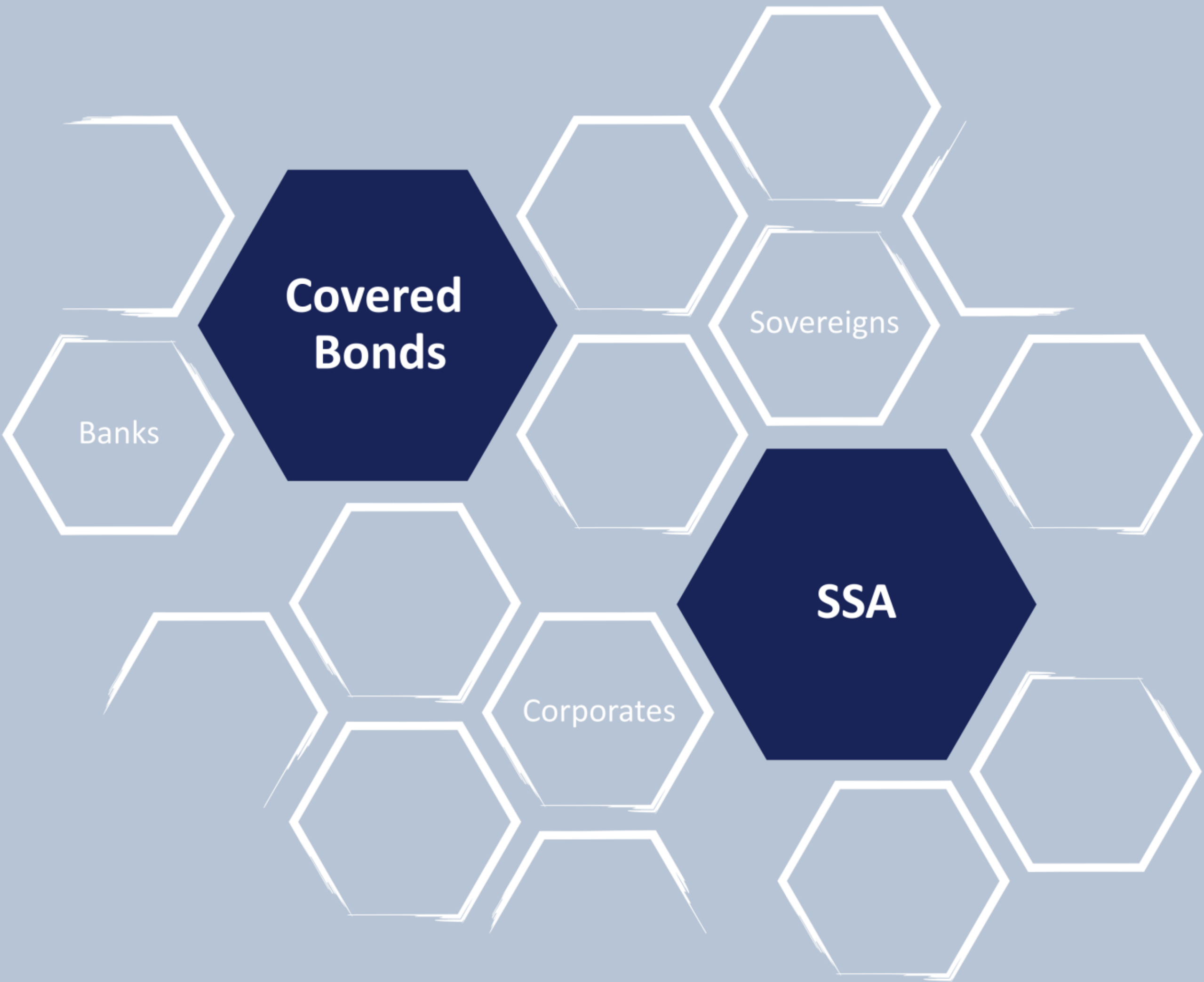
NORD/LB



Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

15 June 2022 ♦ 20/2022

Marketing communication (see disclaimer on the last pages)

Finanzgruppe

Agenda

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: Melanie Kiene, CIIA // Dr Frederik Kunze

Primary market issuance window open again since yesterday

The current market environment, consisting, among other aspects, of further rising inflation rates, at least increasing signs of an impending recession and an ECB that looks set to adjust interest rates (cf. also Fixed Income Special from 09 June 2022) in addition to exiting its expansive monetary policy measures, has resulted in the fact that we have only seen three new issues in the EUR benchmark covered bond market since our last edition of the Covered Bond & SSA View a fortnight ago. Two of the three deals were actually only placed yesterday. Before the primary market issuance window opened again on Tuesday, the last issue was placed by NIBC Bank on 6 June 2022. The issuance volume for this 5y bond was EUR 500m. It represented something of a debut deal for NIBC Bank as it was the first issue under the new soft bullet covered bond programme. In the past, this issuer had opted for bonds with a CPT structure. The bond was announced with a spread guidance of ms +14bp area, with the final pricing ultimately set at ms +11bp (order book: EUR 870m), resulting in a new issue premium of +3bp. The first deal from yesterday saw Aareal Bank approach investors with a mortgage Pfandbrief. The bond has a term to maturity of over four years and entered the marketing phase with guidance in the area of ms +8bp. The order book ultimately amounted to more than EUR 630m. No spread tightening was observed in the end for this bond with a volume of EUR 500m. The Austrian issuer Bausparkasse Wüstenrot was the second institution to make an appearance on the market yesterday (Tuesday). NORD/LB has been mandated as joint lead manager for this deal, an aspect which was announced last week. The issuance volume of the mortgage-backed covered bond with a term of three years was already fixed in advance – EUR 250m (WNG). Investor interest was high and the final order book already totalled in excess of EUR 450m after just two and a half hours. The initial guidance of ms +15bp area was then reduced so that the final pricing for this sub-benchmark deal came in at ms +12bp, producing a new issue premium of 4-5bp in the process. The investor allocation breaks down as follows: Banks 56%, CB/OI 23%, Asset & Fund Managers 11%, Insurance & Pension Funds 10%. In geographical terms, 45% of the Pfandbrief was allocated to investors from the domestic market of Austria, with a further 23% attributable to Germany, 19% to the Nordics, 4% each to Italy and France, 1% to CEE and 4% to Others. Widening spreads are currently dominating the secondary market and there is a perceptible risk-off mood, which is also related to the fact that significant new issue premiums are expected for future new issues.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
NIBC Bank	NL	08.06.	XS2491156142	5.0y	0.50	ms +11bp	AAA / - / AAA	-
Aareal Bank	DE	14.06.	DE000AAR0348	4.6y	0.50	ms +8bp	- / Aaa / -	-

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

ECB interest rate decision: expected implications for covered bonds

The interest rate decision by the European Central Bank (please also refer to the SSA Market Overview section) last week is not without implications for the covered bond segment. Nevertheless, we would by no means speak of a big surprise. With regard to ending the APP, the central bankers have created what is at least in part a sharp edge, which, in tandem with further interest rate hikes, should lead to covered bonds widening slightly. There could even be more pronounced widening in the short term of a potentially sentiment-driven nature. The reinvestment of the CBPP3 maturities should continue to ensure a certain fundamental level of demand from the Eurosystem, whereby we assume a gradual reduction in the ECB order rate on the primary market. Looking ahead to the coming deals, the "risk" of reducing the stake to 20% is at least conceivable. In terms of more medium to long-term developments, we are looking forward to TLTRO III maturities with some anticipation. However, not all expiring volumes on the covered bond market are due for refinancing. Nevertheless, we definitely see arguments for commercial banks in the common currency area adjusting their funding behaviour, which would also include covered bond issuers. All in all, we foresee spread widening, particularly in the coming weeks, which should ultimately also lead to greater differentiation across jurisdictions.

S&P review of the covered bond market at the end of Q2 2022

In their quarterly review "Global Covered Bond Insights Q2 2022", the risk experts at S&P also point out that the covered bond issuance volume in the EUR benchmark segment this year is extraordinarily high and has actually already exceeded the total volume for 2021. France and Germany are responsible for over 56% of covered bond deals from the eurozone. Outside of Europe, Canada leads the way with 69%, followed by Australia with just over 20%. S&P sees the main driver for the increased issuance activity as the less attractive conditions of central bank liquidity programmes (some have already stopped these altogether – also in view of the rising inflation). Another reason given is the decline in customer deposits. The significantly shorter maturities in comparison with the previous year are striking. According to information from S&P, 48% of the deals issued since the beginning of the year have a term of up to seven years (reporting date 26 May 2022; previous year: 13%). The experts at S&P attribute this development to the shape of the swap curve and to the fact that the shorter maturity segments also promise attractive positive returns for investors again. Despite high investor demand, the proportion of covered bond issues with an ESG background has not increased compared with last year, and has so far stood at around 13%. The restricted availability of sustainable assets is regarded as a limiting factor here. A further deteriorating environment could compromise the ability of borrowers to service loans due to reduced disposable income. However, the analysts at S&P currently identify no risk to the ratings of investment-grade covered bonds. For example, S&P has not downgraded any covered bonds since 2019, in spite of the coronavirus pandemic.

Moody's: new covered bond legislation in Spain strengthens bond creditors

In order to implement the EU Covered Bond Directive, a new Covered Bond Act is set to enter into force in Spain on 08 July 2022. The rating agency Moody's took a close look at this and came to a positive overall assessment, despite some ambiguities. The agency highlights the fact that the new act provides for improved asset segregation for covered bond holders. Another positive aspect that will strengthen the credit standards is the planned use of a special administrator who, in the event of insolvency or liquidation, will independently only represent the interests of the covered bond creditors. Current legislation provides for a common administrator for covered and unsecured bonds, which can create conflicts of interest. In line with EU requirements, the new law prescribes a liquidity reserve of 180 days, although requirements for overcollateralisation (OC) will be less strict. While overcollateralisation of at least 25% for mortgage bonds and 43% for public sector covered bonds is currently mandatory, this has been reduced significantly to 5%. The loan-to-value ratio (LTV) of 80% for residential real estate and 60% for commercial real estate has been adopted from the EU directive. According to Moody's, it is unclear in the new legislation whether the annual revaluation of collateral that is required can be based on the original value or higher. Another aspect that requires clarification by the legislator, according to the analysts, is the method used in real estate valuation to determine the mortgage lending value, since the law mentions different valuations here, which leave room for interpretation. Also ambiguous is the fact that when defining a covered bond programme, one article speaks of only one cover pool, while another states that a programme can encompass multiple cover pools. In addition, Moody's assumes that the new act will be revised this year to clarify such ambiguities.

Market overview SSA/Public Issuers

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

ECB presents new roadmap for H2 2022

At its scheduled meeting last Thursday, the European Central Bank confirmed that, after ending net purchases under the Pandemic Emergency Purchase Programme (PEPP) at the end of March 2022, it would now also discontinue net purchases under its conventional Asset Purchase Programme (APP). The latter had been given a game-changing adjustment as recently as the ECB's March meeting. Following the end of the PEPP in March this year, the APP was initially doubled to EUR 40bn in April as a support measure, before the rate of purchases was quickly reduced again in May to EUR 30bn. As at 1 June 2022, the Eurosystem lowered the APP to the initial amount (EUR 20bn per month). This means that the ECB is decreasing its purchases and at a faster pace than we would have previously thought possible. It was always the most probable scenario that the APP would end in Q3 2022. However, the ECB had said that this would depend on data. Now the ECB has taken the decision to exit as early as 1 July this year. This paves the way for a first interest rate hike at the ECB's meeting on 21 July 2022. To recap briefly, the PEPP will be keeping us busy for another 2.5 years and we see no reduction in total assets. With regard to the APP, the situation is far more cryptic at present: "The ECB's Governing Council intends to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when it starts raising the key ECB interest rates and, in any case, for as long as necessary to maintain ample liquidity conditions and an appropriate monetary policy stance." We believe that anything from six months to more than 24 months is possible and hope that details will be provided at the press conference following the Governing Council's meeting in July. In line with expectations, no key rate adjustments have been resolved (as yet). Accordingly, the interest rate for main refinancing operations (MRO), the rate on the marginal lending facility and the rate on the deposit facility remain unchanged at 0.00%, 0.25% and -0.50%. However, it is highly likely that changes in the interest rates will follow at the next four meetings at least. In the second half of this year, precisely these four further meetings of the Governing Council remain, providing sufficient room for manoeuvre, with new projections to be issued at two of the meetings (September and December). It looks like the first step in July will involve all three interest rates and not, as previously expected, only the rate on the deposit facility. A clear scope of +25bp has already been communicated. The further course of action in September will mainly depend on the data but will definitely include another interest rate change. We expect that a hike of +50bp will only be implemented if, for the inflation projection, the digit before the decimal point is 7. At the next two meetings in 2022 after that, the plan then is for hikes to continue gradually, i.e. +25bp at each of the meetings. Our base scenario for July envisaged the return to a symmetrical range for the three interest rates. This symmetry would not be achieved if all three interest rates really are increased by 25bp in July. Furthermore, we expect that by September, negative interest on the part of the European Central Bank will be a thing of the past. Whether the rate on the deposit facility, for example, would then increase by "only" 25 basis points and the other two interest rates go up by 50bp would ultimately not be that important – it would just be more symmetrical.

