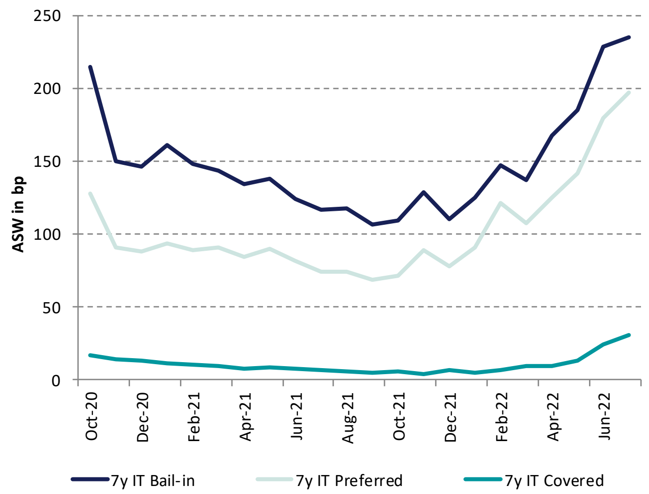
**Spread trend DE: CB vs. SP vs. NPS (generic; 7y)**



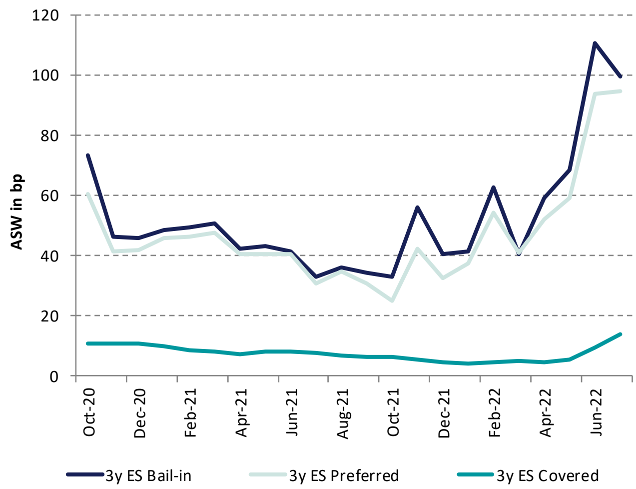

**Spread trend FR: CB vs. SP vs. NPS (generic; 7y)**




**Spread trend IT: CB vs. SP vs. NPS (generic; 7y)**




**Spread trend ES: CB vs. SP vs. NPS (generic; 7y)**




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

**What is the significance of these observations for the covered bond primary market?**
Actually, an isolated consideration of the price difference between senior unsecured bonds and covered bonds would be insufficient with regard to the influence on commercial banks' funding. We certainly assume that more expensive senior unsecured funding could generally have a positive impact on primary market volumes on the covered bond primary market. This effect could even actually be boosted by the uncertain market environment, where investors tend to look for more secure investments. On the other hand, however, there are also banks' actual funding requirements to be considered. Some banks are likely to still be comfortably situated because their TLTRO III holdings remain substantial. As such, certain banks may therefore continue to focus on NPS issues, even with increased spread levels, as there are regulatory motives associated with placement. We also see ESG considerations as a possible motive for remaining attached to the senior segment, even if spreads are comparatively high. Ultimately, green bonds in the senior unsecured format allow banks to finance or refinance a far broader range of assets than is the case for covered issues. This is particularly the case for project financing, although not exclusively so.

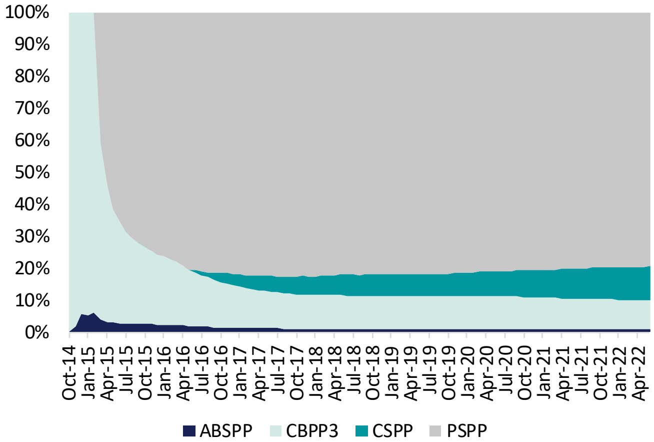
**Conclusion**
The two sub-markets for senior unsecured bonds were hit by shock-induced paralysis in the wake of surging uncertainty resulting from Russia's attack on Ukraine both in the primary market and in the secondary market, which lasted longer than the paralysis that affected the covered bond segment. In expectation of a reorientation of the ECB's monetary policy, however, early revaluations with regard to the price differences between covered bonds and senior unsecured bonds have already started. The more marked differentiation that we have presented on the secondary market for a few representative countries may generally make covered bonds look more attractive. Nevertheless, pricing is not the only reason for choosing a funding instrument. There are also question marks with regard to the requisite funding requirement. We are of the opinion at least that some issuers have already achieved their funding target for 2022 to a substantial extent.

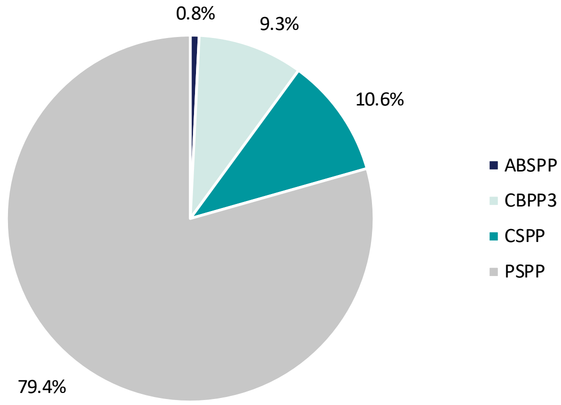
# ECB tracker

### Asset Purchase Programme (APP)

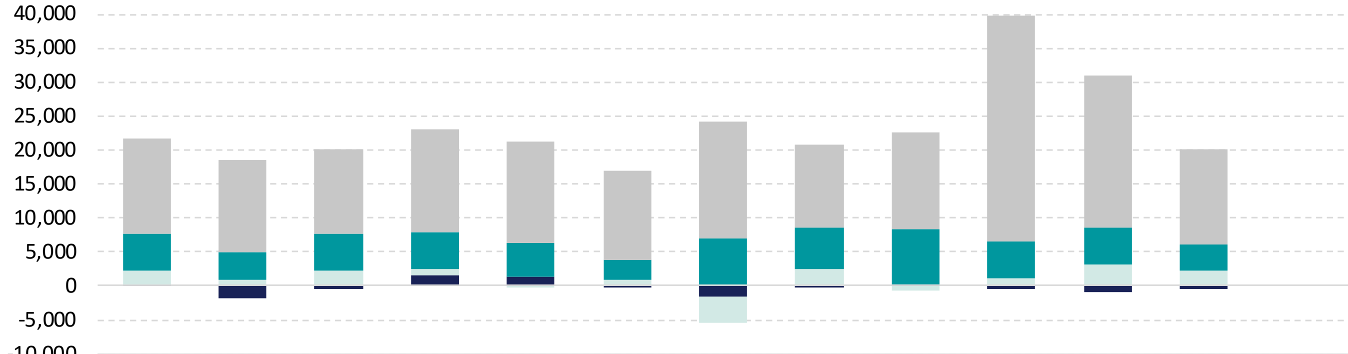
| | ABSPP | CBPP3 | CSPP | PSPP | APP |
|---|---|---|---|---|---|
| **May-22** | 25,779 | 300,171 | 341,432 | 2,581,291 | 3,248,673 |
| **Jun-22** | 25,365 | 302,210 | 344,952 | 2,592,645 | 3,265,172 |
| **Δ** | -371 | +2,339 | +3,858 | +13,924 | +19,750 |

### Portfolio structure



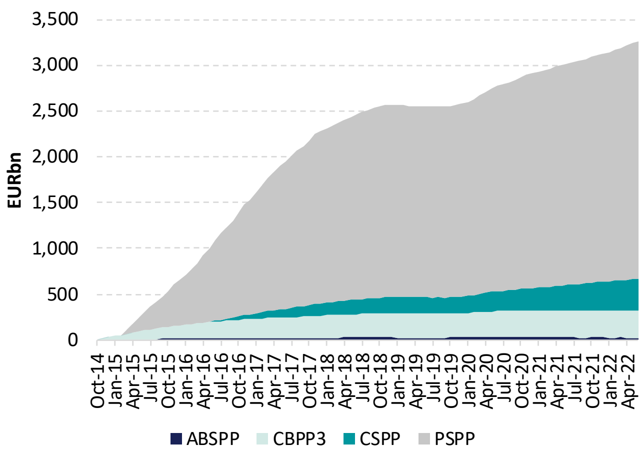

### Monthly net purchases (in EURm)



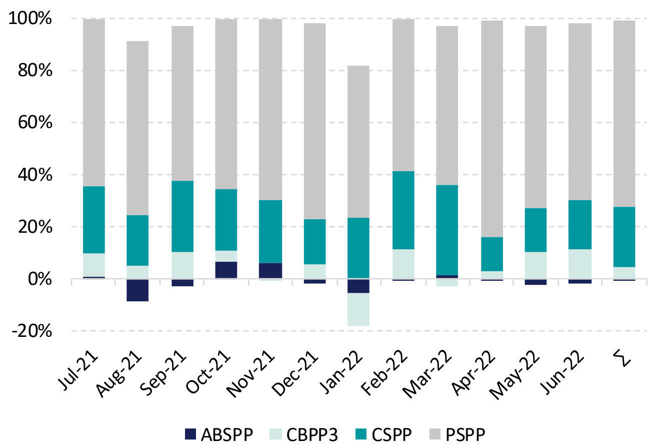

| | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | ∑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APP | 21,597 | 16,749 | 19,659 | 23,017 | 21,200 | 16,596 | 18,838 | 20,698 | 21,929 | 39,397 | 30,232 | 19,750 | 269,662 |
| PSPP | 13,943 | 13,563 | 12,423 | 15,038 | 14,815 | 12,989 | 17,292 | 12,095 | 14,172 | 33,238 | 22,443 | 13,924 | 195,935 |
| CSPP | 5,502 | 3,936 | 5,590 | 5,481 | 5,142 | 3,007 | 6,970 | 6,272 | 8,042 | 5,461 | 5,366 | 3,858 | 64,627 |
| CBPP3 | 2,011 | 999 | 2,184 | 1,008 | -12 | 942 | -3,761 | 2,376 | -606 | 1,074 | 3,247 | 2,339 | 11,801 |
| ABSPP | 141 | -1,749 | -538 | 1,490 | 1,255 | -342 | -1,663 | -45 | 321 | -376 | -824 | -371 | -2,701 |

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

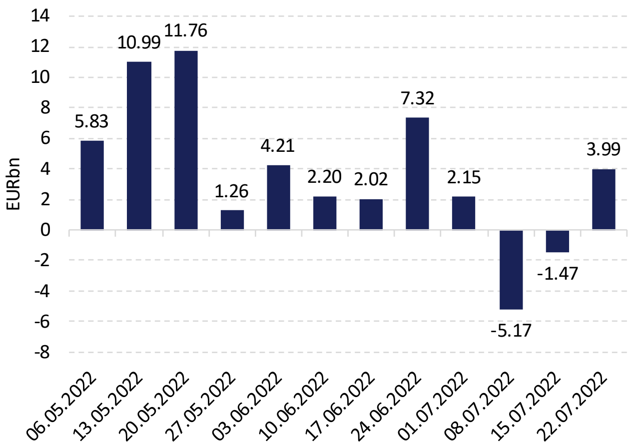
## Portfolio development



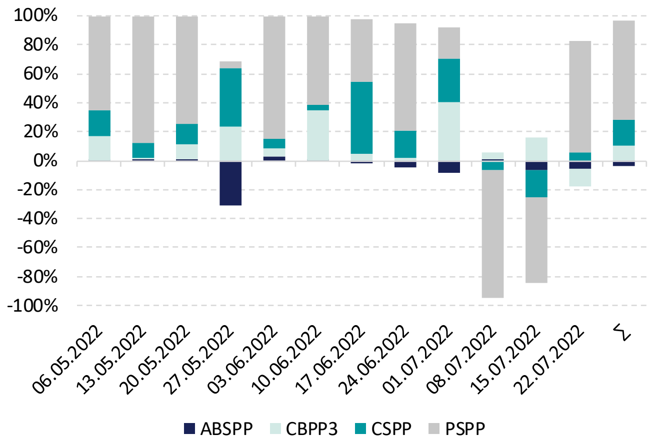

## Distribution of monthly purchases



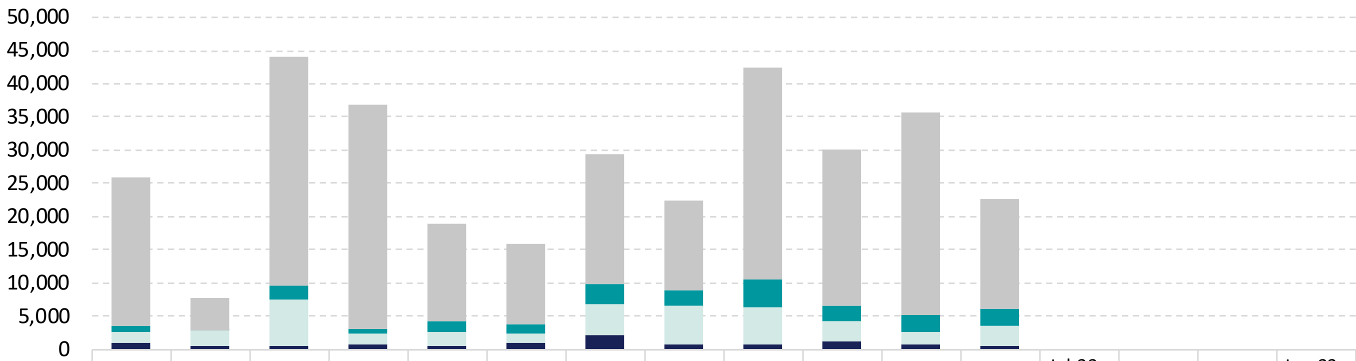

## Weekly purchases




## Distribution of weekly purchases




## Expected monthly redemptions (in EURm)

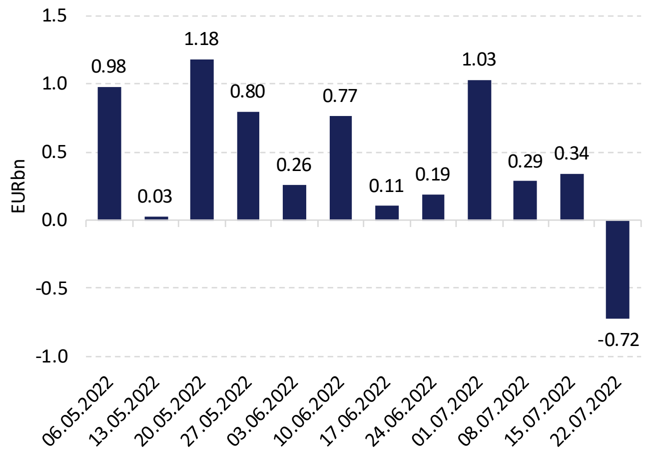


| | Jul-22 | Aug-22 | Sep-22 | Oct-22 | Nov-22 | Dec-22 | Jan-23 | Feb-23 | Mar-23 | Apr-23 | May-23 | Jun-23 | Jul-22 - Jun-23 | 2021 | 2022 | Jan-23 - Jun-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APP | 26,009 | 7,770 | 44,014 | 36,948 | 18,860 | 15,812 | 29,328 | 22,493 | 42,533 | 30,101 | 35,785 | 22,763 | 332,416 | 247,069 | 298,614 | 183,003 |
| PSPP | 22,446 | 4,841 | 34,354 | 33,927 | 14,669 | 12,016 | 19,469 | 13,656 | 32,033 | 23,561 | 30,549 | 16,619 | 258,140 | 188,494 | 228,558 | 135,887 |
| CSPP | 978 | 196 | 2,155 | 674 | 1,557 | 1,416 | 2,940 | 2,182 | 4,219 | 2,380 | 2,566 | 2,504 | 23,767 | 17,134 | 17,337 | 16,791 |
| CBPP3 | 1,629 | 2,227 | 6,873 | 1,651 | 2,167 | 1,487 | 4,786 | 5,977 | 5,631 | 2,937 | 1,874 | 3,108 | 40,347 | 30,143 | 41,244 | 24,313 |
| ABSPP | 956 | 506 | 632 | 696 | 467 | 893 | 2,133 | 678 | 650 | 1,223 | 796 | 532 | 10,162 | 11,298 | 11,475 | 6,012 |