ECB projections – rate of inflation revised upwards for all years and…

With regard to the ECB staff projections, we will once again focus on the inflation projection. After all, these projections represent guidelines for the monetary policy approach adopted in Frankfurt. As expected, the projections for 2022 were revised up significantly. For the current year, in which we have not even hit the halfway point, the European Central Bank expects a rate of inflation of 6.8% (previously: 5.1%). The ECB's projection for 2023 is 3.5% (previously: 2.1%) and it is 2.1% for 2024 (previously: 1.9%). With regard to 2025, the first projection will be made in December this year. With these projections, the ECB is clearly signalling its assumptions regarding the further trend in prices. The ECB continues to assume an upward trend in the rate of price increases in the short term. We expect the projections to be revised upwards again in September, since the duration of the war in Ukraine remains uncertain and the minimum wage in Germany is set to be increased two more times this year (on 01.07. and 01.10.), while food and energy prices continue to be at high levels.

…weaker GDP growth forecast than previously expected

The ECB expects growth in the Eurozone of 2.8% in 2022 (previously: 3.7%). For 2023 and 2024, the ECB expects 2.1% (previously: 2.8%) and 2.1% (previously: 1.6%) respectively. In this regard, a definite positive aspect is that the recovery – despite projections having been revised downwards again – is set to be boosted by the policy of opening up adopted everywhere due to the waning impact of the pandemic. Similar to the inflation projections, with regard to expectations of economic activity picking up in real terms, an assessment of the war in Ukraine as well as of any economic setbacks resulting from it has yet to be provided. In this sense, any upward revision of the inflation rate will also come with downside risks in terms of GDP projections. In the past, the combination of high inflation and slow growth often prompted a knee-jerk reaction expressed as fear of a marked and sustained phase of stagflation. We prefer to think of it as slowflation, because we do not interpret the dataset as reflecting stagnant growth. As before, we do not expect a recession in any of the years under review.

Old ECB projections for growth and inflation in the Eurozone*

	March 2022 projections				Adverse scenario				Severe scenario			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Real GDP	5,4	3,7	2,8	1,6	5,4	2,5	2,7	2,1	5,4	2,3	2,3	1,9
HICP inflation	2,6	5,1	2,1	1,9	2,6	5,9	2,0	1,6	2,6	7,1	2,7	1,9

* Change on previous year in %
Source: ECB, NORD/LB Markets Strategy & Floor Research

New ECB projections for growth and inflation in the Eurozone*

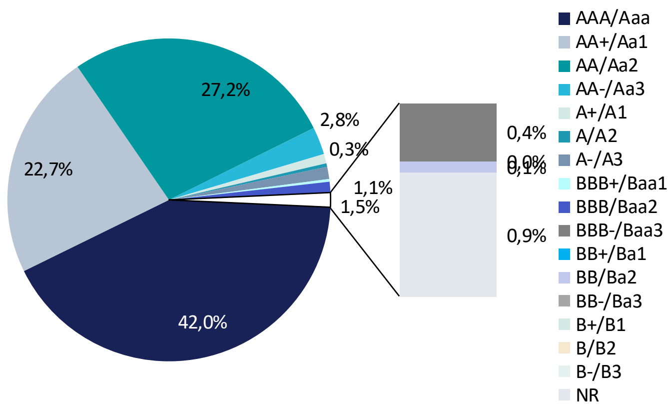
	June 2022 projections				Adverse scenario				Severe scenario			
	2021	2022	2023	2024	2021	2022	2023	2024	2021	2022	2023	2024
Real GDP	5,4	2,8	2,1	2,1	-	-	-	-	-	-	-	-
HICP inflation	2,6	6,8	3,5	2,1	-	-	-	-	-	-	-	-

* Change on previous year in %
Source: ECB, NORD/LB Markets Strategy & Floor Research

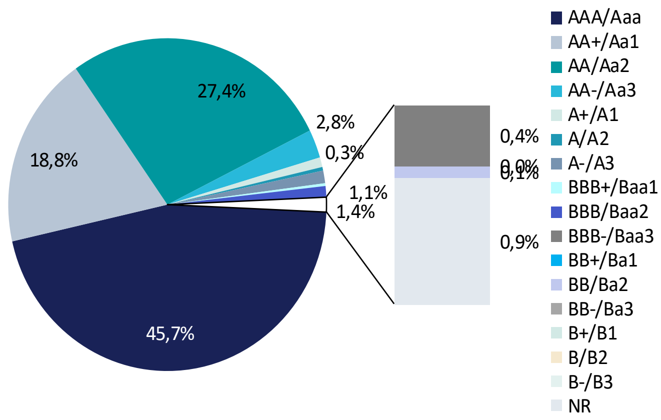
Moody's upgrades ESM und EFSF ratings to Aaa

In the last issue of this publication, we mentioned the change in the European Union rating. This week, we can already report on the next rating upgrade in the Supranationals segment. The rating agency Moody's has affirmed the top rating of Aaa (previously: Aa1) and a stable outlook for the European Stability Mechanism (ESM) and European Financial Stability Facility (EFSF). Two factors were decisive for Moody's rating actions: on the one hand, the improved robustness of the European crisis-fighting architecture – including the EU and ECB – was mentioned. In the event of a systemic crisis, the rating agency now sees the risk of default correlation between various member states as mitigated. In this respect, the rating for France (Aa2, stable) was particularly important. Previously, it had been assumed that in the event of a sovereign default of France, most shareholders with a lower rating would also end up in the same situation. Following an analysis of crisis management during the pandemic – for example, the joint debt issuance under the auspices of the European Union – Moody's no longer shares this opinion. The second factor determining the rating upgrade was the reform of the ESM Treaty. This would reduce the concentration risk of the loan portfolio, since there would be less overlap between shareholders and borrowers in the event of a crisis. In addition, according to the rating agency, the change means that there is an incentive for member states regarding existing loan programmes to make use of financial support at an early stage, which reduces the risk of contagion for other member states. In an earlier issue in 2021, we highlighted the ESM reform and described the advantages arising from it in detail. Moody's has assessed as temporary the fact that implementation of the reform has come to a standstill due to the legislative procedures in Germany and Italy. The rating agency maintained the outlook as stable. According to Moody's, it is bolstered by an assumed very high level of willingness of shareholders to provide support. As a result of the enhanced rating, our volume-weighted distribution has further shifted in the direction of AAA/Aaa. The ESM now has a top rating across all rating agencies and therefore falls into this category. This does not apply to EFSF bonds. Both Fitch and S&P have specified an AA rating for the EFSF. The shift relates to bonds worth around EUR 90bn. In percentage terms, it represents a shift of almost 4 percentage points.

Rating distribution (volume-weighted; before)



Rating distribution (volume-weighted; after)



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

NORD/LB

Primary market

After the ECB's meeting last Thursday, the primary market has remained in defensive mode. It is similar in other currency areas. The example of Erste Abwicklungsanstalt (ticker: ERSTAA) reflects this. It had planned to launch a USD-denominated benchmark bond issue with a 2y maturity. However, in view of the volatile market conditions, the issuer opted to postpone the bond issue. Since our last publication date on 1 June this year, we have been able to take a closer look at some deals and want to share our observations with you, starting with the Asian Development Bank (ticker: ASIA). We have already commented on the mandate, and the bond issue was then placed in the market on 1 June 2022. The bond has a maturity of 15 years and a volume of EUR 1bn. The order book worth EUR 1.1bn produced a bid-to-cover ratio of 1.1x. The bond was priced at ms +3bp, which matched the guidance. In addition, the federal state of North Rhine-Westphalia was present in the primary market – this time with a dual tranche in sustainability format. The public issuer from Düsseldorf (ticker: NRW) raised EUR 3.5bn in total. Placed at ms -6bp (guidance: ms -5bp area), a 10y bond accounted for EUR 2bn of the total amount and a 30y bond for EUR 1.5bn. This 30y bonds was placed at ms +35bp (guidance: ms +37bp area). Both deals were more than twice oversubscribed. The order book for the 10y sustainability bond amounted to EUR 4.7bn and that for the 30y bond to EUR 3.3bn. It is also likely that we will soon be seeing activity from a Swedish issuer. Svensk Exportkredit (ticker: SEK) intends to issue a green bond with a maturity of five years in benchmark format. Investor meetings have been conducted since last Wednesday. In addition, not one but two supranationals sent out RfPs, these being the EU and the EFSF. The resultant EFSF deal was already observed in the market yesterday. The bond has a maturity of ten years and was placed at ms +1bp (guidance: ms +1bp area) and is worth EUR 2bn. The order book totalled EUR 2.7bn, which resulted in a bid-to-cover ratio of 1.35x. Meanwhile, we expect the European Union deal – for the NGEU programme – to take place in the coming week. Furthermore, it was indicated on Monday that Bpifrance (ticker: OSEOFI) is planning to launch a benchmark bond issue of a green bond, with the relevant investor meetings to take place from 15 to 17 June 2022.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
EFSF	SNAT	13.06.	EU000A2SCAC2	10.0y	2.00bn	ms +1bp	AA / Aaa / AA	-
NRW	DE	07.06.	DE000NRW0NG6	30.0y	1.50bn	ms +35bp	AAA / Aa1 / AA	X
NRW	DE	07.06.	DE000NRW0NF8	10.0y	2.00bn	ms -6bp	AAA / Aa1 / AA	X
ASIA	SNAT	31.05.	XS2489466446	15.0y	1.00bn	ms +3bp	AAA / Aaa / AAA	-

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

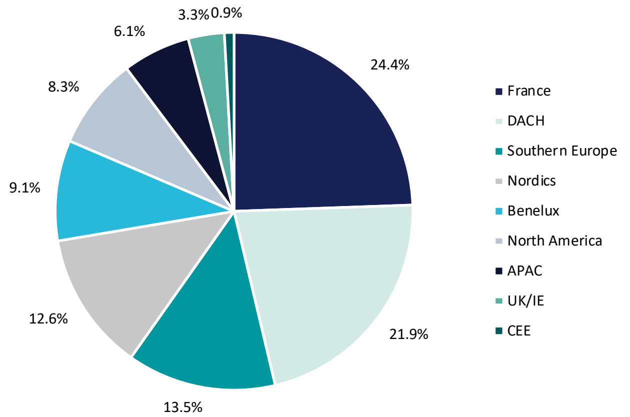
Covered Bonds
Covered bond jurisdictions in focus: a look at Australia and New Zealand

Authors: Melanie Kiene // Dr Frederik Kunze

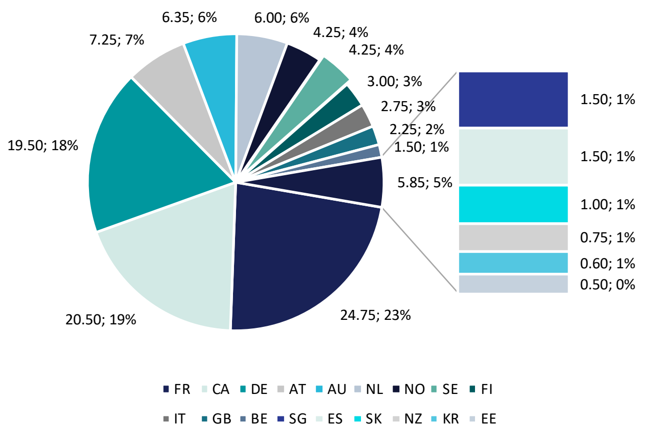
Covered bonds from “Down Under” account for 4.1% of the EUR benchmark segment

Currently, the total volume of outstanding covered bonds in EUR benchmark format comes to EUR 936bn. The majority, with a share of 24.4% or EUR 228.8bn, is attributable to France, followed by Germany at 17.8% (EUR 166.8bn). While these countries issue in their domestic currency, this is no longer the case for the country that follows in third place among the largest EUR benchmark issuers. As a “third country”, Canada has a considerable share, at EUR 77.7bn (8.3%), of the total market. In the current edition of our weekly publication, we propose to focus on two “overseas” jurisdictions, namely Australia and New Zealand. Issuers in both countries also issue the majority of their covered bonds in a foreign currency, namely the euro. On 8 June 2022, Australia had an outstanding EUR benchmark volume of EUR 30.2bn (3.2%), spread across 31 bonds in total. New Zealand accounted for EUR 8.45bn (0.9%) spread across twelve issues, meaning that the “Down Under” jurisdictions together account for an overall share of 4.1%.