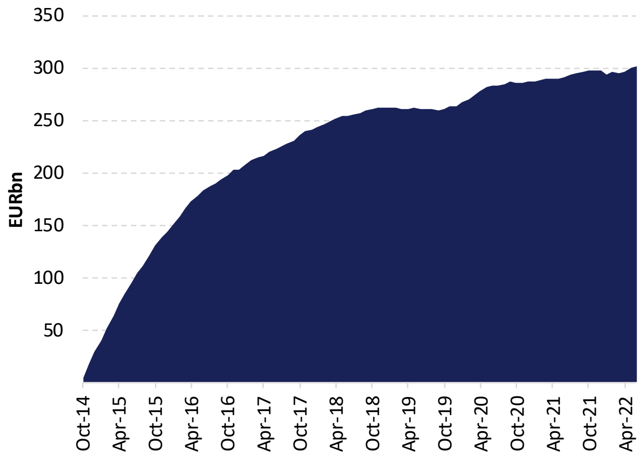
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

## Covered Bond Purchase Programme 3 (CBPP3)

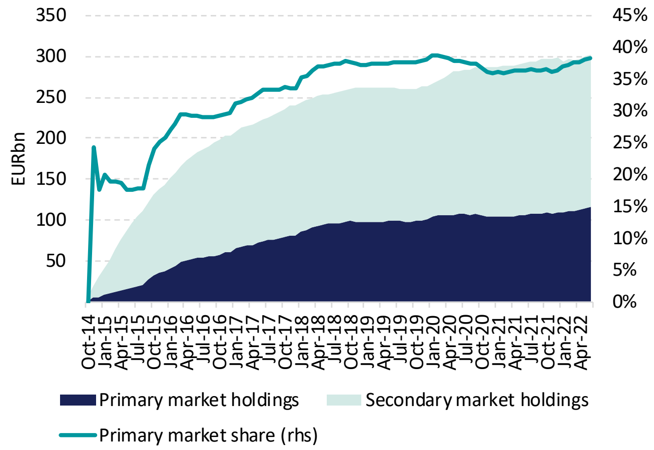
### Weekly purchases



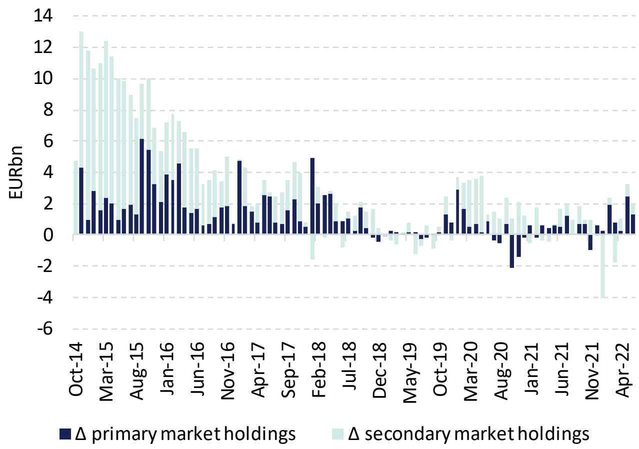

### Development of CBPP3 volume



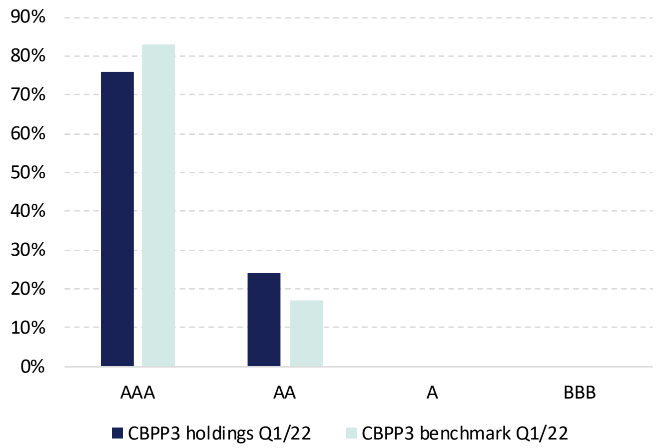

### Primary and secondary market holdings



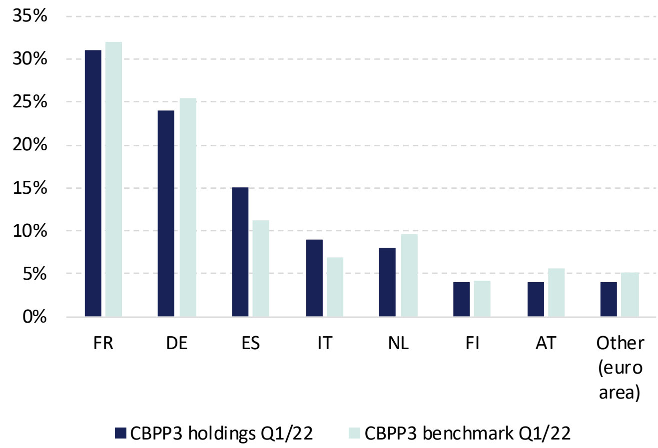

### Change of primary and secondary market holdings




### Distribution of CBPP3 by credit rating



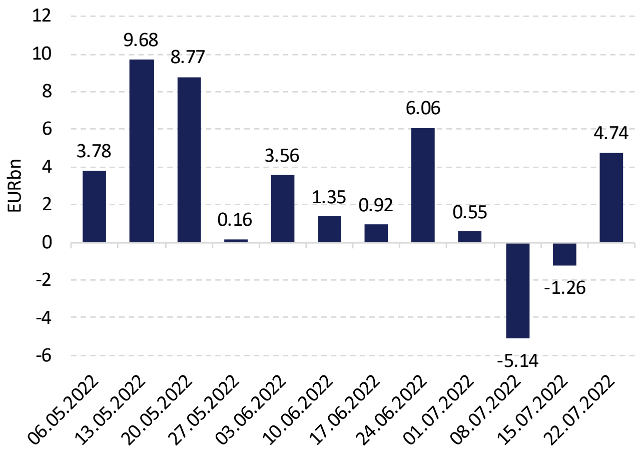

### Distribution of CBPP3 by country of risk



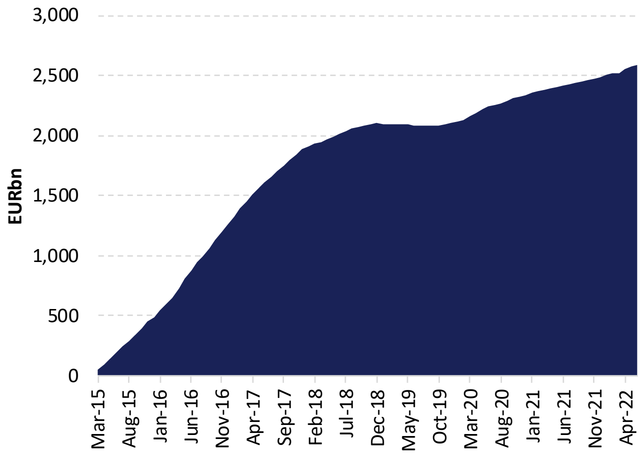

Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

## Public Sector Purchase Programme (PSPP)

### Weekly purchases




### Development of PSPP volume



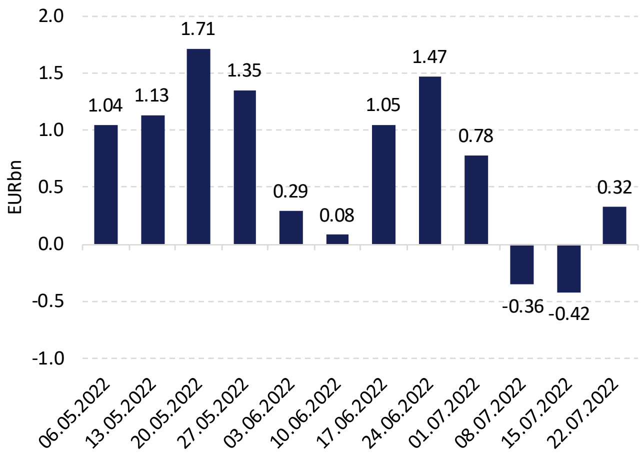

### Overall distribution of PSPP buying at month-end

| Jurisdiction | Adjusted distribution key[1] | Holdings (EURm) | Expected holdings (EURm)[2] | Difference (EURm) | Current WAM of portfolio[3] (in years) | WAM of eligible universe[4] (in years) | Difference (in years) |
|---|---|---|---|---|---|---|---|
| AT | 2.7% | 77,504 | 74,123 | 3,381 | 7.3 | 8.1 | -0.8 |
| BE | 3.4% | 94,970 | 92,265 | 2,705 | 7.5 | 9.9 | -2.4 |
| CY | 0.2% | 4,240 | 5,449 | -1,209 | 8.5 | 8.9 | -0.5 |
| DE | 24.3% | 666,639 | 667,600 | -961 | 6.7 | 8.0 | -1.3 |
| EE | 0.3% | 444 | 7,134 | -6,690 | 8.1 | 8.1 | 0.0 |
| ES | 11.0% | 315,066 | 301,988 | 13,078 | 8.0 | 8.2 | -0.2 |
| FI | 1.7% | 43,617 | 46,518 | -2,901 | 7.9 | 8.9 | -1.0 |
| FR | 18.8% | 531,309 | 517,242 | 14,067 | 6.9 | 8.4 | -1.5 |
| GR | 0.0% | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| IE | 1.6% | 42,418 | 42,885 | -467 | 8.4 | 10.1 | -1.7 |
| IT | 15.7% | 447,979 | 430,231 | 17,748 | 7.2 | 7.8 | -0.7 |
| LT | 0.5% | 5,881 | 14,657 | -8,776 | 10.6 | 10.4 | 0.1 |
| LU | 0.3% | 3,777 | 8,342 | -4,565 | 5.8 | 6.1 | -0.3 |
| LV | 0.4% | 3,772 | 9,868 | -6,096 | 9.5 | 9.4 | 0.1 |
| MT | 0.1% | 1,414 | 2,656 | -1,242 | 11.1 | 9.8 | 1.3 |
| NL | 5.4% | 132,716 | 148,414 | -15,698 | 7.7 | 9.3 | -1.6 |
| PT | 2.2% | 54,982 | 59,273 | -4,291 | 7.5 | 7.9 | -0.4 |
| SI | 0.4% | 10,775 | 12,194 | -1,419 | 9.7 | 9.9 | -0.2 |
| SK | 1.1% | 18,171 | 29,003 | -10,832 | 8.1 | 8.8 | -0.7 |
| SNAT | 10.0% | 288,595 | 274,427 | 14,168 | 8.2 | 9.4 | -1.2 |
| **Total / Avg.** | **100.0%** | **2,744,270** | **2,744,270** | **0** | **7.3** | **8.4** | **-1.1** |

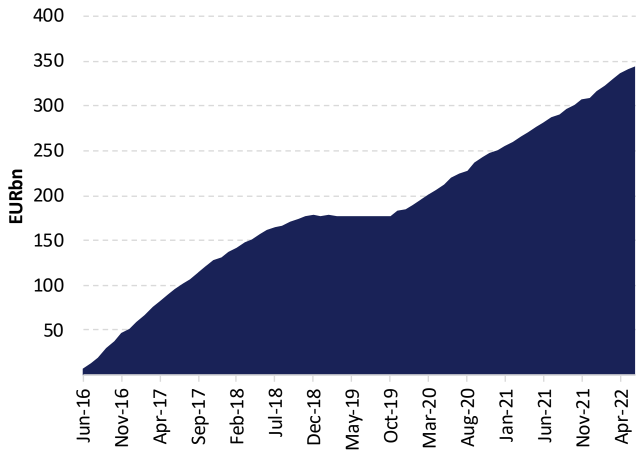
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of PSPP portfolio holdings
[4] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP
Source: ECB, NORD/LB Markets Strategy & Floor Research

## Corporate Sector Purchase Programme (CSPP)

### Weekly purchases

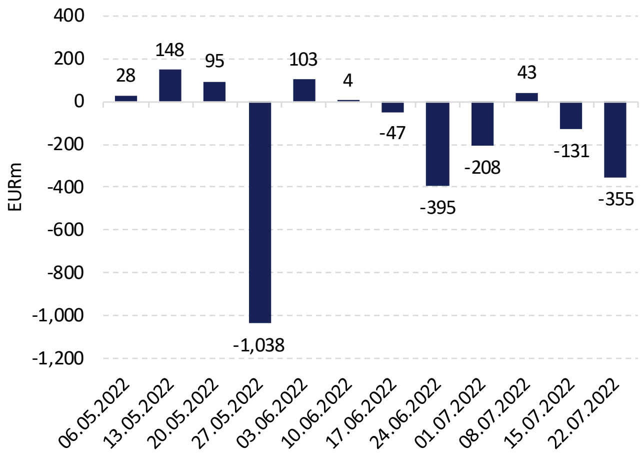



### Development of CSPP volume

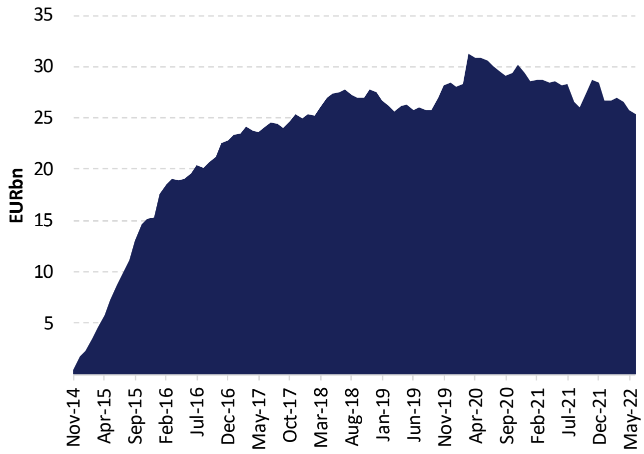



## Asset-Backed Securities Purchase Programme (ABSPP)

### Weekly purchases




### Development of ABSPP volume



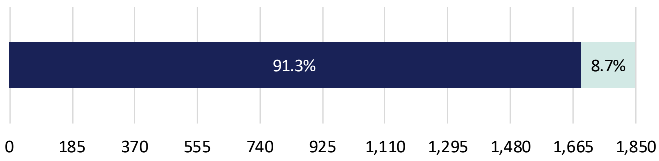

Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

### Pandemic Emergency Purchase Programme (PEPP)

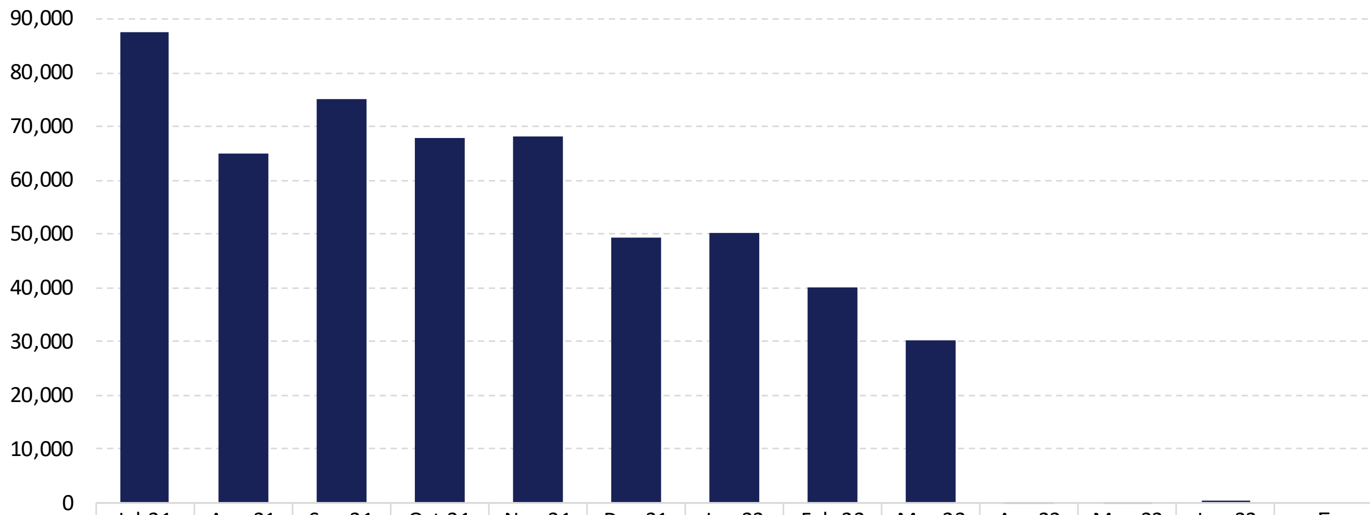
**Holdings (in EURm)**

| | **PEPP** |
|---|---|
| **May-22** | 1,718,061 |
| **Jun-22** | 1,718,074 |
| **Δ (net purchases)** | +12 |

**Invested share of PEPP envelope (in EURbn)**

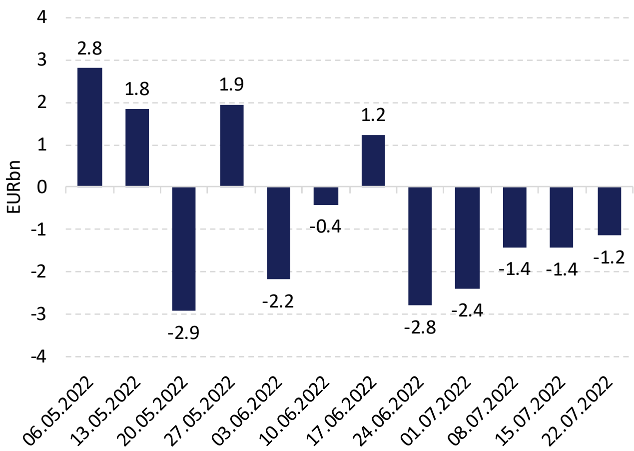



**Monthly net purchases (in EURm)**

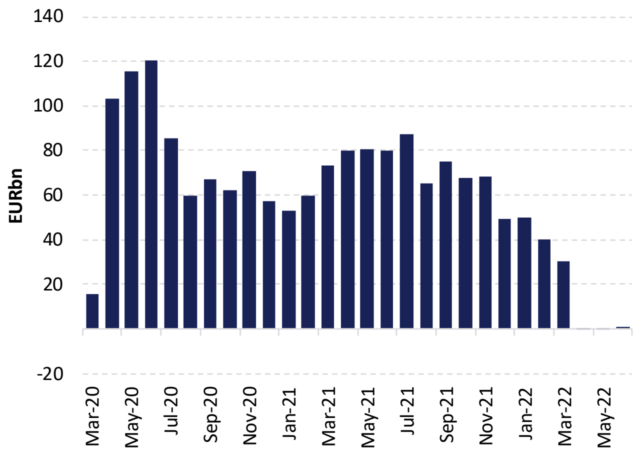



| | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | ∑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ■ PEPP | 87,557 | 65,050 | 75,051 | 67,855 | 68,045 | 49,375 | 50,113 | 40,184 | 30,214 | -4 | -10 | 12 | 533,442 |

**Weekly purchases**




**Development of PEPP volume**

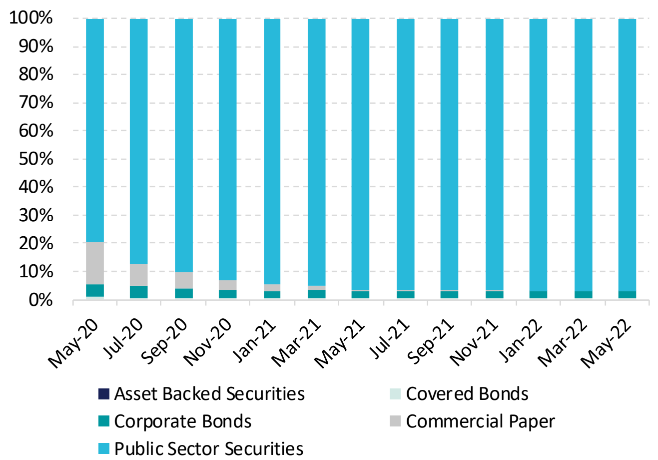


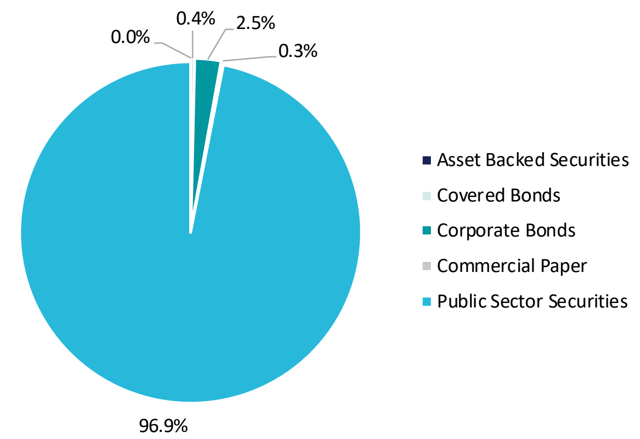

Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

### Holdings under the PEPP (in EURm)

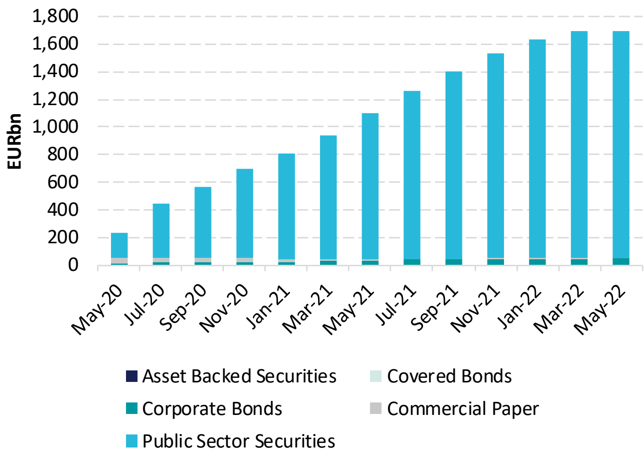
| | Asset-backed Securities | Covered Bonds | Corporate Bonds | Commercial Paper | Public Sector Securities | PEPP |
|---|---|---|---|---|---|---|
| **Mar-22** | 0 | 6,067 | 40,313 | 5,862 | 1,644,247 | 1,696,489 |
| **May-22** | 0 | 6,067 | 41,825 | 4,352 | 1,644,230 | 1,696,474 |
| **Δ (net purchases)** | 0 | 0 | +1,512 | -1,510 | -17 | -14 |

### Portfolio structure

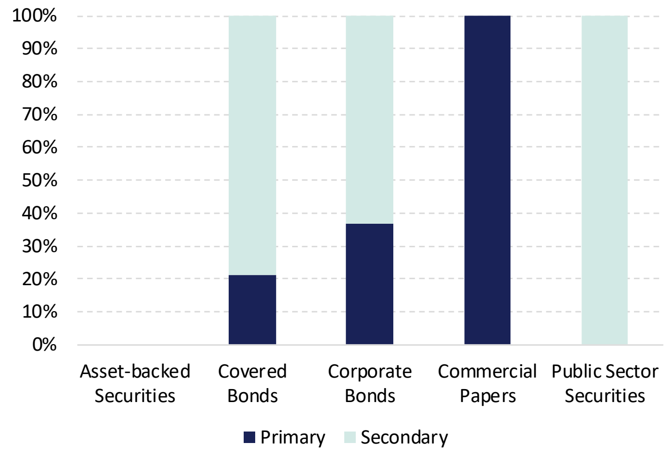



### Portfolio development




### Share of primary and secondary market holdings




### Breakdown of private sector securities under the PEPP

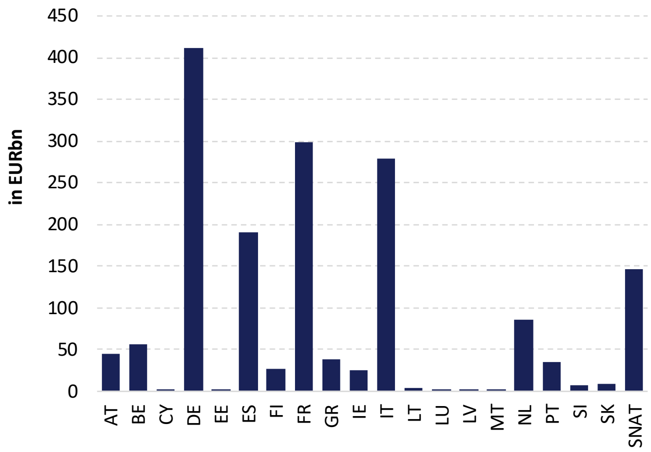
| May-22 | Asset-backed securities | | Covered bonds | | Corporate bonds | | Commercial paper | |
|---|---|---|---|---|---|---|---|---|
| | Primary | Secondary | Primary | Secondary | Primary | Secondary | Primary | Secondary |
| **Holdings in EURm** | 0 | 0 | 1,298 | 4,769 | 15,332 | 26,493 | 4,353 | 0 |
| **Share** | 0.0% | 0.0% | 21.4% | 78.6% | 36.7% | 63.3% | 100.0% | 0.0% |

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

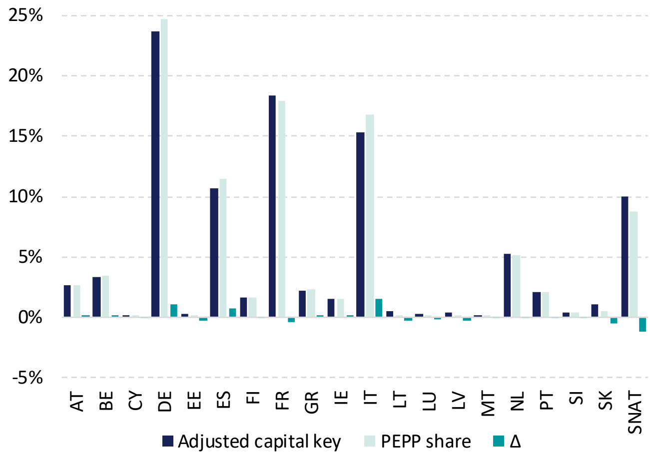
### Breakdown of public sector securities under the PEPP

| 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 | 44,280 | 2.6% | 2.7% | 0.0% | 7.8 | 7.3 | 0.5 |
| BE | 57,052 | 3.3% | 3.4% | 0.1% | 6.5 | 8.9 | -2.4 |
| CY | 2,464 | 0.2% | 0.1% | 0.0% | 9.0 | 8.3 | 0.7 |
| DE | 412,492 | 23.7% | 24.8% | 1.0% | 6.4 | 6.8 | -0.4 |
| EE | 256 | 0.3% | 0.0% | -0.2% | 8.0 | 6.5 | 1.6 |
| ES | 190,463 | 10.7% | 11.4% | 0.7% | 7.6 | 7.5 | 0.1 |
| FI | 26,918 | 1.7% | 1.6% | 0.0% | 7.2 | 7.8 | -0.6 |
| FR | 298,979 | 18.4% | 17.9% | -0.4% | 8.1 | 7.8 | 0.2 |
| GR | 38,677 | 2.2% | 2.3% | 0.1% | 8.6 | 9.7 | -1.0 |
| IE | 25,832 | 1.5% | 1.6% | 0.0% | 9.0 | 9.2 | -0.2 |
| IT | 279,302 | 15.3% | 16.8% | 1.5% | 7.2 | 7.0 | 0.2 |
| LT | 3,216 | 0.5% | 0.2% | -0.3% | 10.1 | 9.6 | 0.5 |
| LU | 1,853 | 0.3% | 0.1% | -0.2% | 6.3 | 7.2 | -0.9 |
| LV | 1,890 | 0.4% | 0.1% | -0.2% | 8.6 | 8.5 | 0.1 |
| MT | 609 | 0.1% | 0.0% | -0.1% | 10.9 | 9.1 | 1.8 |
| NL | 86,124 | 5.3% | 5.2% | -0.1% | 7.7 | 8.6 | -0.9 |
| PT | 34,802 | 2.1% | 2.1% | 0.0% | 6.8 | 7.1 | -0.3 |
| SI | 6,532 | 0.4% | 0.4% | 0.0% | 9.2 | 9.2 | 0.0 |
| SK | 7,966 | 1.0% | 0.5% | -0.6% | 8.8 | 8.3 | 0.5 |
| SNAT | 145,953 | 10.0% | 8.8% | -1.2% | 10.4 | 8.5 | 1.9 |
| **Total / Avg.** | **1,665,660** | **100.0%** | **100.0%** | **0.0%** | **7.6** | **7.6** | **0.0** |