Distribution by jurisdiction (EUR BMK)



Primary market (2022 ytd; EUR BMK; EUR bn)



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

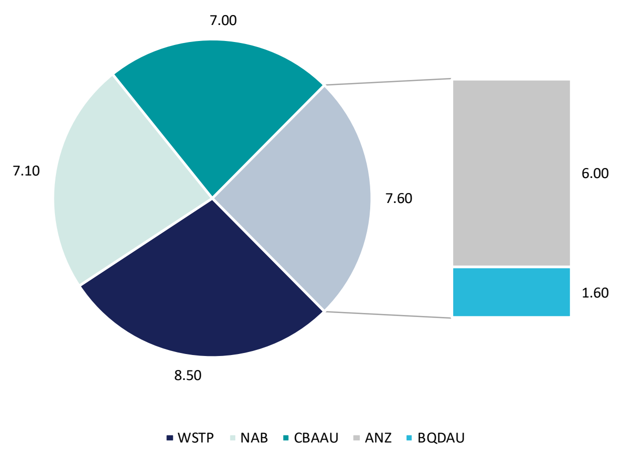
The euro as the dominant currency both in Australia…

According to [ECBC statistics] at the end of 2020, the outstanding total volume of the covered bond market came to EUR 2,908.7bn across the world. Of this figure, a total of EUR 62.6bn was attributable to Australia and EUR 9.7bn to New Zealand. Both countries only issue mortgage-backed covered bonds. Here, the ECBC estimates the total market at EUR 2,579.8bn. Of the previously mentioned EUR 62.6bn, the Australian banks have issued “only” the equivalent of EUR 8.8bn in their domestic currency (AUD) and a further EUR 18.1bn in other currencies outside the euro.

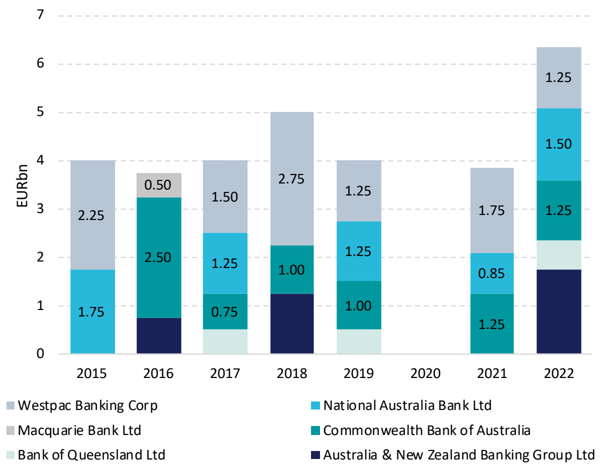
…and in New Zealand
The euro is also the dominant issuance currency in New Zealand, where only the equivalent of EUR 0.2bn was attributable to the domestic currency (NZD) and EUR 0.3bn to other currencies. As far as structures are concerned, banks in New Zealand only make use of soft bullet formats, while all three structures are used in Australia. Over recent years, the trend from a hard bullet to a soft bullet structure has also become established here. Commonwealth Bank of Australia is the only bank that issues conditional pass-through bonds (outstanding covered bond volume: EUR 1.4bn) and of the Australian covered bond market, only EUR 4.3bn is still attributable to hard bullet structures (2014: EUR 31.9bn hard bullet, EUR 32.9bn soft bullet).

Covered bond markets: Australia and New Zealand
As discussed initially, the covered bond market in Australia and New Zealand is dominated by EUR issues, although other currencies also play a significant role in Australia. Consequently, the proportion of covered bonds in "other currencies" (28%) and Australian dollars (13%) together amounts to approximately 40%. There is more diversity in terms of currency in Australia. For both countries, in addition to currency-specific aspects, such as the cross-currency basis as an argument, above all the focus for issuers is on addressing a significant group of investors as a selling point of EUR benchmarks. In 2020, no covered bonds were issued in either country due to the coronavirus pandemic.

EUR benchmarks AU (outstanding; EUR bn)



EUR benchmarks AU (issues; EUR bn)



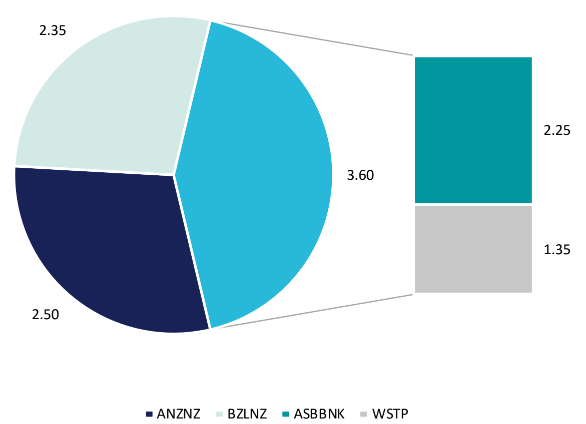
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

EUR benchmark segment: five active issuers in Australia, four in New Zealand
We currently estimate the volume of outstanding EUR benchmarks at EUR 30.2bn, spread across five issuers (see above chart). At present, there are four active issuers in New Zealand (see chart below), which together have an EUR benchmark volume of EUR 8.5bn. Both sub-segments are heterogeneous by and large, although each of the five Australian banks has already approached investors with new issues in 2022, while only ANZ Bank New Zealand has done so from New Zealand. In our opinion, the banks' focus on the soft bullet (SB) sub-segment is also striking. Only the covered bond issued by the Bank of Queensland has a CPT structure. The following table contains key basic data on the five issuers.

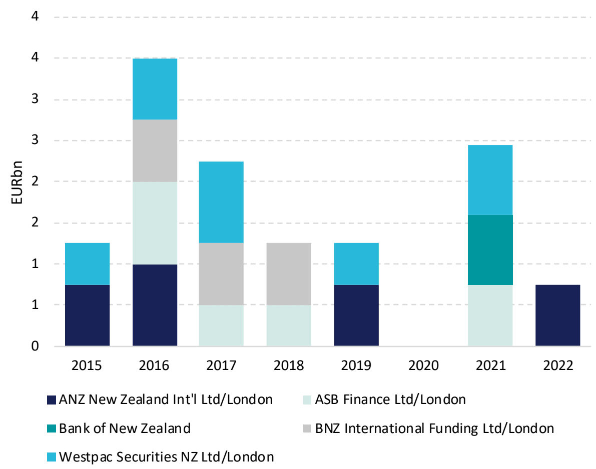
Westpac Banking Corp. (AU) and ANZ Bank New Zealand (NZ) have the largest national cover pools

Westpac Banking Corp. (Westpac) has the largest cover pool in Australia, which contains AUD 35.9bn of cover assets, followed by Commonwealth Bank of Australia (CBA) with assets worth AUD 29.7bn. These compare with AUD 29.1bn and AUD 26.4bn, respectively, of covered bonds. With nine bonds totalling EUR 8.5bn, Westpac is the largest EUR benchmark issuer. CBA and National Australia Bank (NAB) have each issued seven EUR benchmark covered bonds and account for EUR 7.0bn and EUR 7.1bn, respectively, of the total issuance volume.

EUR benchmarks NZ (outstanding, EUR bn)



EUR benchmarks NZ (issues, EUR bn)



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

Invariably "best ratings" for covered bonds from Australia and New Zealand

The covered bonds invariably have a best rating from Moody's (Aaa) and an additional AAA rating from Fitch. ANZ Bank New Zealand (NZD 9.5bn) has by far the largest cover pool in New Zealand. The other three active issuers in New Zealand have cover pools of between NZD 5.3bn and NZD 5.4bn. The overcollateralisation ratios are far higher than the minimum required by law (3% in Australia; present value overcollateralisation in New Zealand) and above the overcollateralisation to be found for the respective rating.

Overview: Australian EUR benchmark issuers (as at 07.06.2022)

Issuer (*Link*)	Pool	Cover pool volume (AUD m)	Total amount outstanding (AUD m)	OC	EUR BMK covered bonds No. / sum (EUR bn)	CB-Rating (Fitch / Moody's/ S&P)	Maturity type (BMK)
Australia and New Zealand Banking Group [3]	Mortgage	16,320.4	11,059.3	161.53%	5 / 6.00	AAA / Aaa /-	Soft
Bank of Queensland [2]	Mortgage	4,874.4	2,304.4	2,112.28%	3 / 1.60	AAA / Aaa /-	CPT
Commonwealth Bank of Australia[2]	Mortgage	29,693.0	26,341.9	10.09%	7 / 7.00	AAA / Aaa /-	Soft
National Australia Bank [2]	Mortgage	27,962.3	20,899.0	133.80%	7 / 7.10	AAA / Aaa /-	Soft
Westpac Banking Corp.[2]	Mortgage	35,906.5	29,068.7	127.28%	9 / 8.50	AAA / Aaa /-	Soft

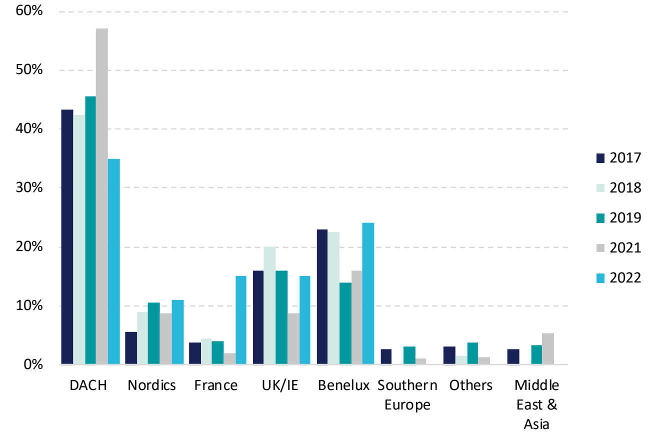
Source: Issuers, rating agencies, NORD/LB Markets Strategy & Floor Research; [2] 04/30/2022, [3] 05/02/2022, [4] 05/31/2022, [5] 05/17/2022, [6] 01/31/2022

Overview: New Zealand EUR benchmark issuers (as at 07.06.2022)