### Distribution of public sector assets by jurisdiction




### Deviations from the adjusted distribution key




[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

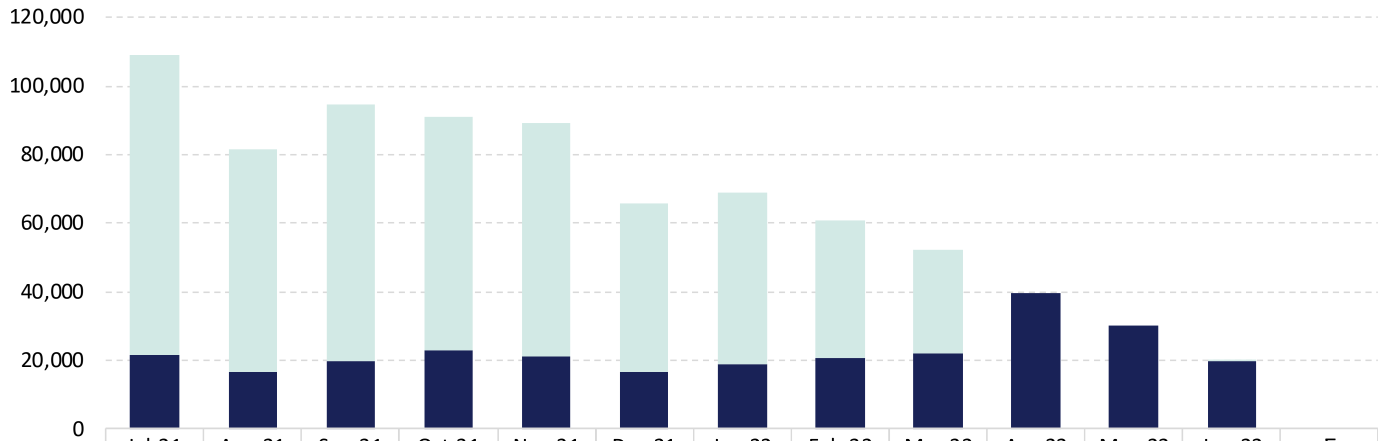
NORD/LB

## Aggregated purchase activity under APP and PEPP

### Holdings (in EURm)

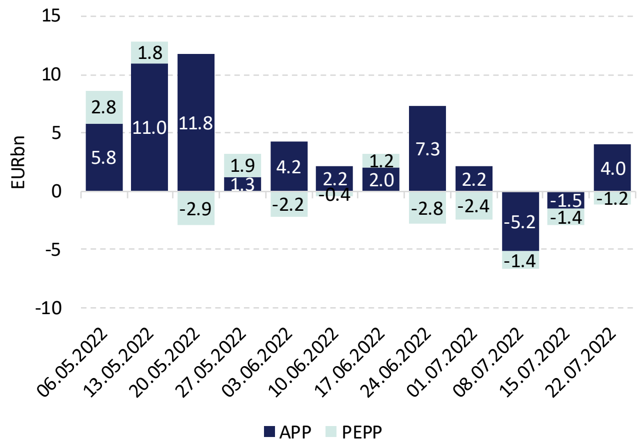
| | APP | PEPP | APP & PEPP |
|---|---|---|---|
| **May-22** | 3,248,673 | 1,718,061 | 4,966,734 |
| **Jun-22** | 3,265,172 | 1,718,074 | 4,983,246 |
| **Δ** | +19,750 | +12 | +19,762 |

### Monthly net purchases (in EURm)

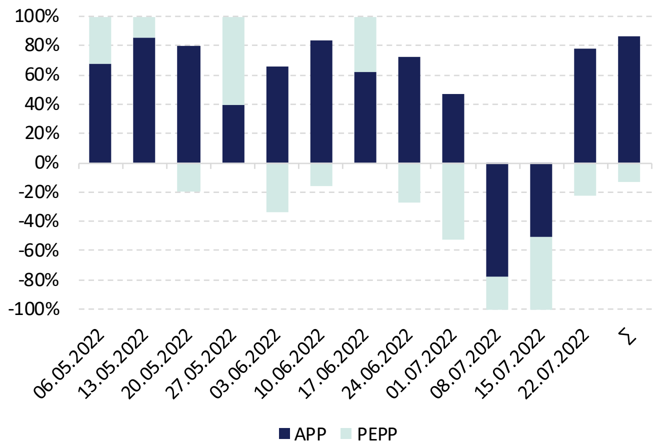



| | Jul-21 | Aug-21 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | ∑ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ∑ | 109,154 | 81,799 | 94,710 | 90,872 | 89,245 | 65,971 | 68,951 | 60,882 | 52,143 | 39,393 | 30,222 | 19,762 | 803,104 |
| PEPP | 87,557 | 65,050 | 75,051 | 67,855 | 68,045 | 49,375 | 50,113 | 40,184 | 30,214 | -4 | -10 | 12 | 533,442 |
| APP | 21,597 | 16,749 | 19,659 | 23,017 | 21,200 | 16,596 | 18,838 | 20,698 | 21,929 | 39,397 | 30,232 | 19,750 | 269,662 |

### Weekly purchases



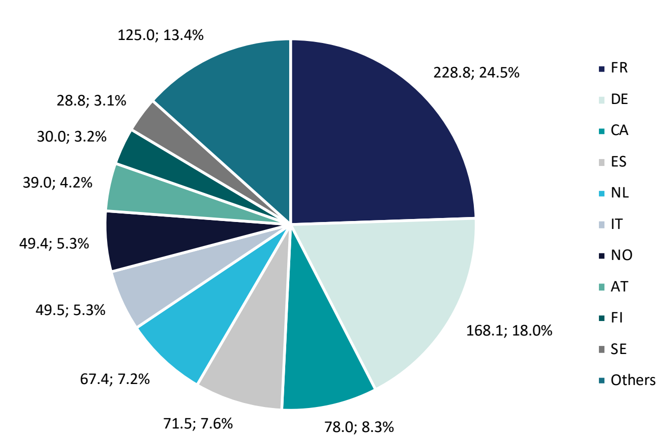

### Distribution of weekly purchases



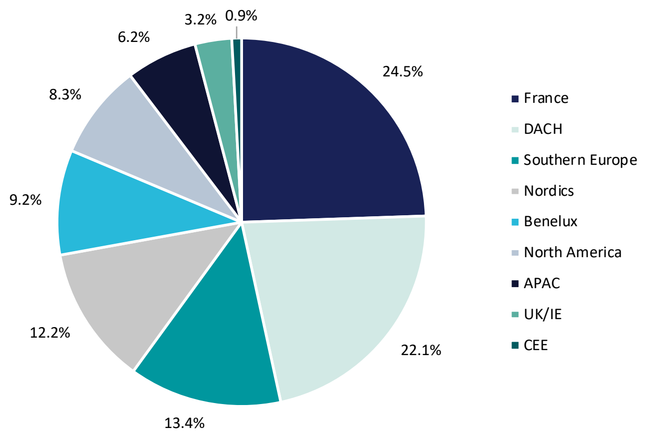

Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

# Charts & Figures
# Covered Bonds

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



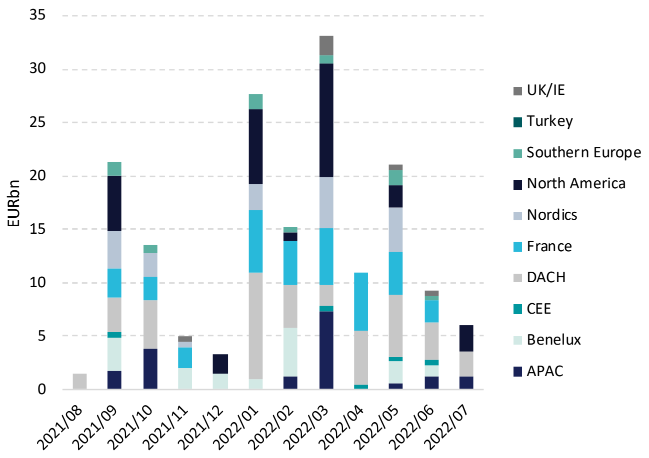

### EUR benchmark volume by region (in EURbn)



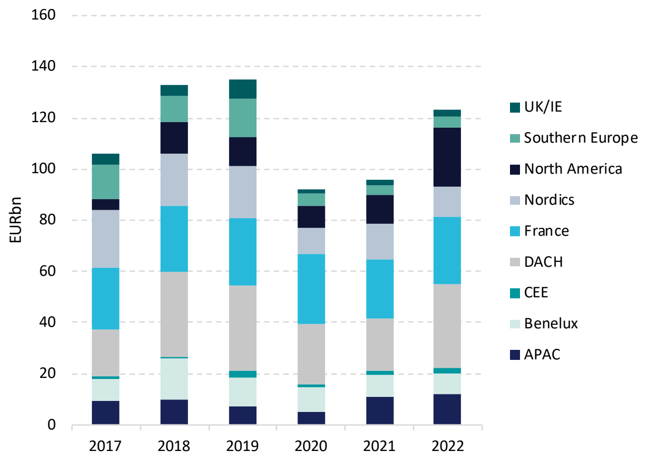

### Top-10 jurisdictions

| 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 | 228.8 | 220 | 14 | 0.94 | 10.0 | 5.5 | 0.83 |
| 2 | DE | 168.1 | 244 | 21 | 0.63 | 8.4 | 4.6 | 0.48 |
| 3 | CA | 78.0 | 60 | 0 | 1.26 | 5.8 | 3.2 | 0.31 |
| 4 | ES | 71.5 | 58 | 5 | 1.12 | 11.6 | 3.7 | 1.67 |
| 5 | NL | 67.4 | 69 | 1 | 0.91 | 11.5 | 7.4 | 0.79 |
| 6 | IT | 49.5 | 60 | 2 | 0.80 | 9.2 | 4.1 | 1.27 |
| 7 | NO | 49.4 | 58 | 9 | 0.85 | 7.5 | 4.0 | 0.40 |
| 8 | AT | 39.0 | 71 | 3 | 0.55 | 9.3 | 5.9 | 0.65 |
| 9 | FI | 30.0 | 32 | 2 | 0.94 | 7.7 | 3.7 | 0.40 |
| 10 | SE | 28.8 | 34 | 0 | 0.84 | 7.6 | 3.8 | 0.52 |

### EUR benchmark issue volume by month

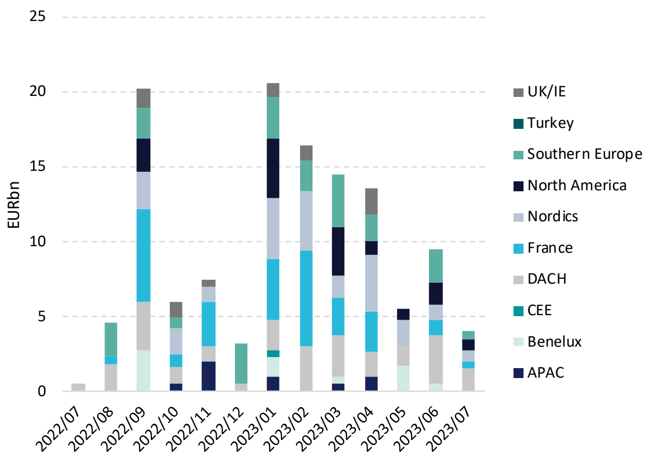



### EUR benchmark issue volume by year

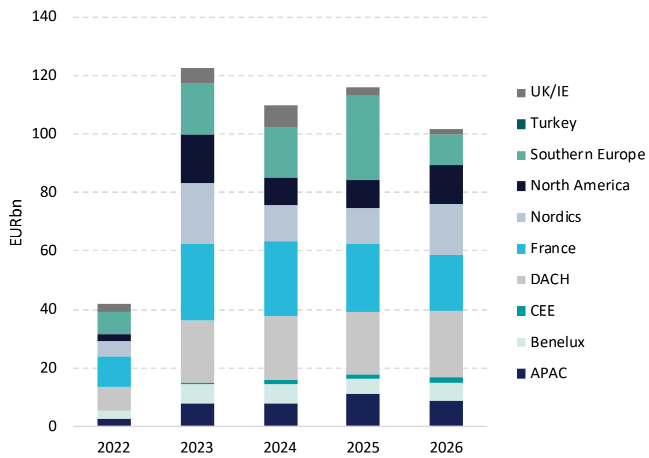



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

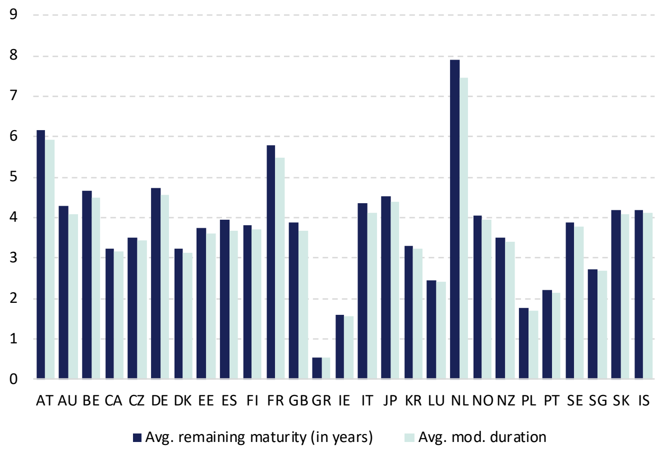
## EUR benchmark maturities by month



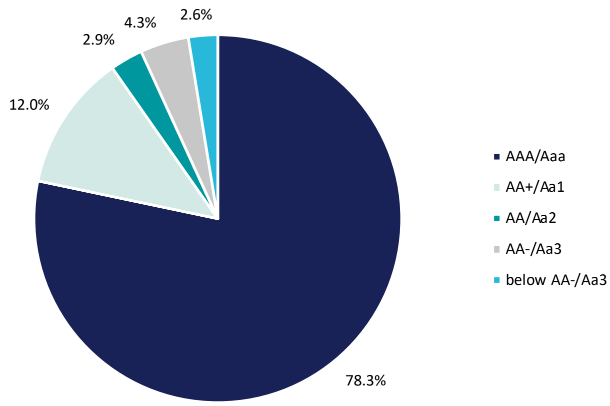

## EUR benchmark maturities by year



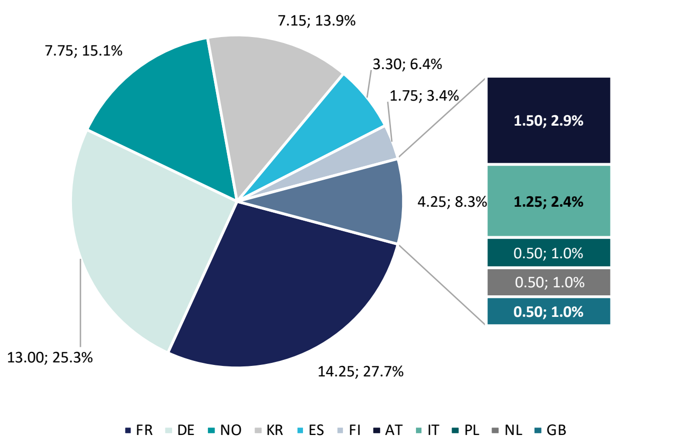

## Modified duration and time to maturity by country



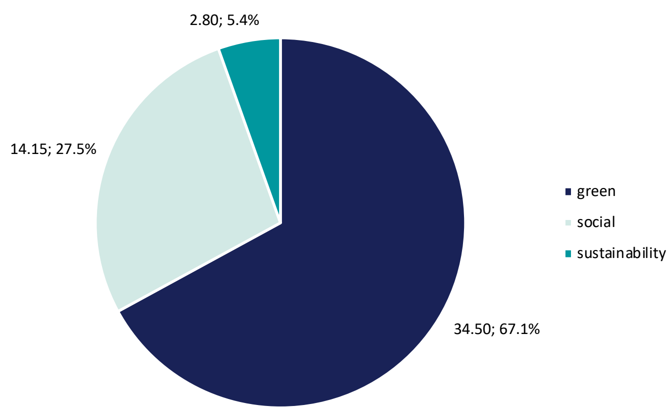

## Rating distribution (volume weighted)




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

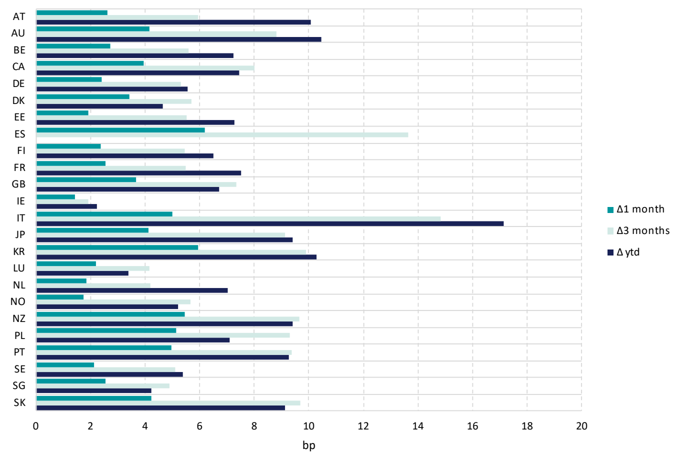



## EUR benchmark volume (ESG) by type (in EURbn)

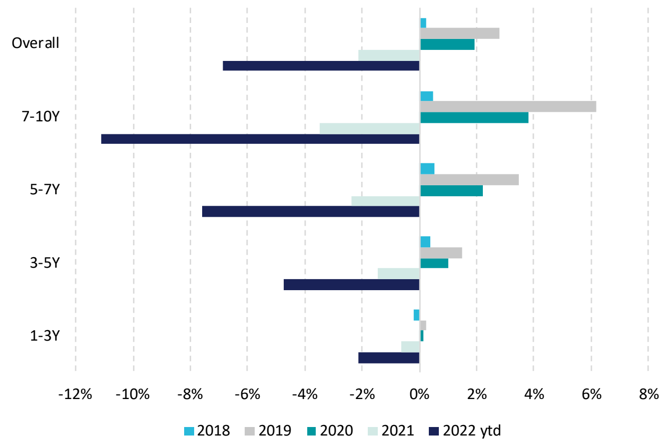



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

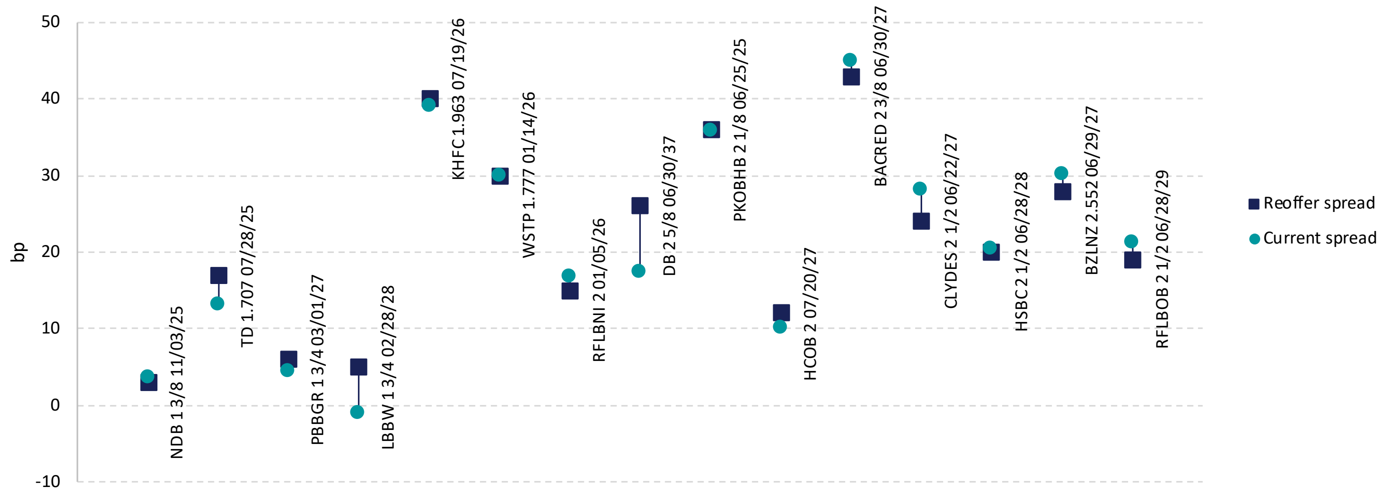
## Spread development by country



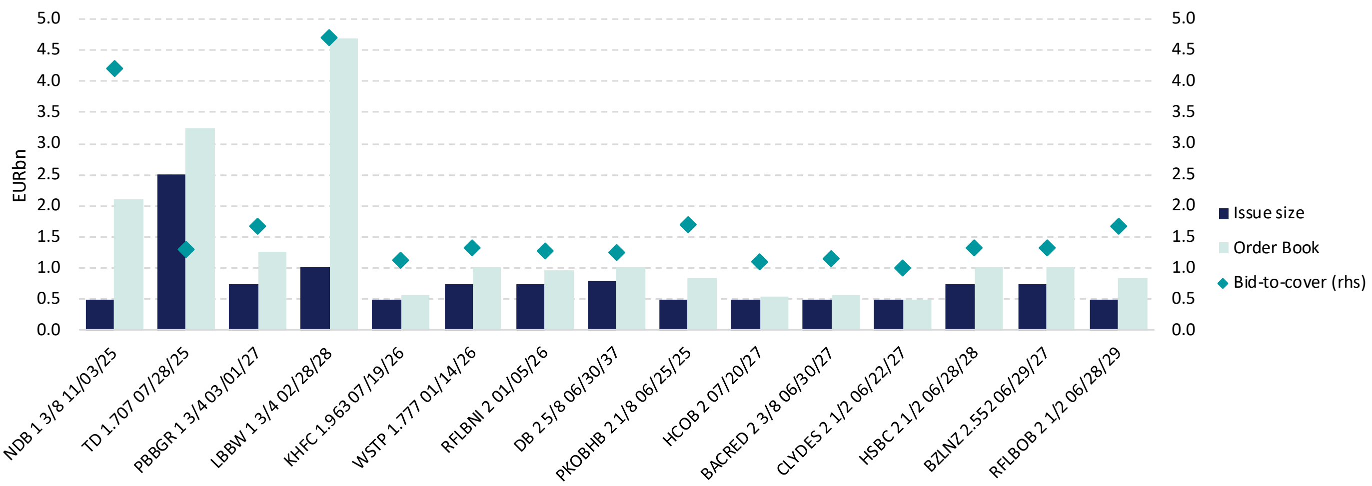

## Covered bond performance (Total return)




## Spread development (last 15 issues)



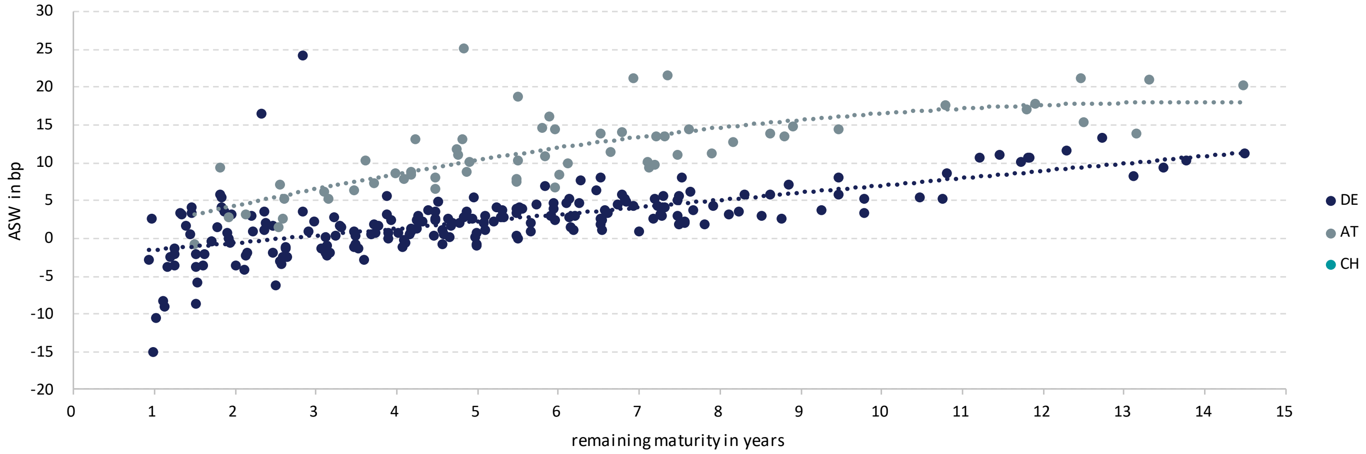

## Order books (last 15 issues)



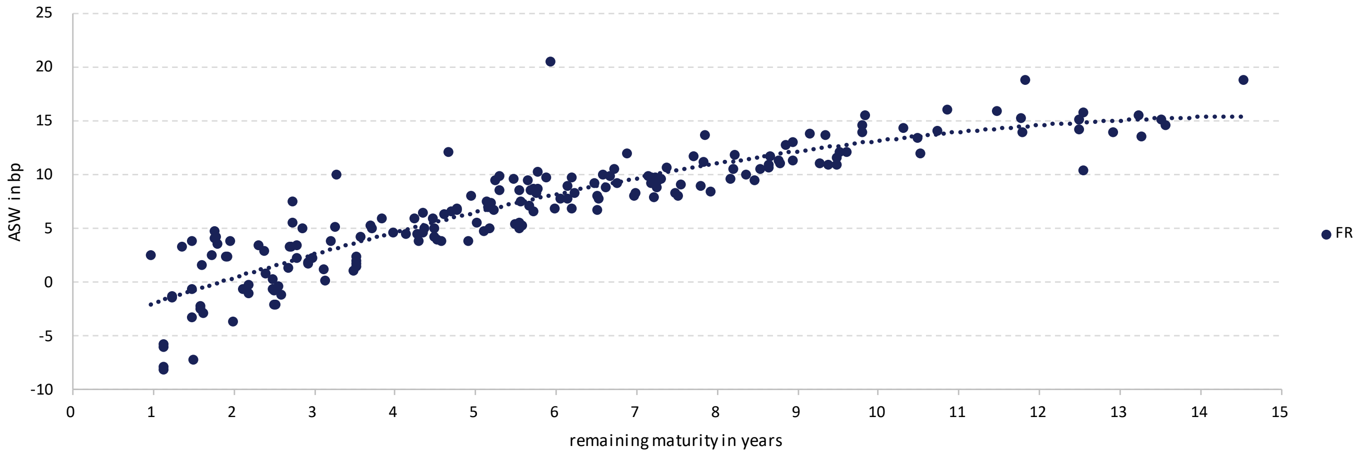

Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

## Spread overview[1]

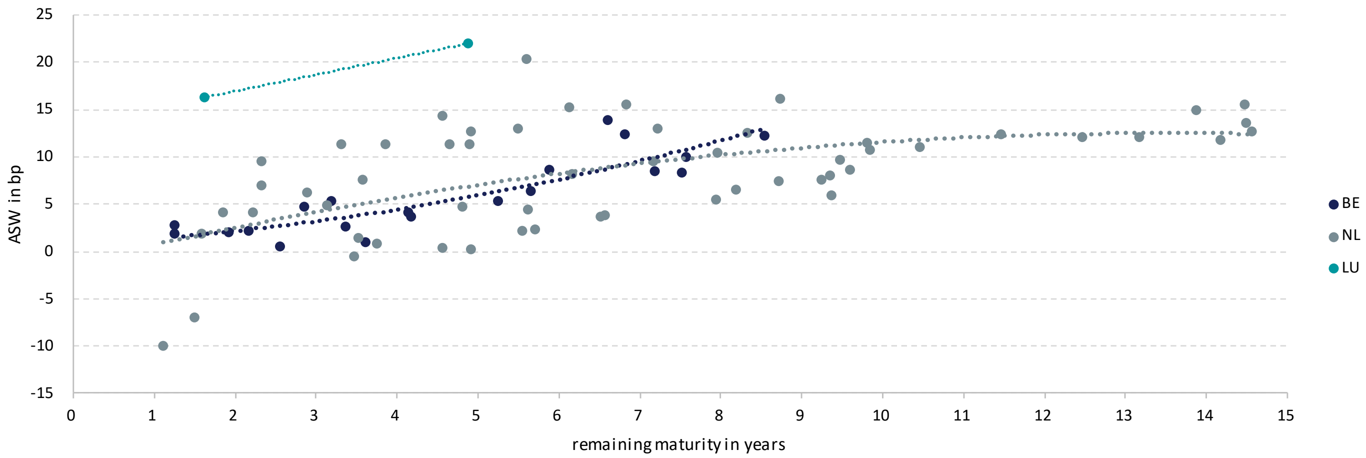