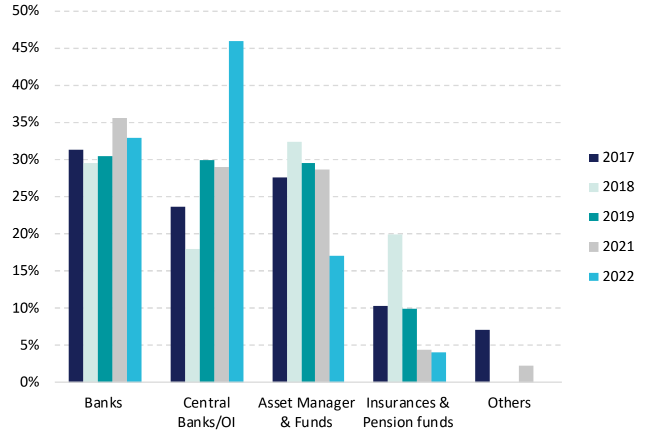
Issuer (*Link*)	Pool	Cover pool volume (NZD m)	Total amount outstanding (NZD m)	OC	EUR BMK covered bonds No. / sum (EUR bn)	CB-Rating (Fitch / Moody's/ S&P)	Maturity type (BMK)
ANZ Bank New Zealand [3]	Mortgage	9,455.9	4,047.7	233.61%	3 / 2.50	AAA / Aaa /-	Soft
ASB Bank	Mortgage	5,382.6	3,733.3	129.00%	4 / 2.25	AAA / Aaa /-	Soft
Bank of New Zealand [5]	Mortgage	5,254.9	4,175.7	125.84%	3 / 2.35	AAA / Aaa /-	Soft
Westpac New Zealand [6]	Mortgage	5,432.2	4,131.1	142.53%	2 / 1.35	AAA / Aaa /-	Soft

Source: Issuers, rating agencies, NORD/LB Markets Strategy & Floor Research; [2] 04/30/2022, [3] 05/02/2022, [4] 05/31/2022, [5] 05/17/2022, [6] 01/31/2022

NZ EUR BMK: investor distribution by region



NZ EUR BMK: investor distribution by group

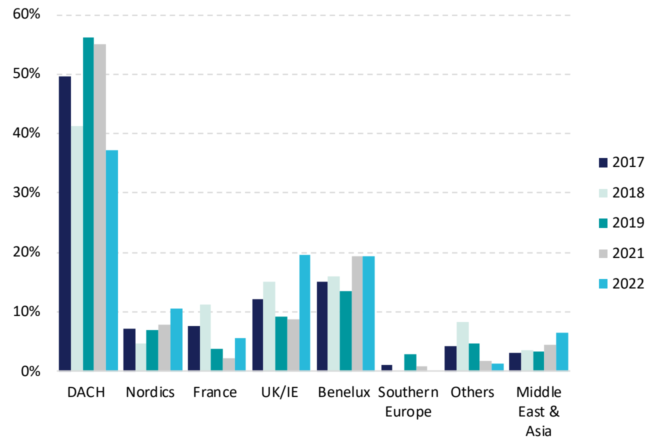


Source: Issuers, market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

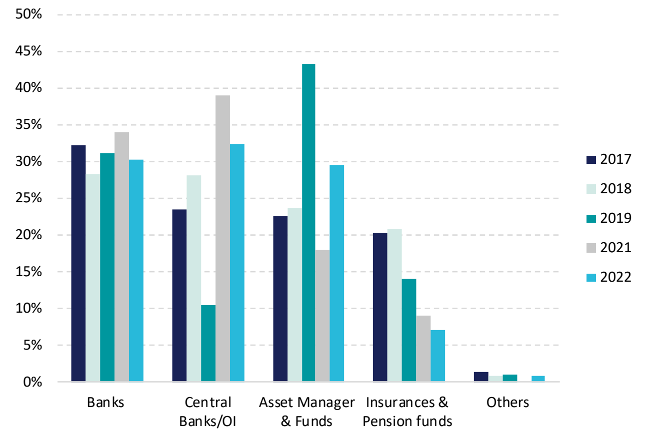
Investors from the DACH region are the most important group

With regard to investor distribution, the picture for both countries under consideration is comparable with the market as a whole in the EUR benchmark segment. The largest shares of primary market issues are allocated to accounts in the DACH region. With the diagrams below, it should be noted that no new issues were placed in 2020. However, in terms of types of investors, banks will remain the most important group of purchasers on the primary market for Australian and New Zealand covered bonds.

AU EUR BMK: investor distribution by region



AU EUR BMK: investor distribution by group



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

Australia: a look at the banking market

As is the case in many places at present, the Australian central bank has already set out along the road to raising interest rates and it is relatively likely that it will stick to it as well. The key interest rate in Australia had been at a historic low of 0.10% since March 2020 and was raised to 0.35% in March 2022 and now to 0.85% at the beginning of June 2022. In the opinion of Australia's central bank, the Reserve Bank of Australia, the domestic economy is in good shape and the unemployment rate is the lowest it has been for 50 years, meaning that monetary support is no longer required. However, even in Australia, the headline inflation rate of 5.1% in the first quarter of 2022 was above the target range of 2% to 3%. The Australian economy is benefiting from booming demand for raw materials. This meant that even during the coronavirus pandemic in 2020, GDP only fell by 2.1% and then increased by 4.8% last year. The first quarter closed with growth of 0.8% Q/Q or 3.3% Y/Y. The unemployment rate recently stood at 4.0%. However, the key interest rate cannot increase too rapidly either, as this might trigger a sharp fall in property prices, which could send banks' loan losses soaring. S&P assumes that house prices will either stagnate or fall slightly next year. For the banking market, S&P takes the view that the increase in rates will have positive effects on gross earnings. Interest margins decreased in recent years due to low interest rates, in particular. Borrowers are only likely to have difficulties as a result of the increase in rates if they are already very highly leveraged and have agreed floating rate loans. However, according to S&P, the loan books of banks only contain few of these borrowers. The rating agency assumes that rising loan losses will only eat up the increase from gross earnings in part. The banking market seems sound and resilient. To illustrate this, we have compared some financial figures for covered bond issuers. All banks present sound cost-income ratios, they are adequately capitalised and have hardly any problem loans. As a result, this leads to ratings of between "A-" and "AA-" from the three well-known rating agencies.

Overview: Australian banks

Entity	Total assets AUD	Net Customer Loans/ Deposits (%)	Problem Loans/ Gross Customer Loans (%)	Cost-to-Income (%)	Return on Equity (%)	CET1 ratio (%)	Rating[1]
Australia and New Zealand Banking Group [4]	1,017,361m	99.64	0.25	50.82	10.73	11.53	A+ / - / AA-
Bank of Queensland [3]	94,895m	115.86	0.25	62.06	7.35	9.68	A- / - / BBB+
Commonwealth Bank of Australia[2]	1,149,813m	106.70	0.82	44.19	14.57	11.75	A+ / - / AA-
National Australia Bank [4]	975,876m	NA	0.75	45.75	10.81	12.48	A+ / - / AA-
Westpac Banking Corp.[4]	964,749m	119.75	1.09	58.90	7.4	11.33	A+ / - / AA-

Overview: New Zealand banks

Entity	Total assets NZD	Net Customer Loans/ Deposits (%)	Problem Loans/ Gross Customer Loans (%)	Cost-to-Income (%)	Return on Equity (%)	CET1 ratio (%)	Rating[1]
ANZ Bank New Zealand [4]	190,491m	112.95	0.50	37.27	12.37	12.44	A+ / - / AA-
ASB Bank [2]	116,839m	126.03	1.14	37.01	16.19	12.89	A+ / - / AA-
Bank of New Zealand [4]	124,059m	132.06	0.19	35.33	13.90	12.69	A+ / - / AA-
Westpac New Zealand [4]	117,422m	115.57	0.64	47.03	10.82	11.29	A+ / - / AA-

Source: S&P Global Markets Intelligence, issuers, rating agencies, NORD/LB Markets Strategy & Floor Research;
[1] (Fitch / Moody's/ S&P); [2] 12/31/2021, [3] 02/28/2022, [4] 03/31/2022

New Zealand: a look at the banking market

The economic recovery is also continuing in New Zealand although the country is affected by inflation and capacity bottlenecks. Supply-side inflationary pressure is exacerbated by the tight employment market, strong domestic demand and high raw material prices. In the first quarter of 2022, inflation was well above the target set by the Reserve Bank of New Zealand, at 6.9% Y/Y or 1.8% Q/Q, and led to a sharp increase in interest rates. Higher inflation leads to higher tax revenues but also to higher financing costs and social benefits, whereby the latter are tied to rising wages and salaries. A substantial increase in government expenditure could boost inflation further. With its latest rate hike of 50 basis points at the end of May, the RBNZ has now raised the key rate to 2.00%. New Zealand financial institutions are exposed to economic risks resulting from the dramatic increase in house prices in the last two years. Growth in house prices reached the highest level for more than 30 years at the end of 2021. The increase in interest rates and other political measures adopted by the authorities are likely to curb growth in the next two years in line with the latest trend. According to S&P, loan losses are likely to remain low in the next two years and converge with the level before COVID-19. New Zealand's foreign trade weaknesses – in particular, its high levels of foreign debt and persistent current account deficits – exacerbate the economic risks. Despite high levels of debt among private households and the agricultural sector, high property prices and the country's dependence on revenue from raw materials, the banking market is characterised as a stable financial system. As described previously, although New Zealand and Australia are exposed to risks resulting from the interest rate hike in terms of a fall in the property market and rising loan losses, the banks should still be able to cope with the challenges.

Covered bond legislation in Australia and New Zealand

The legal basis for issuing covered bonds in Australia is provided by the Banking Act of 1959 supplemented by the Banking Amendment (Covered Bonds) Bill (No.1) of 2011. This legal basis also gives covered bond investors their primary claim to the cover assets. In New Zealand, the legal basis can be found in part 5 of the Reserve Bank of New Zealand Act of 1989, which came into effect in December 2013. In Australia, suitable cover assets include mortgage and public sector assets as well as loans to banks. There are no legal requirements on cover assets in New Zealand. Moreover, Australia and Germany are also more stringent with regard to loan to value limits. For instance, the limits for mortgage assets in Australia are between 80% (residential) and 60% (commercial) and 60% also applies in Germany, only New Zealand has no requirements regarding this.

CPT structure only in New Zealand

With regard to the repayment structure, placements of both soft and hard bullets are possible in Australia and New Zealand, while CPT structures can also be used in New Zealand. Our understanding is that covered bond benchmarks from Australia and New Zealand can be classified as Level 2A assets in the context of LCR management on the basis of the regulations currently applicable. A risk weighting of 20% also applies to the issues from both jurisdictions considered here.

Overview of legislation: Australia, New Zealand and Germany

Country	Australia	New Zealand	Germany
Name	Australian Covered Bonds	New Zealand Registered Covered Bonds	Mortgage, ship and aircraft Pfand-briefe, public sector Pfandbriefe
Abbreviation	-	-	*Hypfe* (mortgage), *Öpfe* (public sector), *Schipfe* (ship), *Flupfe* (aircraft)
Special law	Yes	Yes	Yes
Cover assets (if applicable, including substitute cover)	Mortgage loans, public sector receivables, loans to banks	No legal requirement, (in practice: mortgage loans)	Mortgage, shipping and aircraft loans, public sector receivables, loans to banks
Owner of the assets	SPV	SPV	Issuer
Specialist bank principle	No	No	No
Geographical restriction - mortgage cover	AU	- (in practice: NZ)	EEA, AU, CA, CH, JP, NZ, UK, US, SG
Loan to value ratio - mortgage cover	Residential: 80% Commercial: 60%	No restrictions	60% of the loan to value ratio
Cover register	Yes	Yes	Yes
Derivatives in the cover pool	Yes	Yes	Yes
Substitute cover	Yes	No	Yes
Substitute cover limit	15%	-	10% *Öpfe*, 20% *Hypfe / Schipfe / Flupfe*
Minimum overcollateralisation	3% nominal	Nominal cover	2% present value
Asset encumbrance *** Issue limit** **** Cover pool limit**	8% of Australian assets**	10% of balance sheet total**	-
Art. 52(4) UCITS complied with	No	No	Yes
CRD complied with	No	No	Yes (does not apply to aircraft Pfand-briefe)
ECB eligibility	No	No	Yes

Source: National legislation, ECBC, NORD/LB Markets Strategy & Floor Research; Research

LCR eligibility of bonds

Both jurisdictions also count as "third countries" (in addition to the UK, Canada and Singapore, for example) in the context of covered bond harmonisation. As we understand it, New Zealand and Australian covered bonds are currently eligible (provided that all criteria are met) as Level 2A assets. However, this could change with the Covered Bond Directive that will be applicable from 8 July 2022. To ensure that covered bonds issued by the banks based there retain their LCR eligibility in future, they will have to comply with the extended European transparency requirements. In this context, the focus is on Article 14 of the Covered Bond Directive. If we assume that the data is published at least every quarter, the next date on which the data must be provided for the first time would be 30 September 2022. This would mean that the first extended templates could be expected in October. Informed circles indicate that not all countries are prepared to comply with this (yet). Others, such as Singapore, are already working on it. However, LCR eligibility is a reason for buying for many investors and European investors are a key group of investors, meaning that we expect the requisite data to also be published – albeit possibly somewhat later – in Australia and New Zealand.