### DACH




### France

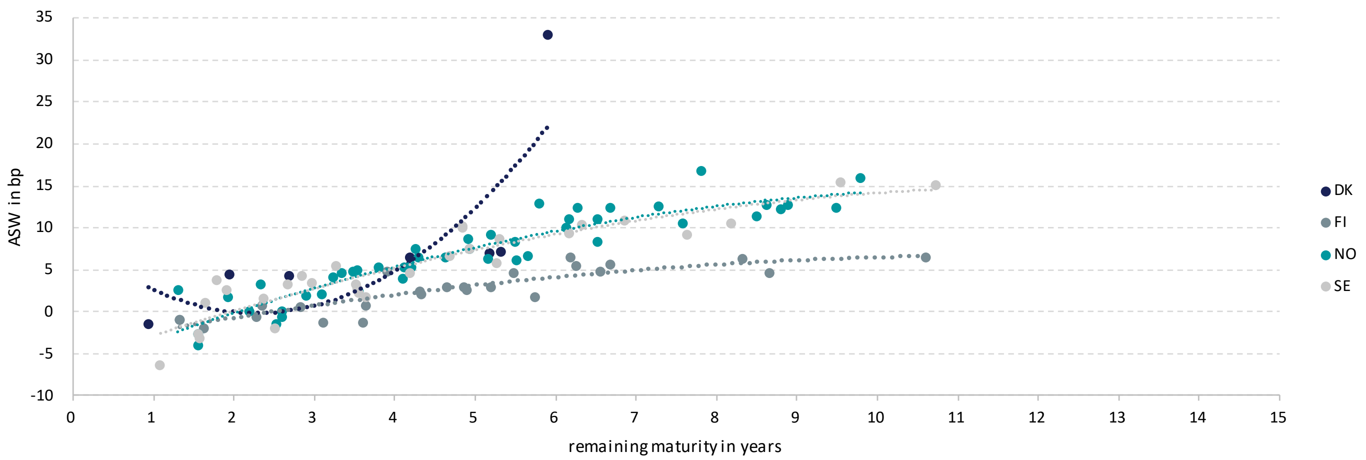



### Benelux

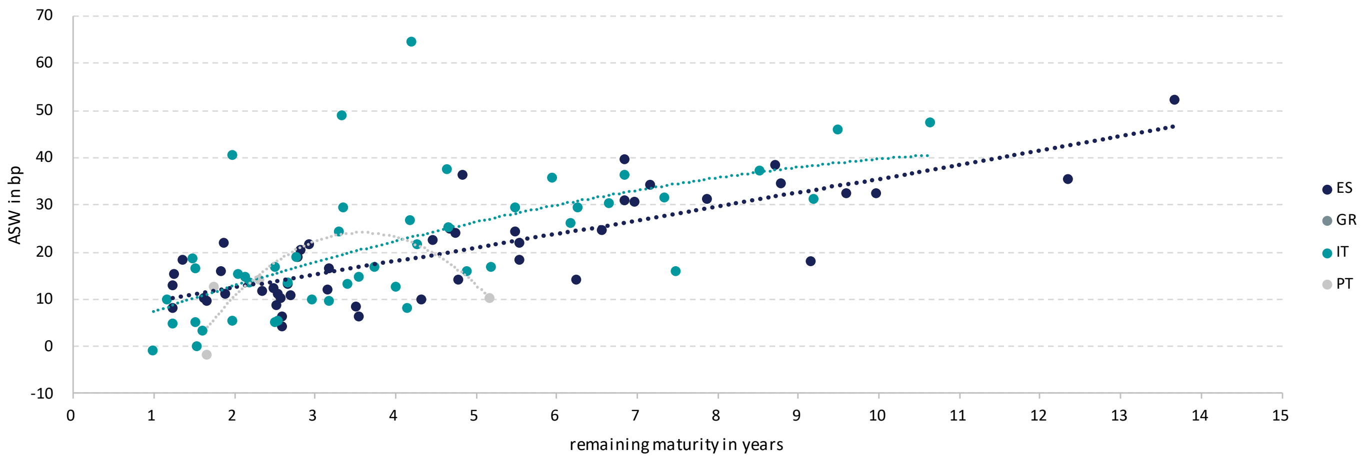



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

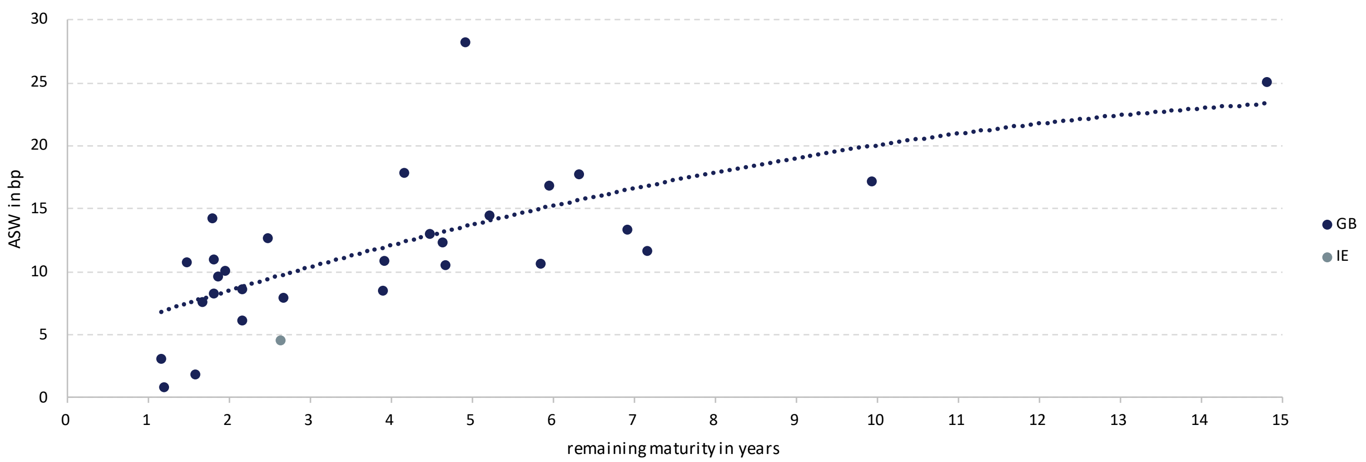
**Nordics**




**Southern Europe**

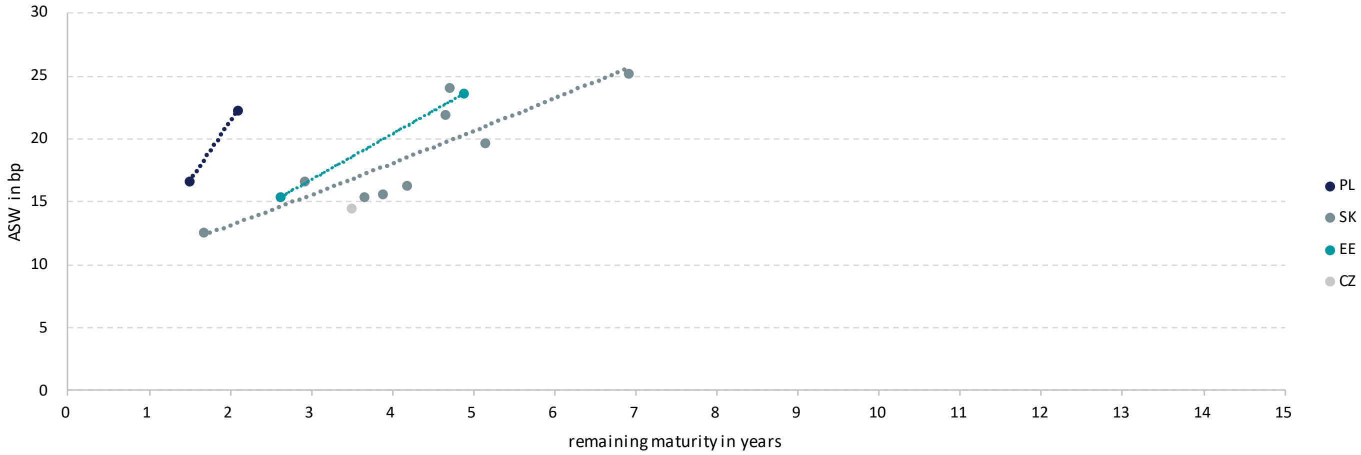



**UK/IE**

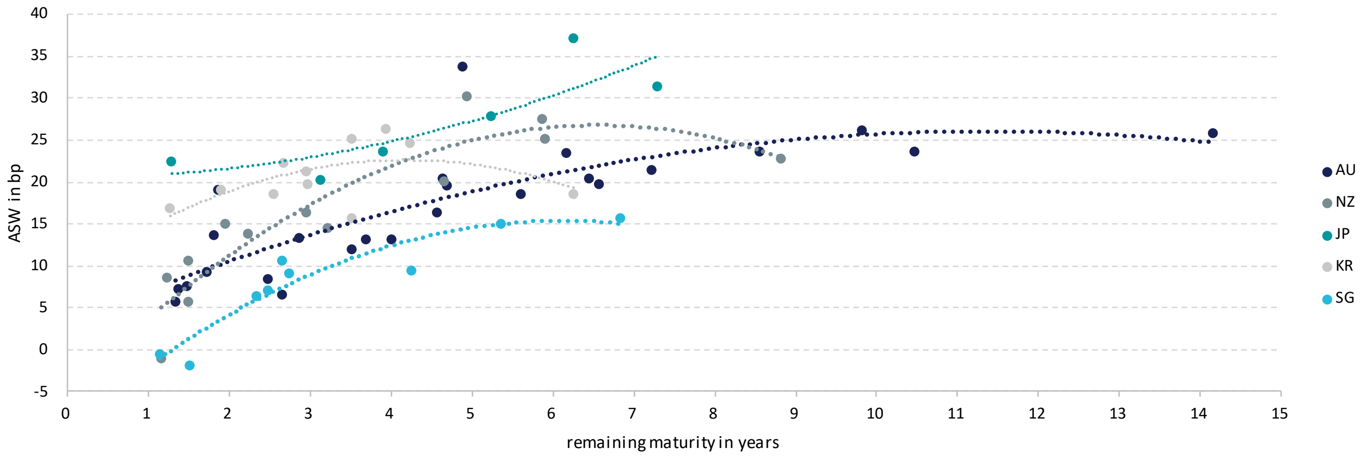



Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

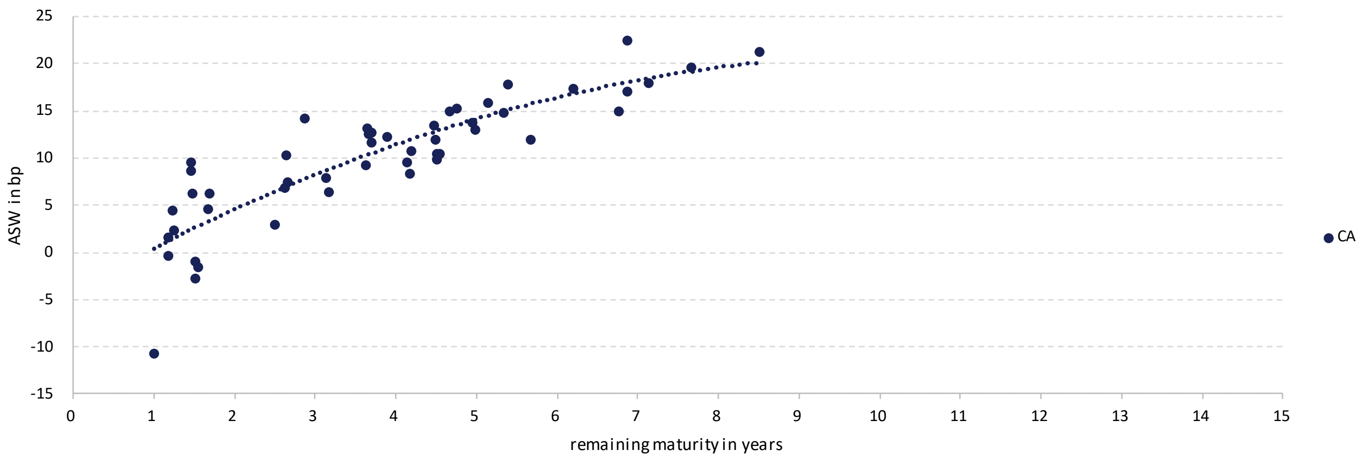
## CEE




## APAC



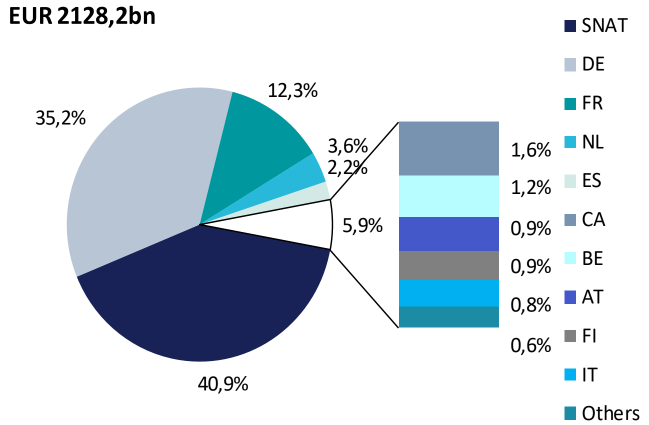

## North America




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

# Charts & Figures
# SSA/Public Issuers

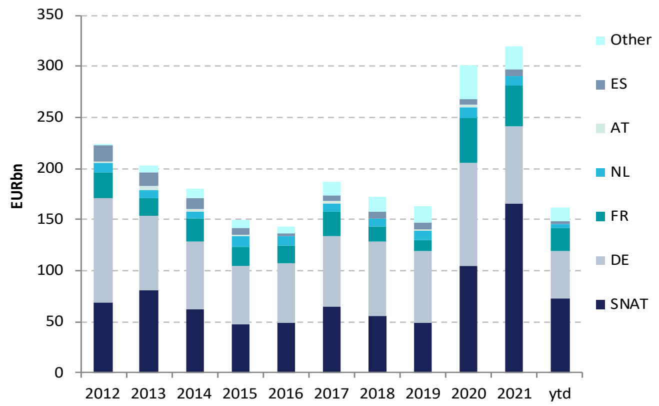
### Outstanding volume (bmk)



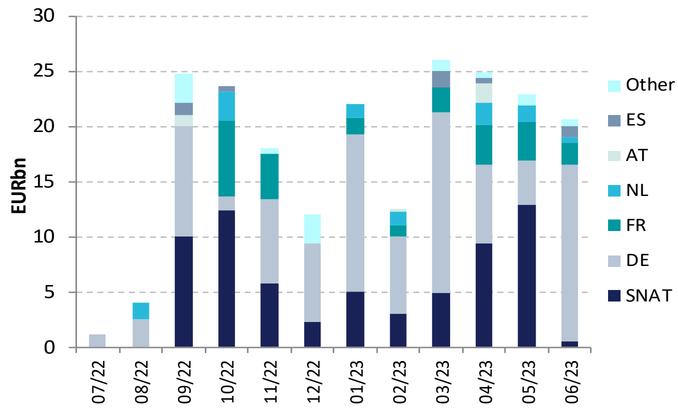

### Top 10 countries (bmk)

| Country | Vol. (€bn) | No. of bonds | ØVol. (€bn) | Vol. weight. ØMod. Dur. |
|---|---|---|---|---|
| SNAT | 869,5 | 214 | 4,1 | 8,4 |
| DE | 749,8 | 566 | 1,3 | 6,7 |
| FR | 261,9 | 178 | 1,5 | 6,5 |
| NL | 77,2 | 69 | 1,1 | 6,6 |
| ES | 45,8 | 59 | 0,8 | 5,0 |
| CA | 33,2 | 22 | 1,5 | 4,9 |
| BE | 24,5 | 28 | 0,9 | 12,6 |
| AT | 20,2 | 23 | 0,9 | 4,7 |
| FI | 18,1 | 22 | 0,8 | 5,6 |
| IT | 16,0 | 19 | 0,8 | 5,3 |

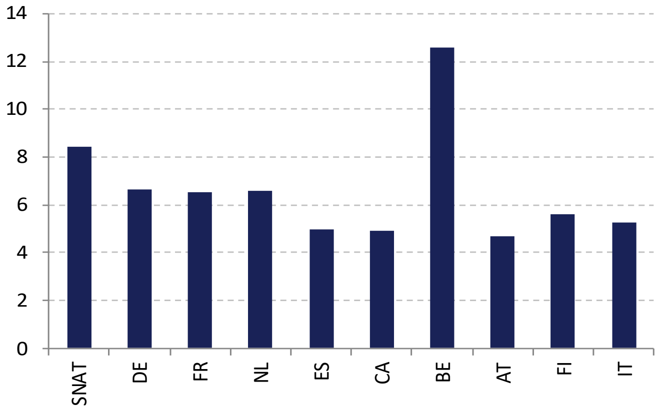
### Issue volume by year (bmk)



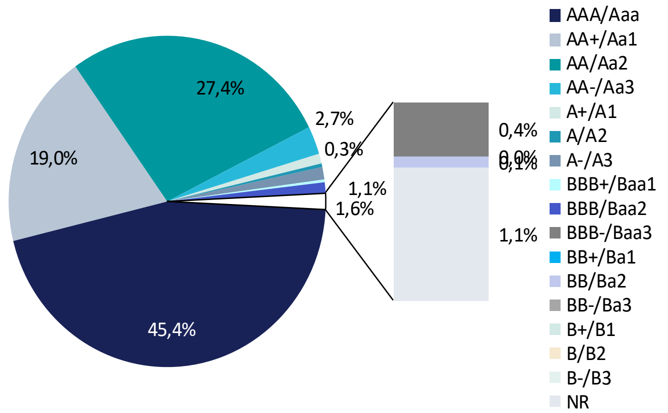

### Maturities next 12 months (bmk)




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

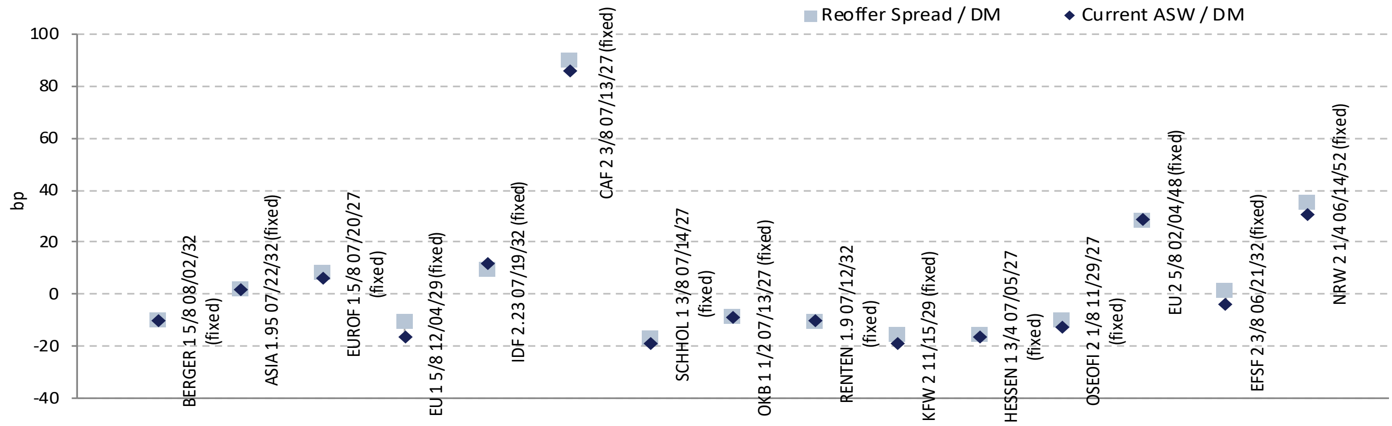



### Rating distribution (vol. weighted)

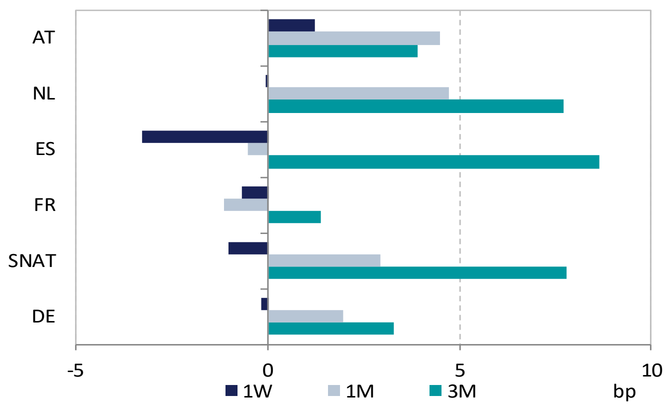



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

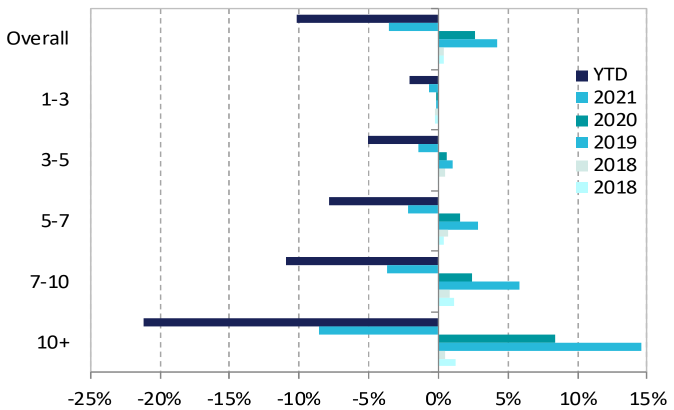
## Spread development (last 15 issues)



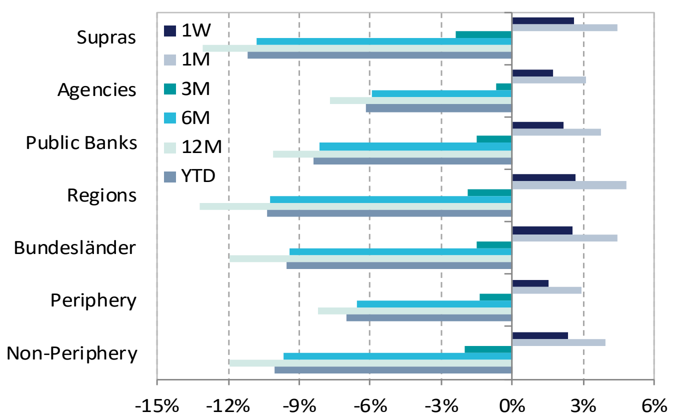

## Spread development by country



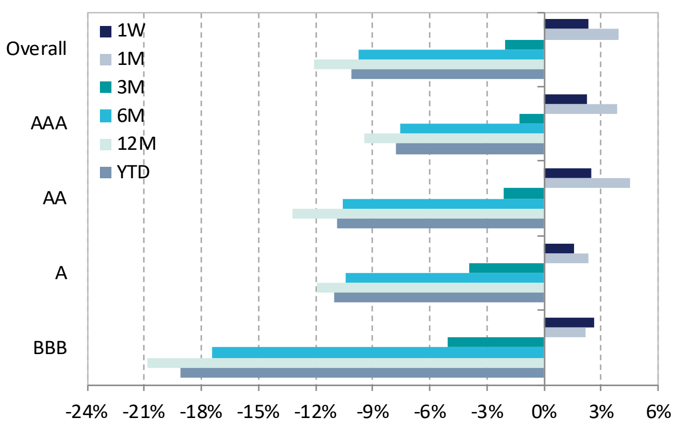

## Performance (total return)




## Performance (total return) by segments

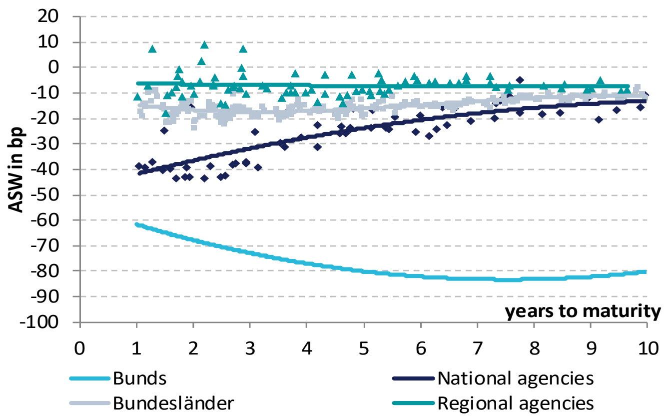



## Performance (total return) by rating

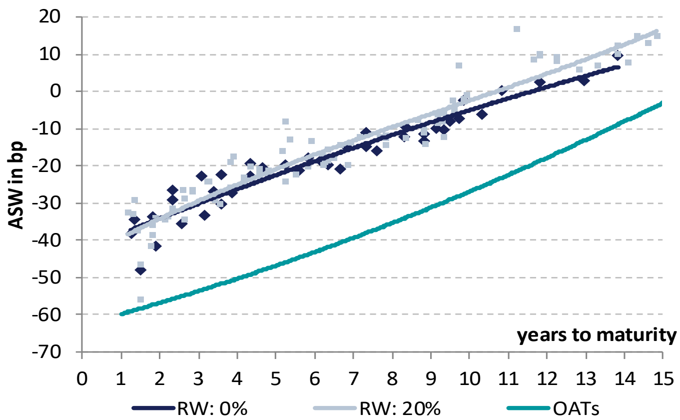



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

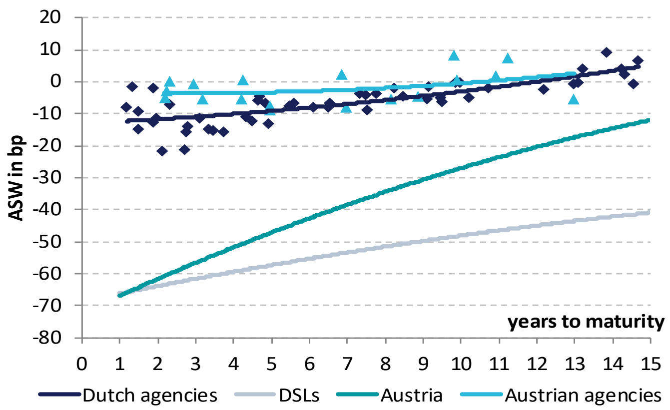
### Germany (by segments)



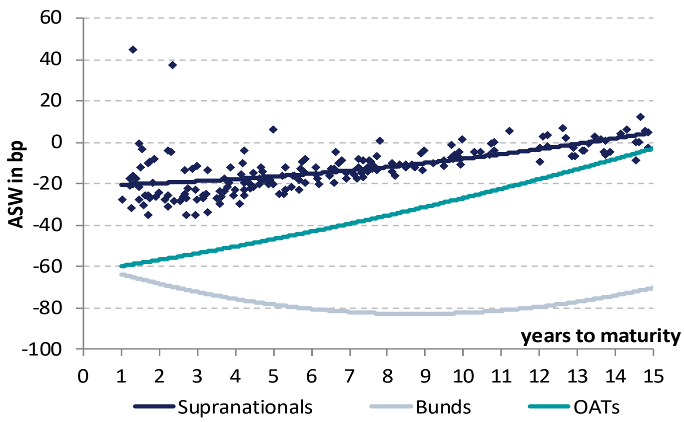

### France (by risk weight)



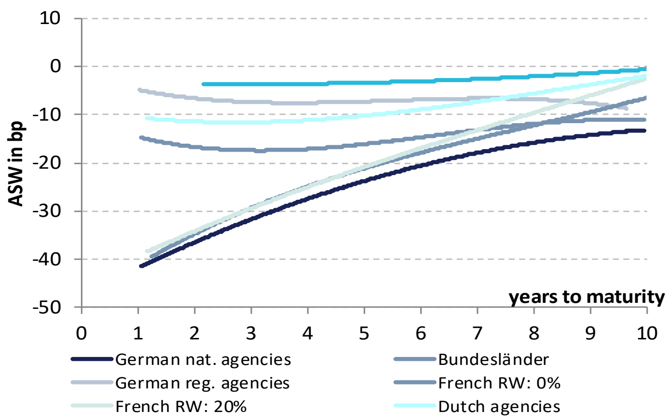

### Netherlands & Austria



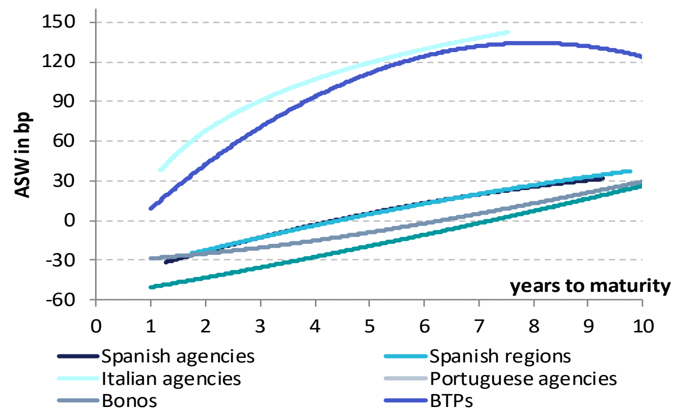

### Supranationals




### Core




### Periphery




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

# Appendix
# Overview of latest Covered Bond & SSA View editions

| Publication | Topics |
|---|---|
| 24/2022 ♦ 20 July | ▪ A brief spotlight on the EUR sub-benchmark segment<br>▪ Deutsche Hypo real estate climate: index falls again |
| 23/2022 ♦ 13 July | ▪ ECB preview: might the ECB go slightly further?<br>▪ EBA Report on Asset Encumbrance: levels increasing |
| 22/2022 ♦ 06 July | ▪ H1 review and outlook for H2 2022<br>▪ Half time in the 2022 SSA year – taking stock |
| 21/2022 ♦ 22 June | ▪ Focus on ESG covered bonds: BayernLB's "green rail" public sector Pfandbrief<br>▪ Stability Council convenes for 25th meeting |
| 20/2022 ♦ 15 June | ▪ Covered bond jurisdictions in focus: a look at Australia and New Zealand<br>▪ NGEU: Green Bond Dashboard |
| 19/2022 ♦ 01 June | ▪ ECB: 3, 2, 1 – lift-off! Decisive June, active summer ahead<br>▪ The covered bond universe of Moody's: an overview<br>▪ ECB Financial Stability Review identifies increasing risks in the eurozone: a brief overview of covered bonds |
| 18/2022 ♦ 25 May | ▪ Transparency requirements §28 PfandBG Q1 2022<br>▪ ESG: EUR-benchmarks 2022 in the SSA segment (ytd) |
| 17/2022 ♦ 18 May | ▪ Development of the German property market<br>▪ The SSA market in 2022 a review of the first four months |
| 16/2022 ♦ 11 May | ▪ Focus on covered bond jurisdictions: a look at Austria<br>▪ Update on DEUSTD – Joint German cities (bond No. 1) |
| 15/2022 ♦ 04 May | ▪ Focus on covered bond jurisdictions: Spotlight on Sweden<br>▪ ESG covered bonds from Germany: DKB issues social Pfandbrief in the form of a "Berlin Social Housing Bond"<br>▪ 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!?<br>▪ PEPP reporting: (Not) an obituary |
| 13/2022 ♦ 06 April | ▪ ECB adjusts order behaviour in time for the new quarter<br>▪ United Kingdom: spotlight on the EUR benchmark segment<br>▪ Issuer Guide SSA 2022: the Nordic agency market |
| 12/2022 ♦ 30 March | ▪ An overview of the market for ESG covered bonds<br>▪ Issuer Guide SSA 2022: the Austrian agency market |
| 11/2022 ♦ 23 March | ▪ ESG update 2022 in the spotlight<br>▪ The ratings approach of DBRS |
| 10/2022 ♦ 16 March | ▪ What does the recent ECB meeting mean for covered bonds?<br>▪ Credit authorisations of the German Laender for 2022 |

**NORD/LB:**
Markets Strategy & Floor Research

**NORD/LB:**
Covered Bond Research

**NORD/LB:**
SSA/Public Issuer Research

**Bloomberg:**
RESP NRDR <GO>

NORD/LB

# Appendix
# Publication overview

**Covered Bonds:**

**Issuer Guide Covered Bonds 2021**

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

**Transparency requirements §28 PfandBG (quarterly update)**

**Covered bonds as eligible collateral for central banks**

**SSA/Public Issuers:**

**Issuer Guide – German Laender 2021**

**Beyond Bundeslaender: Greater Paris (IDF/VDP)**

**Spotlight on Belgian regions**

**Spotlight on Spanish regions**

**Fixed Income Specials:**

**ESG-Update 2022**

**ECB ready for lift-off: Every journey starts with a first step**

**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**

# Appendix
# Contacts at NORD/LB

## Markets Strategy & Floor Research

**Jan-Phillipp Hensing**
SSA/Public Issuers

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

**Dr Frederik Kunze**
Covered Bonds/Banks

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

**Melanie Kiene, CIIA**
Covered Bonds/Banks

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

**Dr Norman Rudschuck, CIIA**
SSA/Public Issuers

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

## Sales

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

## Trading

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

## Origination & Syndicate

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

## Sales Wholesale Customers

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

## Treasury

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

**Disclaimer**

**The present report (hereinafter referred to as “information”) was drawn up by NORDDEUTSCHE LANDESBANK GIROZENTRALE (NORD/LB). The supervisory authorities responsible for NORD/LB are the European Central Bank (ECB), Sonnemannstraße 20, D-60314 Frankfurt am Main, and the Federal Financial Supervisory Authority in Germany (Bundesanstalt für Finanzdienstleitungsaufsicht; BaFin), Graurheindorfer Str. 108, D-53117 Bonn and Marie-Curie-Str. 24-28, D-60439 Frankfurt am Main. The present report and the products and services described herein have not been reviewed or approved by the relevant supervisory authority.**

The present information is addressed exclusively to Recipients in Austria, Belgium, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Indonesia, Ireland, Italy, Japan, Korea, Luxembourg, the Netherlands, New Zealand, Poland, Portugal, Singapore, Portugal, Spain, Sweden, Switzerland, the Republic of China (Taiwan), Thailand, the United Kingdom and Vietnam (hereinafter referred to as “Relevant Persons” or “Recipients”). The contents of the information are disclosed to the Recipients on a strictly confidential basis and, by accepting such information, the Recipients shall agree that they will not forward it to third parties, copy and/or reproduce this information without the prior written consent of NORD/LB. The present information is addressed solely to the Relevant Persons and any parties other than the Relevant Persons shall not rely on the information contained herein. In particular, neither this information nor any copy thereof shall be forwarded or transmitted to the United States of America or its territories or possessions, or distributed to any employees or affiliates of Recipients resident in these jurisdictions.