Conclusion

Looking at the size of the Australian and New Zealand covered bond market as a whole, the EUR benchmark segment of the countries initially seems comparatively small. Nevertheless, they are part of the established benchmark jurisdictions, although the Australian segment plays a more dominant role in view of the size of the banking market. This year, we still expect Australian banks to raise around EUR 1.6bn on the primary market and expect New Zealand banks to raise EUR 1.0bn, meaning that all things considered, there is likely to be a small positive net supply in both countries. Essentially, the situation for covered bonds can be described as sound, which is attributable, in particular, to the legal framework as well as the credit quality and profitability of issuers in the EUR benchmark segment. The situation on the property market must also be viewed as challenging as consequence of the change in interest rates combined with surging inflation, although covered bond ratings should continue to remain stable.

SSA/Public Issuers
NGEU: Green Bond Dashboard

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

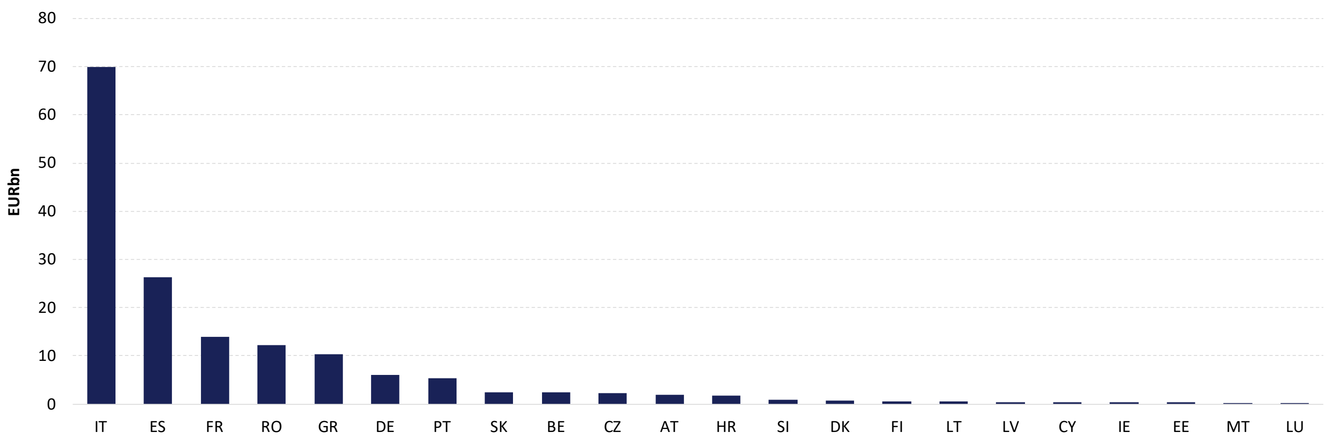
Introduction

The European Union published the NextGenerationEU Green Bond Dashboard on 31 March; the Dashboard aims to provide a transparent insight into the sustainable investment undertaken to date and planned under the Recovery and Resilience Facility. To date, green bonds totalling close to EUR 23bn have been placed as part of the NextGenerationEU (NGEU) programme. The European Commission states that of the proceeds raised, a total of EUR 5.3bn has so far been used for investments by Member States. This may look sobering, and not only at first glance: according to the previously reported expenses for Member States' approved recovery and resilience plans, approximately EUR 159.7bn is eligible as proceeds earmarked for green investments up to the end of 2026. Italy accounts for by far the largest share of these funds, at EUR 69.9bn, followed by Spain, at EUR 26.4bn.

NGEU review

Let's start with a brief review of the NGEU: the programme was adopted as an economic package in the course of the Covid-19 pandemic in 2020. The programme is worth around EUR 800bn (at current prices). The aim of the package is to emerge stronger from the pandemic, to transform national economies and to create new opportunities as well as jobs. The Recovery and Resilience Facility is at the heart of the NGEU. It is responsible for the provision of loans and grants amounting to EUR 723.8bn (at current prices): grants (EUR 338bn) will be repaid from the EU budget, while the Union's loans (EUR 385.8bn) will be repaid by the respective Member States. The EU budget will also be supported by new sources of income. These are split between three pillars overall: emissions trading, the Carbon Border Adjustment Mechanism (CBAM) and the residual profits of multinationals. The remaining amount of EUR 83.1bn is to be used for key EU projects.

Eligible investments for NGEU green bonds by country according to recovery and resilience plans



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

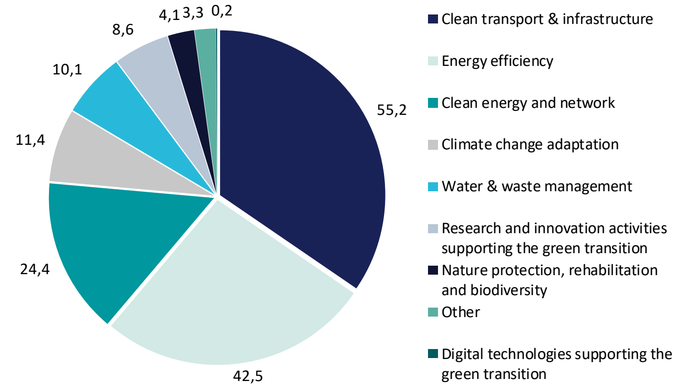
Recovery and Resilience Facility

The Recovery and Resilience Facility (RRF) is a temporary funding instrument launched in February 2021, which allows the European Commission to provide its Member States with financial resources that contribute to financing reforms and investments that are in line with the EU's priorities. In doing so, the facility pursues a dual aim: firstly, it helps the EU to achieve its target of climate neutrality by 2050 and secondly, it sets Europe on the path to digital transformation and accelerates this process. To receive RRF funding, Member States must present their plans for investments and reforms that will both promote economic recovery and boost social resilience. States can receive funding up to a previously allocated amount. The recovery and resilience plans (RRP) submitted by 22 Member States have been approved so far, although this figure will shortly rise to 23: the European Commission finally approved the Polish recovery plan amounting to approximately EUR 36bn on 1 June 2022. Previously, there were conflicts between the EU and the Polish government regarding a disputed legal reform, which Poland is currently reversing. The RRP is subject to certain targets: 20% of the planned expenses are expected to contribute to digital transformation and 37% is expected to make a contribution to protecting the climate. Cumulatively speaking, the approved RRPs even go beyond this: both the proportion of expenses for digital transformation and climate protection measures exceed the targets, at 26.4% and 39.9%, respectively. The facility is based on six pillars in total:

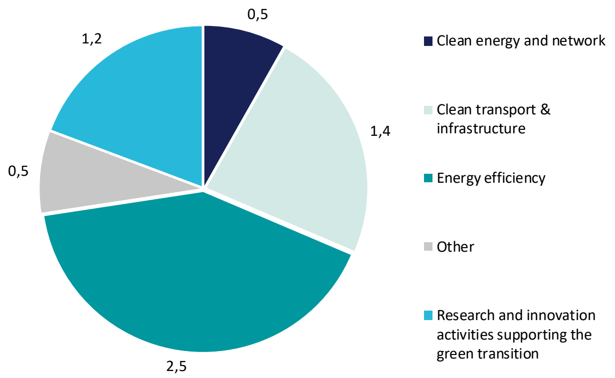
- Green transition
- Digital transformation
- Smart, sustainable and inclusive growth
- Social and territorial cohesion
- Health, and economic, social and institutional resilience
- Policies for next generation

The RRF is performance-based. This means that States will receive funding tranches upon achievement of agreed milestones and targets aimed at realising the reforms and investments in the plans. As soon as the European Commission has approved an RRP, the relevant loan agreements are concluded with the Member State. Once these are signed, States subsequently receive up to 13% of the amount upfront – within two months "where possible". The milestones defined in advance are subsequently assessed up to twice a year. If these have been achieved, the next tranche will be disbursed at the request of the respective Member State. Should the Commission conclude that not all milestones and targets have been achieved to its satisfaction, the Commission may make a partial disbursement. Subsequently, the State in question has six months to take the measures needed to achieve the target. Should this not take place within the time set, the Commission may reduce the total amount of financial support. However, there is the possibility that the Member State comes to the conclusion on the basis of objective criteria that the milestones and targets can no longer be achieved. In this case, it has the option of presenting an amended plan to the Commission for approval.

Allocation of green bond-eligible investments by category (EUR bn)



Germany: green bond-eligible investments by RRP (EUR bn)



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

German recovery and resilience plan

The plan submitted by Germany – and approved on 22 June 2021 – envisages grants of EUR 25.6bn. Of these, at least 42% is earmarked for climate protection and as much as 52% for digital transformation. Germany has therefore applied for less than Romania or Greece, for instance, and ranks only sixth in terms of the largest amounts – an aspect which we criticised this in 2021. Germany's gross national product (GNP) is also forecasted to increase by between 0.4 and 0.7 percentage points by 2026 and up to 135,000 new jobs will be created on the labour market. Germany not only benefits from its own RRP: the anticipated economic upturn enjoyed by other Member States – thanks to the NGEU programme – will probably lead to an increase in exports and transfer effects. This alone will boost the GNP by an estimated 0.4 percentage points. In detail, as part of the country's green transformation, the plan earmarks EUR 3.3bn for decarbonising the economy – especially industry – with particular focus on developing an effective hydrogen economy. A total of EUR 5.4bn is earmarked for more sustainable transport, in particular, the electrification of cars and public transport. A subsidy for purchasing electric cars is cited as an example project here. A total of EUR 2.5bn is also to be spent on a large-scale refurbishment programme to make residential properties more energy efficient. As far as digital transformation is concerned, EUR 1.5bn is earmarked for a Europe-wide initiative for microelectronics and communication technology, for example. In addition, EUR 750m is to be invested in another Europe-wide initiative for cloud infrastructures and services. More than 115 services provided by the German federal government and 100 provided by the Laender are also to be made accessible online by the end of 2022, for which the plan envisages investments of EUR 3bn. Let us turn to the funds eligible for green bonds: of the EUR 25.6bn in total, EUR 6.1bn can be financed via green bonds. The category energy efficiency accounts for the largest share here, at EUR 2.5bn (41%). In total, EUR 1.4bn (23%) is attributable to clean transport and infrastructure, followed by research and innovation activities to support the green transition, at EUR 1.2bn (19%). In the categories clean energy and "other", EUR 0.5bn (8%) can be financed using green bonds in each case. A slight drawback here: Germany has received none of the proceeds of the green bonds issued to date.

Green bond proceeds: largest investments in green transport and infrastructure

If one looks at all the investments eligible for green bonds, clean transport and infrastructure is by far the most important sector: in total EUR 55.2bn of the eligible green bond investments of EUR 159.7bn fall within this category. The next largest area comprises energy efficiency at EUR 42.5bn. In the meantime, investments totalling EUR 24.4bn are envisaged for clean energy and network, followed by EUR 11.4bn for adaptations to climate change. The remaining amount of EUR 26.2bn is attributable to the – no less significant – other categories. Overall, a clear trend is apparent here: Europe would like to adopt greener and more sustainable practices, especially in terms of mobility. Unsurprisingly, one Member State is taking the lead here: of Italy's total investment eligible for green bonds of EUR 69.9bn, almost 41% (EUR 28.4bn) is planned for green transport and infrastructure.