**The present information does not constitute financial analysis within the meaning of Art. 36 (1) of the Delegate Regulation (EU) 2017/565, but rather represents a marketing communication** for your general information **within the meaning of Art. 36 (2) of this Regulation. Against this background, NORD/LB expressly points out that this information has not been prepared in accordance with legal provisions promoting the independence of investment research and is not subject to any prohibition of trading following the dissemination of investment research.** Likewise, this information does not constitute an investment recommendation or investment strategy recommendation within the meaning of the Market Abuse Regulation (EU) No. 596/2014**.**

This report and the information contained herein have been compiled and are provided exclusively for information purposes. The present information is not intended as an investment incentive. It is provided for the Recipient’s personal information, subject to the express understanding, which shall be acknowledged by the Recipient, that it does not constitute any direct or indirect offer, recommendation, solicitation to purchase, hold or sell or to subscribe for or acquire any securities or other financial instruments nor any measure by which financial instruments might be offered or sold.

All actual details, information and statements contained herein were derived from sources considered reliable by NORD/LB. For the preparation of this information, NORD/LB uses issuer-specific financial data providers, own estimates, company information and public media. However, since these sources are not verified independently, NORD/LB cannot give any assurance as to or assume responsibility for the accuracy and completeness of the information contained herein. The opinions and prognoses given herein on the basis of these sources constitute a non-binding evaluation of the employees of the Markets Strategy & Floor Research division of NORD/ LB. Any changes in the underlying premises may have a material impact on the developments described herein. Neither NORD/LB nor its governing bodies or employees can give any assurances as to or assume any responsibility or liability for the accuracy, appropriateness and completeness of this information or for any loss of return, any indirect, consequential or other damage which may be suffered by persons relying on the information or any statements or opinions set forth in the present Report (irrespective of whether such losses are incurred due to any negligence on the part of these persons or otherwise).

Past performance is not a reliable indicator of future performance. Exchange rates, price fluctuations of the financial instruments and similar factors may have a negative impact on the value and price of and return on the financial instruments referred to herein or any instruments linked thereto. Fees and commissions apply in relation to securities (purchase, sell, custody), which reduce the return on investment. An evaluation made on the basis of the historical performance of any security does not necessarily provide an indication of its future performance.
The present information neither constitutes any investment, legal, accounting or tax advice nor any assurance that an investment or strategy is suitable or appropriate in the light of the Recipient’s individual circumstances, and nothing in this information constitutes a personal recommendation to the Recipient thereof. The securities or other financial instruments referred to herein may not be suitable for the Recipient’s personal investment strategies and objectives, financial situation or individual needs.

Moreover, the present report in whole or in part is not a sales or other prospectus. Accordingly, the information contained herein merely constitutes an overview and does not form the basis for any potential decision to buy or sell on the part of an investor. A full description of the details relating to the financial instruments or transactions which may relate to the subject matter of this report is given in the relevant (financing) documentation. To the extent that the financial instruments described herein are NORD/LB’s own issues and subject to the requirement to publish a prospectus, the conditions of issue applicable to any individual financial instrument and the relevant prospectus published with respect thereto as well NORD/LB’s relevant registration form, all of which are available for download at www.nordlb.de and may be obtained free of charge from NORD/LB, Georgsplatz 1, 30159 Hanover, shall be solely binding. Furthermore, any potential investment decision should be made exclusively on the basis of such (financing) documentation. The present information cannot replace personal advice. Before making an investment decision, each Recipient should consult an independent investment adviser for individual investment advice with respect to the appropriateness of an investment in financial instruments or investment strategies subject to this information as well as for other and more recent information on certain investment opportunities.

Each of the financial instruments referred to herein may involve substantial risks, including capital, interest, index, currency and credit risks in addition to political, fair value, commodity and market risks. The financial instruments could experience a sudden and substantial deterioration in value, including a total loss of the capital invested. Each transaction should only be entered into on the basis of the relevant investor’s assessment of his or her individual financial situation as well as of the suitability and risks of the investment.

NORD/LB and its affiliated companies may participate in transactions involving the financial instruments described in the present information or their underlying basis values for their own account or for the account of third parties, may issue other financial instruments with the same or similar features as those of the financial instruments presented in this information and may conduct hedging transactions to hedge positions. These measures may affect the price of the financial instruments described in the present information.

If the financial instruments presented in this information are derivatives, they may, depending on their structure, have an initial negative market value from the customer's perspective at the time the transaction is concluded. NORD/LB further reserves the right to transfer its economic risk from a derivative concluded with it to a third party on the market by means of a mirror-image counter transaction.

More detailed information on any commission payments which may be included in the selling price can be found in the "Customer Information on Securities Business" brochure, which is available to download at www.nordlb.de.

The information contained in the present report replaces all previous versions of corresponding information and refers exclusively to the time of preparation of the information. Future versions of this information will replace this version. NORD/LB is under no obligation to update and/or regularly review the data contained in such information. No guarantee can therefore be given that the information is up-to-date and continues to be correct.
By making use of this information, the Recipient shall accept the terms and conditions outlined above.

NORD/LB is a member of the protection scheme of Deutsche Sparkassen-Finanzgruppe. Further information for the Recipient is indicated in clause 28 of the General Terms and Conditions of NORD/LB or at www.dsgv.de/sicherungssystem.

**Additional information for Recipients in Australia:**
NORD/LB IS NOT A BANK OR DEPOSIT TAKING INSTITUTION AUTHORISED UNDER THE 1959 BANKING ACT OF AUSTRALIA. IT IS NOT SUPERVISED BY THE AUSTRALIAN PRUDENTIAL REGULATION AUTHORITY. NORD/LB does not provide personal advice with this information and does not take into account the objectives, financial situation or needs of the Recipient (other than for the purpose of combating money laundering).

**Additional information for Recipients in Austria:**
None of the information contained herein constitutes a solicitation or offer by NORD/LB or its affiliates to buy or sell any securities, futures, options or other financial instruments or to participate in any other strategy. Only the published prospectus pursuant to the Austrian Capital Market Act should be the basis for any investment decision of the Recipient. For regulatory reasons, products mentioned herein may not be on offer in Austria and therefore not available to investors in Austria. Therefore, NORD/LB may not be able to sell or issue these products, nor shall it accept any request to sell or issue these products to investors located in Austria or to intermediaries acting on behalf of any such investors.

**Additional information for Recipients in Belgium:**
Evaluations of individual financial instruments on the basis of past performance are not necessarily indicative of future results. It should be noted that the reported figures relate to past years.

**Additional information for Recipients in Canada:**
This report has been prepared solely for information purposes in connection with the products it describes and should not, under any circumstances, be construed as a public offer or any other offer (direct or indirect) to buy or sell securities in any province or territory of Canada. No financial market authority or similar regulatory body in Canada has made any assessment of these securities or reviewed this information and any statement to the contrary constitutes an offence. Potential selling restrictions may be included in the prospectus or other documentation relating to the relevant product.

**Additional information for Recipients in Cyprus:**
This information constitutes an analysis within the meaning of the section on definitions of the Cyprus Directive D1444-2007-01 (No. 426/07). Furthermore, this information is provided for information and promotional purposes only and does not constitute an individual invitation or offer to sell, buy or subscribe to any investment product.

**Additional information for Recipients in the Czech Republic:**
There is no guarantee that the invested amount will be recouped. Past returns are no guarantee of future results. The value of the investments may rise or fall. The information contained herein is provided on a non-binding basis only and the author does not guarantee the accuracy of the content.

**Additional information for Recipients in Denmark:**
This Information does not constitute a prospectus under Danish securities law and consequently is not required to be, nor has been filed with or approved by the Danish Financial Supervisory Authority, as this Information either (i) has not been prepared in the context of a public offering of securities in Denmark or the admission of securities to trading on a regulated market within the meaning of the Danish Securities Trading Act or any executive orders issued pursuant thereto, or (ii) has been prepared in the context of a public offering of securities in Denmark or the admission of securities to trading on a regulated market in reliance on one or more of the exemptions from the requirement to prepare and publish a prospectus in the Danish Securities Trading Act or any executive orders issued pursuant thereto.

**Additional information for Recipients in Estonia:**
It is advisable to closely examine all the terms and conditions of the services provided by NORD/LB. If necessary, Recipients of this information should consult an expert.

**Additional information for Recipients in Finland:**
The financial products described herein may not be offered or sold, directly or indirectly, to any resident of the Republic of Finland or in the Republic of Finland, except pursuant to applicable Finnish laws and regulations. Specifically, in the case of shares, such shares may not be offered or sold, directly or indirectly, to the public in the Republic of Finland as defined in the Finnish Securities Market Act (746/2012, as amended). The value of investments may go up or down. There is no guarantee of recouping the amount invested. Past performance is no guarantee of future results.

**Additional information for Recipients in France:**
NORD/LB is partially regulated by the “Autorité des Marchés Financiers” for the conduct of French business. Details concerning the extent of our regulation by the respective authorities are available from us on request. The present information does not constitute an analysis within the meaning of Article 24 (1) Directive 2006/73/EC, Article L.544-1 and R.621-30-1 of the French Monetary and Financial Code, but does represent a marketing communication and does qualify as a recommendation pursuant to Directive 2003/6/EC and Directive 2003/125/EC.

**Additional information for Recipients in Greece:**
The information contained herein gives the view of the author at the time of publication and may not be used by its Recipient without first having confirmed that it remains accurate and up to date at the time of its use. Past performance, simulations or forecasts are therefore not a reliable indicator of future results. Investment funds have no guaranteed performance and past returns do not guarantee future performance.

**Additional information for Recipients in Indonesia:**
This report contains generic information and has not been tailored to the circumstances of any individual or specific Recipient. This information is part of NORD/LB’s marketing material.

**Additional information for Recipients in the Republic of Ireland:**
This information has not been prepared in accordance with Directive (EU) 2017/1129 (as amended) on prospectuses (the “Prospectus Directive”) or any measures made under the Prospectus Directive or the laws of any Member State or EEA treaty adherent state that implement the Prospectus Directive or such measures and therefore may not contain all the information required for a document prepared in accordance with the Prospectus Directive or the laws.

**Additional information for Recipients in Japan:**
This information is provided to you for information purposes only and does not constitute an offer or solicitation of an offer to enter into securities transactions or commodity futures transactions. Although the actual data and information contained herein has been obtained from sources which we believe to be reliable and trustworthy, we are unable to vouch for the accuracy and completeness of this actual data and information.

**Additional information for Recipients in South Korea:**
This information has been provided to you free of charge for information purposes only. The information contained herein is factual and does not reflect any opinion or judgement of NORD/LB. The information contained herein should not be construed as an offer, marketing, solicitation to submit an offer or investment advice with respect to the financial investment products described herein.

**Additional information for Recipients in Luxembourg:**
Under no circumstances shall the present information constitute an offer to purchase or issue or the solicitation to submit an offer to buy or subscribe for financial instruments and financial services in Luxembourg.

**Additional information for Recipients in New Zealand:**
NORD/LB is not a bank registered in New Zealand. This information is for general information only. It does not take into account the Recipient's financial situation or objectives and is not a personalised financial advisory service under the 2008 Financial Advisers Act.

**Additional information for Recipients in the Netherlands:**
The value of your investment may fluctuate. Past performance is no guarantee for the future.

**Additional information for Recipients in Poland:**
This information does not constitute a recommendation within the meaning of the Regulation of the Polish Minister of Finance Regarding Information Constituting Recommendations Concerning Financial Instruments or Issuers thereof dated 19 October 2005.

**Additional information for Recipients in Portugal:**
This information is intended only for institutional clients and may not be (i) used by, (ii) copied by any means or (iii) distributed to any other kind of investor, in particular not to retail clients. The present information does not constitute or form part of an offer to buy or sell any of the securities covered by the report, nor should it be understood as a request to buy or sell securities where that practice may be deemed unlawful. The information contained herein is based on information obtained from sources which we believe to be reliable, but is not guaranteed as to accuracy or completeness. Unless otherwise stated, all views contained herein relate solely to our research and analysis and are subject to change without notice.

**Additional information for Recipients in Sweden:**
This information does not constitute (or form part of) a prospectus, offering memorandum, any other offer or solicitation to acquire, sell, subscribe for or otherwise trade in shares, subscription rights or other securities, nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever. The present information has not been approved by any regulatory authority. Any offer of securities will only be made pursuant to an applicable prospectus exemption under the EC Prospectus Directive (Directive (EU) 2017/1129), and no offer of securities is being directed to any person or investor in any jurisdiction where such action is wholly or partially subject to legal restrictions or where such action would require additional prospectuses, other offer documentation, registrations or other actions.

**Additional information for Recipients in Switzerland:**
This information has not been approved by the Federal Banking Commission (merged into the Swiss Financial Market Supervisory Authority (FINMA) on 1 January 2009). NORD/LB will comply with the Directives of the Swiss Bankers Association on the Independence of Financial Research (as amended). The present information does not constitute an issuing prospectus pursuant to article 652a or article 1156 of the Swiss Code of Obligations. The information is published solely for the purpose of information on the products mentioned herein. The products do not qualify as units of a collective investment scheme pursuant to the Federal Act on Collective Investment Schemes (CISA) and are therefore not subject to supervision by FINMA.

**Additional information for Recipients in the Republic of China (Taiwan):**
This information is provided for general information only and does not take into account the individual interests or requirements, financial status and investment objectives of any specific investor. Nothing herein should be construed as a recommendation or advice for you to subscribe to a particular investment product. You should not rely solely on the information provided herein when making your investment decisions. When considering any investment, you should endeavour to make your own independent assessment and determination on whether the investment is suitable for your needs and seek your own professional financial and legal advice. NORD/LB has taken all reasonable care in producing this report and trusts that the information is reliable and suitable for your situation at the date of publication or delivery. However, no guarantee of accuracy or completeness is given. To the extent that NORD/LB has exercised the due care of a good administrator, we accept no responsibility for any errors, omissions, or misstatements in the information given. NORD/LB does not guarantee any investment results and does not guarantee that the strategies employed will improve investment performance or achieve your investment objectives.

**Information for Recipients in the United Kingdom:**
NORD/LB is subject to partial regulation by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA). Details of the scope of regulation by the FCA and the PRA are available from NORD/LB on request. The present information is "financial promotion". Recipients in the United Kingdom should contact the London office of NORD/LB, Investment Banking Department, telephone: 0044 / 2079725400, in the event of any queries. An investment in financial instruments referred to herein may expose the investor to a significant risk of losing all the capital invested.

Time of going to press: Wednesday, 27 July 2022 (08:56h)