Conclusion and outlook

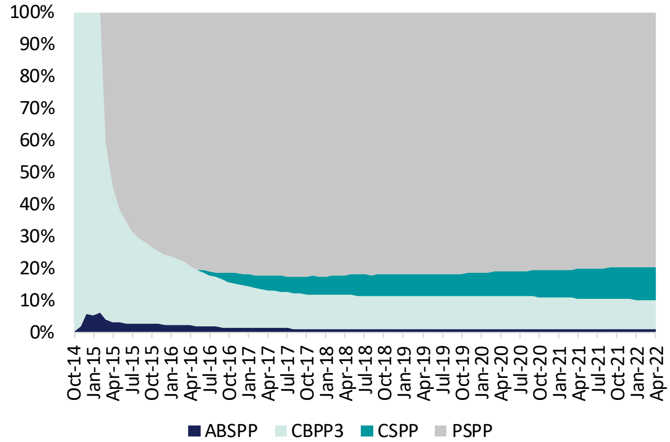
The fact that the NGEU programme amounting to over EUR 800bn will go down in the history books is indisputable. To put the size into perspective more clearly, it is greater than the size of the Marshall Plan of 1948 several times over. Similarly to the situation then – albeit admittedly a slightly lame comparison – the focus is on rebuilding the economy. While there might not be any cities in ruins in the Member States, the pandemic has of course left its mark on national economies in other respects. Logically, the EU is combining that which is needed (economic recovery) with that which will be beneficial (climate protection and digital transformation). Achievement of the goals enshrined in the Paris Agreement will be a challenge supranationally. The fact that the EU can direct investments to green and sustainable areas through the NGEU programme is all the more worthwhile. This is also accepted by Member States, which are even going beyond the prescribed investment targets in climate protection and digital transformation. However, we would have liked a larger amount of the recovery and resilience plan for Germany: our German readers probably know of enough situations and locations where expansion of the digital infrastructure is needed, for example. We doubt whether the planned expenditure will achieve an adequate and, above all, modernised infrastructure. Nevertheless, we would like to commend the EU's transparency with regard to the use of proceeds, in particular. As an issuer of bonds (both conventional and green), this is the correct approach to ensuring they remain attractive to investors on the capital market in future.

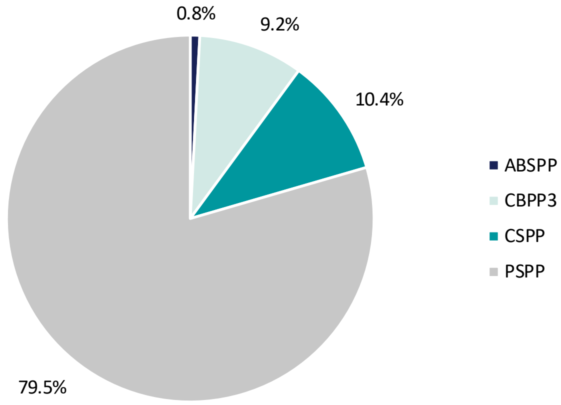
ECB tracker

Asset Purchase Programme (APP)

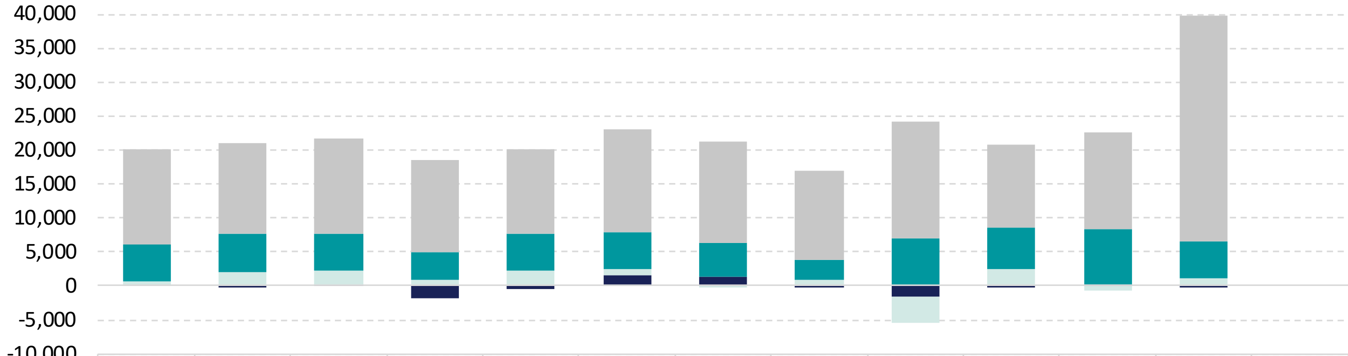
	ABSPP	CBPP3	CSPP	PSPP	APP
Apr-22	26,603	296,924	336,066	2,558,848	3,218,441
May-22	25,780	300,171	341,432	2,581,291	3,248,674
Δ	-823	+3,247	+5,366	+22,443	+30,233

Portfolio structure





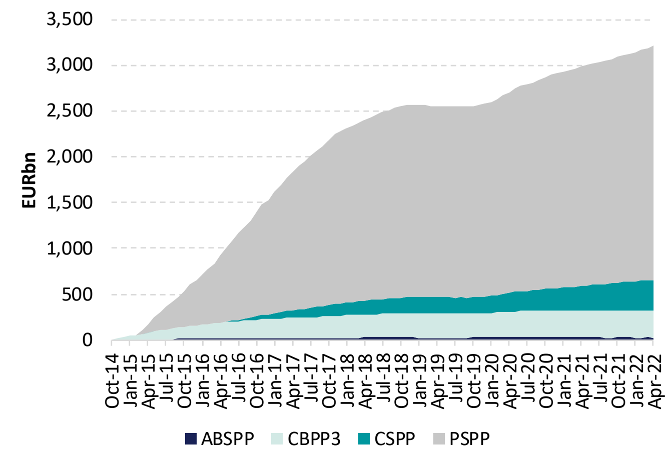
Monthly net purchases (in EURm)



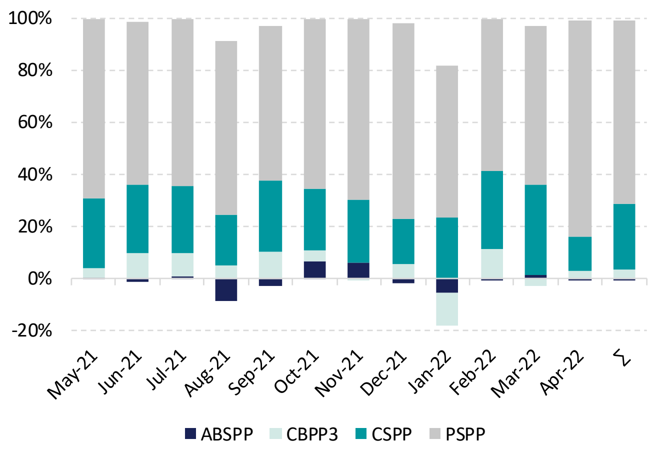
	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	∑
APP	20,141	20,640	21,597	16,749	19,659	23,017	21,200	16,596	18,838	20,698	21,929	39,484	260,548
PSPP	13,973	13,320	13,943	13,563	12,423	15,038	14,815	12,989	17,292	12,095	14,172	33,238	186,861
CSPP	5,394	5,602	5,502	3,936	5,590	5,481	5,142	3,007	6,970	6,272	8,042	5,461	66,399
CBPP3	686	2,037	2,011	999	2,184	1,008	-12	942	-3,761	2,376	-606	1,074	8,938
ABSPP	88	-319	141	-1,749	-538	1,490	1,255	-342	-1,663	-45	321	-289	-1,650

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

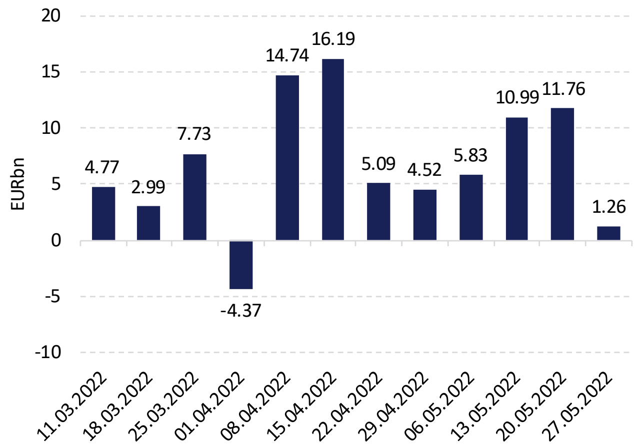
Portfolio development



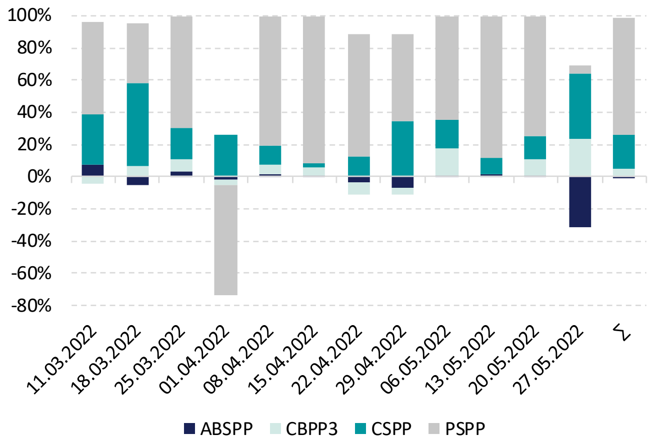
Distribution of monthly purchases



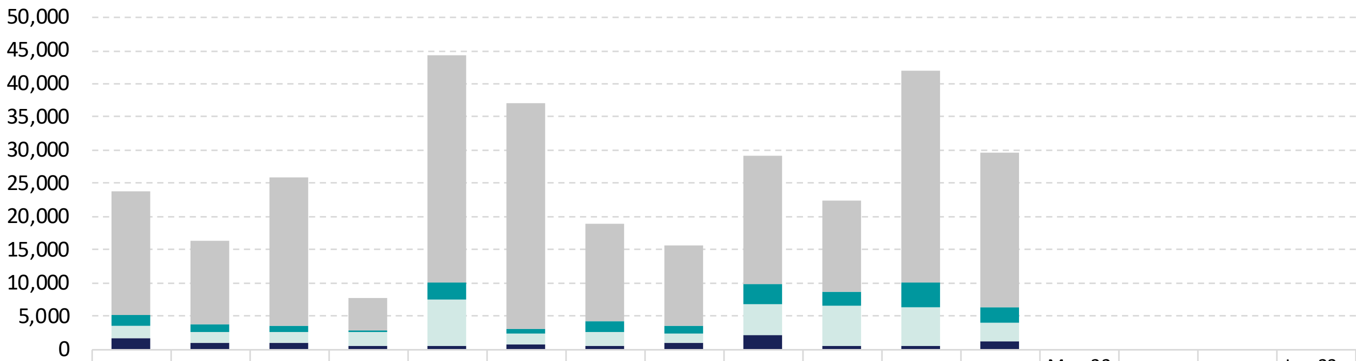
Weekly purchases



Distribution of weekly purchases



Expected monthly redemptions (in EURm)

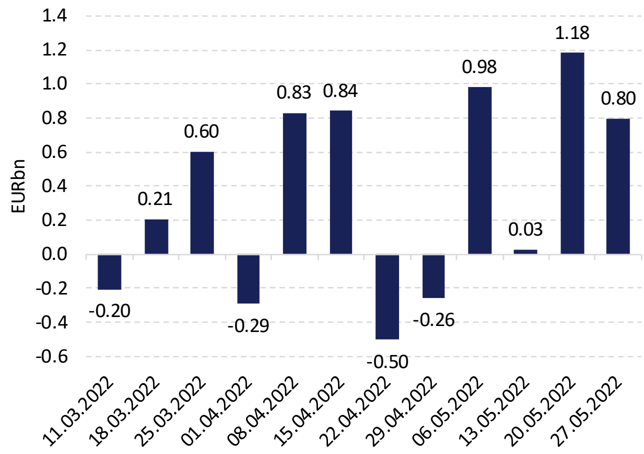


	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-22 - Apr-23	2021	2022	Jan-23 - Apr-23
APP	23,867	16,424	25,834	7,640	44,401	36,993	18,833	15,640	29,260	22,434	42,048	29,692	313,066	247,069	297,726	123,434
PSPP	18,778	12,638	22,304	4,841	34,354	34,003	14,669	12,016	19,469	13,705	32,033	23,376	242,186	188,494	228,491	88,583
CSPP	1,502	1,237	961	96	2,564	674	1,557	1,266	2,899	2,158	3,752	2,217	20,883	17,134	16,785	11,026
CBPP3	1,866	1,582	1,629	2,227	6,873	1,648	2,165	1,485	4,786	5,938	5,631	2,903	38,733	30,143	41,237	19,258
ABSPP	1,721	967	940	476	610	668	442	873	2,106	633	632	1,196	11,264	11,298	11,213	4,567

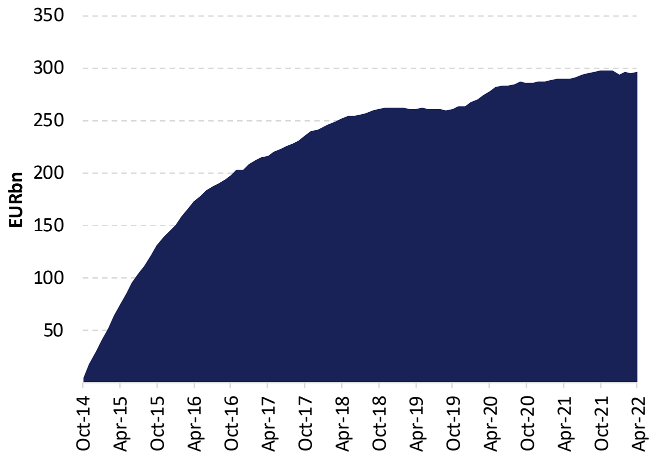
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

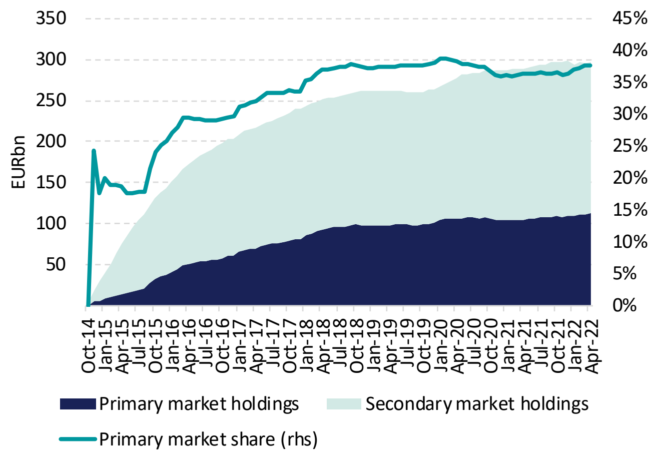
Weekly purchases



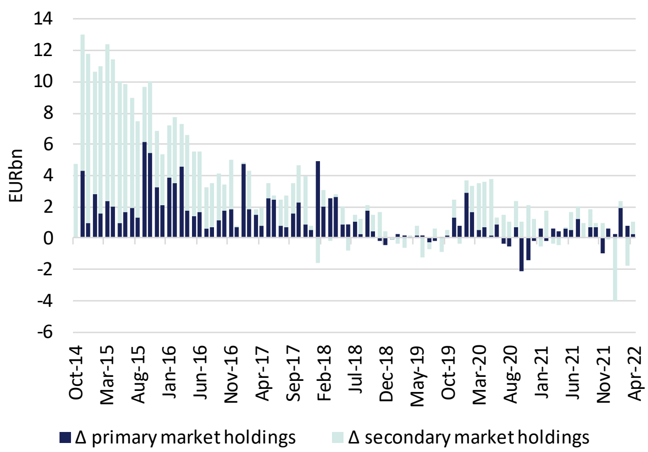
Development of CBPP3 volume



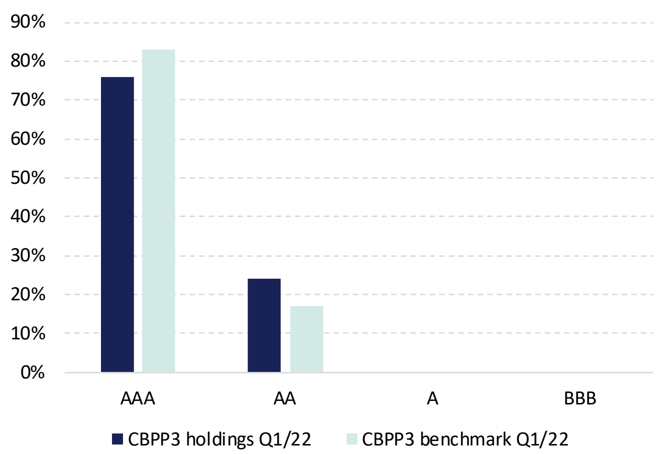
Primary and secondary market holdings



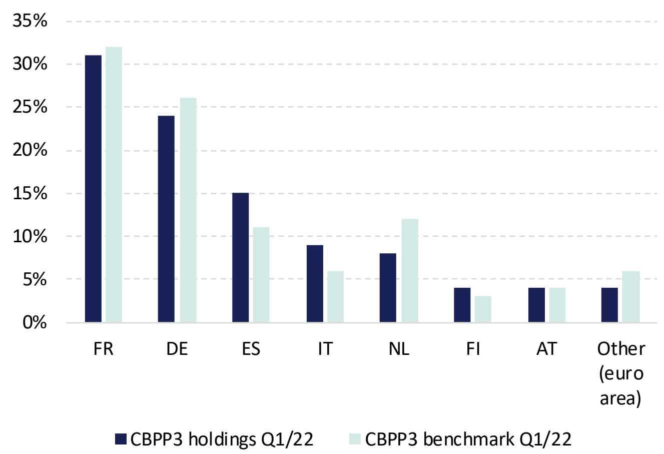
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating



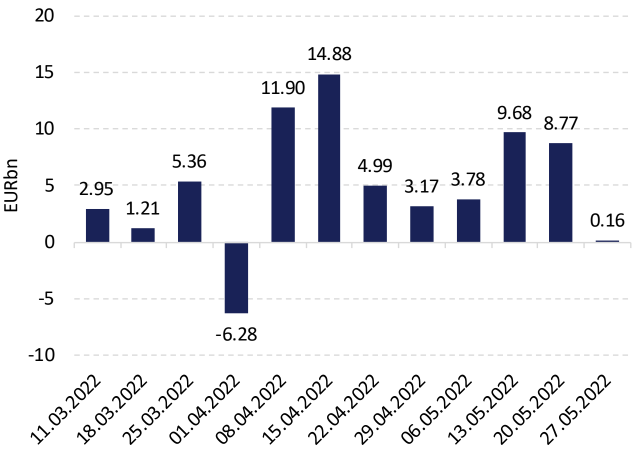
Distribution of CBPP3 by country of risk



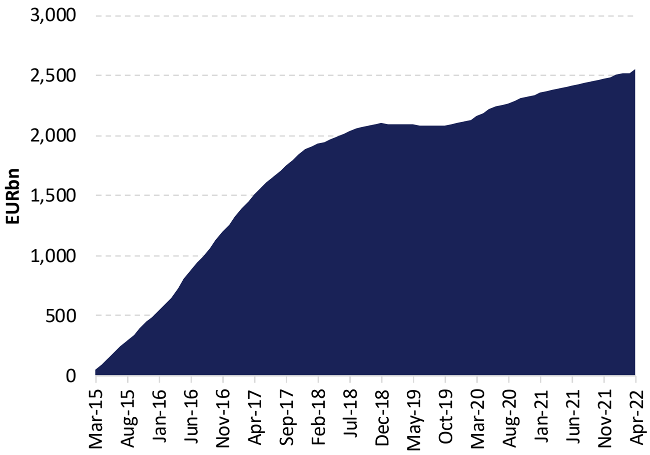
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



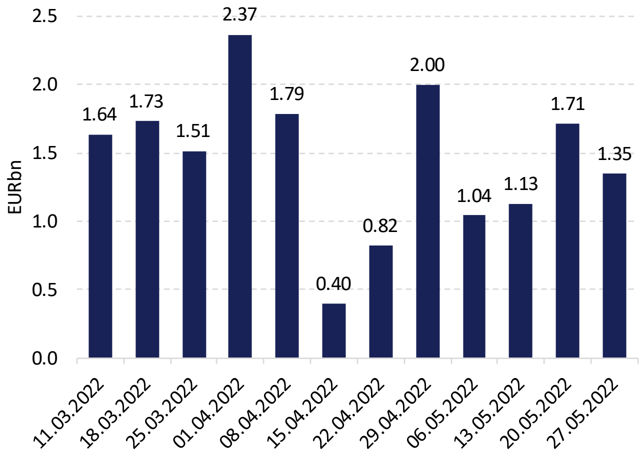
Overall distribution of PSPP buying at month-end

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%	76,789	73,747	3,042	7.3	8.1	-0.8
BE	3.4%	94,131	91,796	2,335	7.5	9.9	-2.4
CY	0.2%	4,199	5,422	-1,223	8.5	8.9	-0.5
DE	24.3%	666,481	664,213	2,268	6.7	8.0	-1.3
EE	0.3%	438	7,098	-6,660	8.1	8.1	0.0
ES	11.0%	312,269	300,456	11,813	8.0	8.2	-0.2
FI	1.7%	43,170	46,282	-3,112	7.9	8.9	-1.0
FR	18.8%	526,667	514,618	12,049	6.9	8.4	-1.5
GR	0.0%	0	0	0	0.0	0.0	0.0
IE	1.6%	41,978	42,667	-689	8.4	10.1	-1.7
IT	15.7%	447,877	428,048	19,829	7.2	7.8	-0.7
LT	0.5%	5,791	14,583	-8,792	10.6	10.4	0.1
LU	0.3%	3,719	8,300	-4,581	5.8	6.1	-0.3
LV	0.4%	3,751	9,818	-6,067	9.5	9.4	0.1
MT	0.1%	1,403	2,643	-1,240	11.1	9.8	1.3
NL	5.4%	131,267	147,661	-16,394	7.7	9.3	-1.6
PT	2.2%	54,508	58,972	-4,464	7.5	7.9	-0.4
SI	0.4%	10,694	12,132	-1,438	9.7	9.9	-0.2
SK	1.1%	18,022	28,856	-10,834	8.1	8.8	-0.7
SNAT	10.0%	287,194	273,035	14,159	8.2	9.4	-1.2
Total / Avg.	**100.0%**	**2,730,346**	**2,730,346**	**0**	**7.3**	**8.4**	**-1.1**

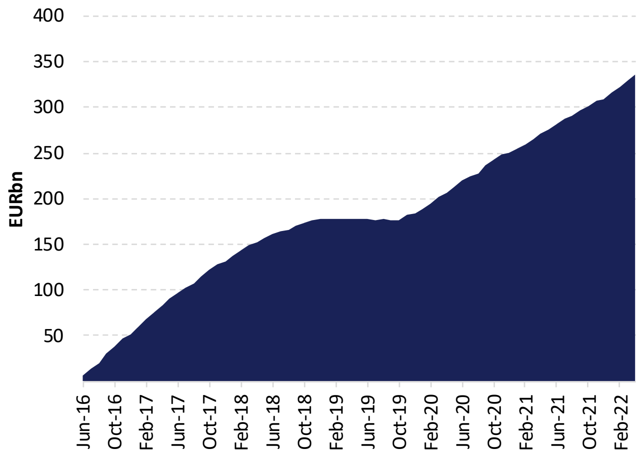
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of PSPP portfolio holdings
[4] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP
Source: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

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

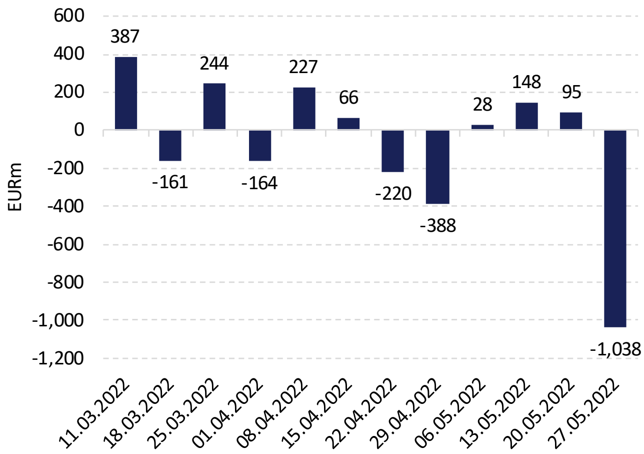


Development of CSPP volume

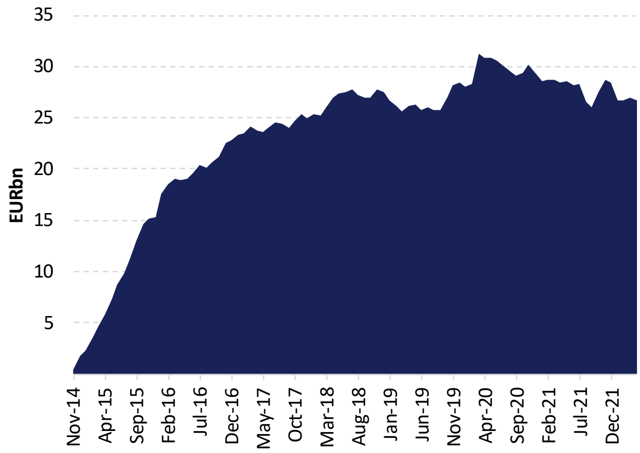


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



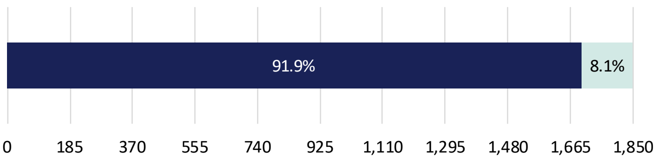
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

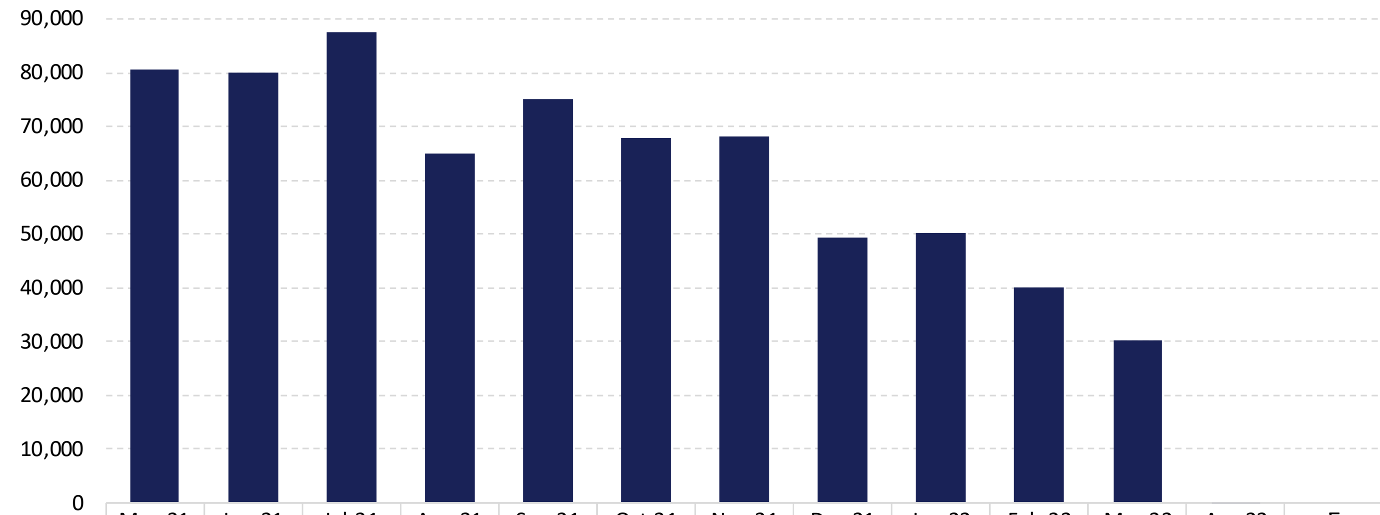
Holdings (in EURm)

	PEPP
Apr-22	1,718,071
May-22	1,718,061
Δ (net purchases)	-10

Invested share of PEPP envelope (in EURbn)

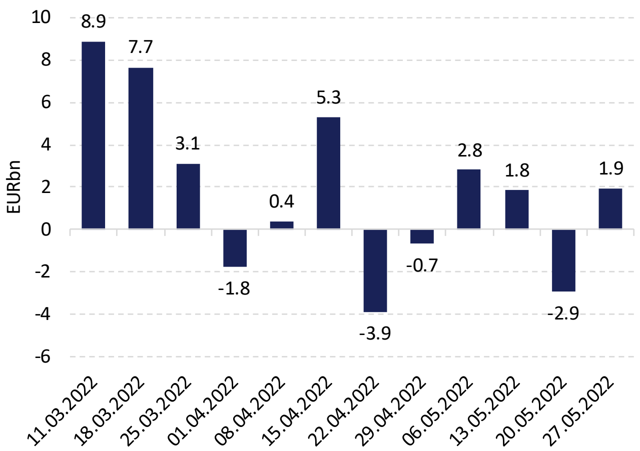


Monthly net purchases (in EURm)

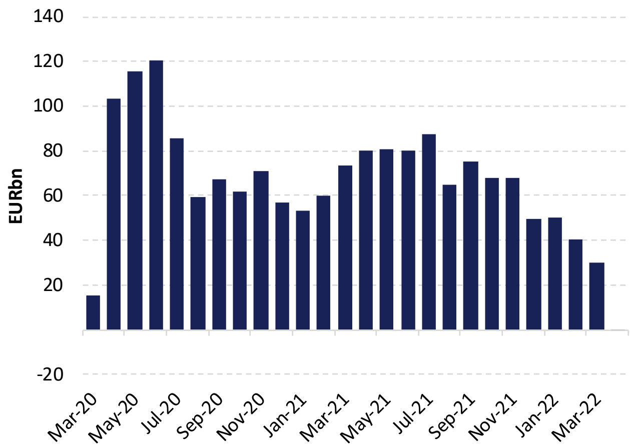


	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	∑
PEPP	80,700	80,168	87,557	65,050	75,051	67,855	68,045	49,375	50,113	40,184	30,214	-4	694,308

Weekly purchases



Development of PEPP volume



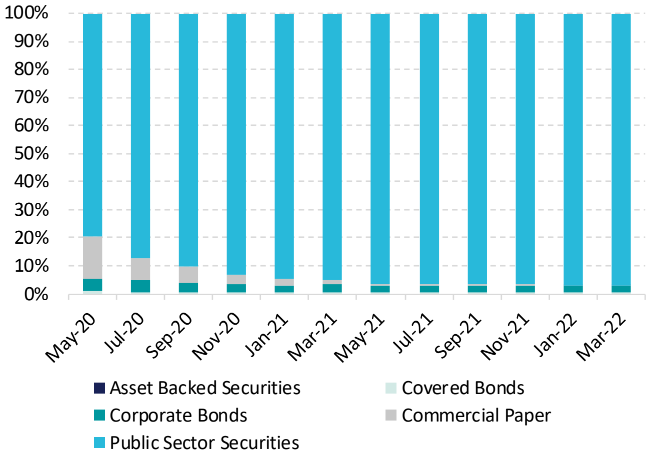
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

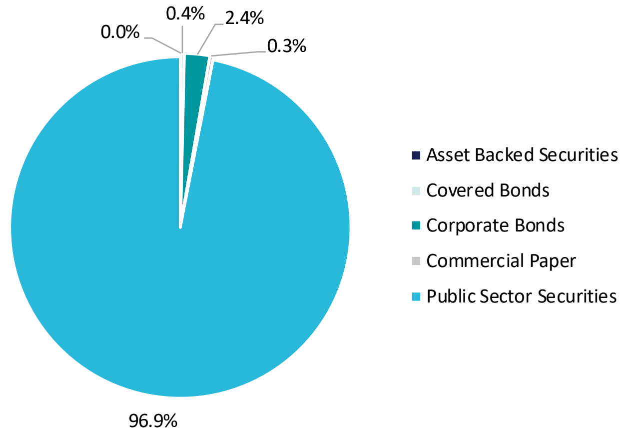
NORD/LB

Holdings under the PEPP (in EURm)

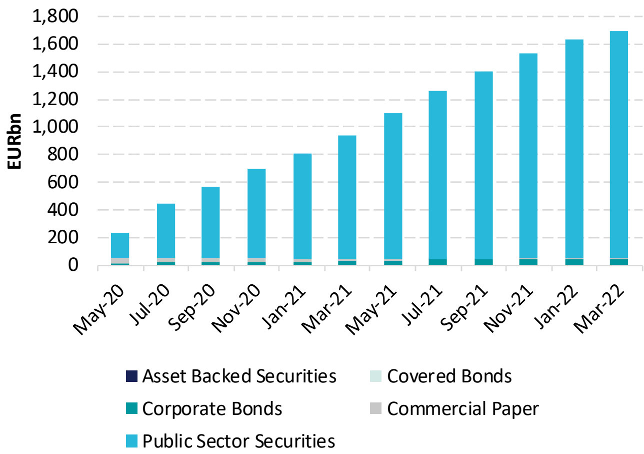
	Asset-backed Securities	Covered Bonds	Corporate Bonds	Commercial Paper	Public Sector Securities	PEPP
Mar-22	0	6,067	40,313	5,862	1,644,247	1,696,489
May-22	0	6,067	41,825	4,352	1,644,230	1,696,474
Δ (net purchases)	0	0	+1,512	-1,510	-17	-14

Portfolio structure

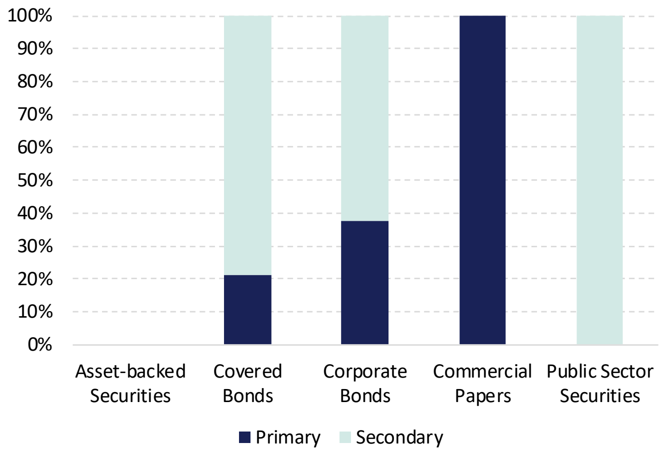




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

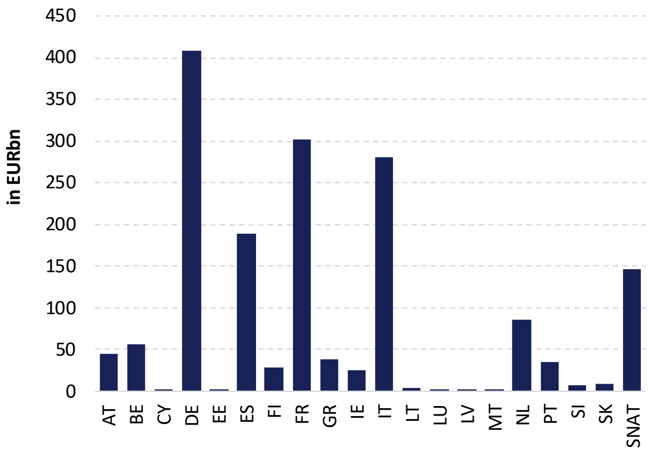
May-22	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,298	4,769	15,332	26,493	4,353	0
Share	0.0%	0.0%	21.4%	78.6%	36.7%	63.3%	100.0%	0.0%

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

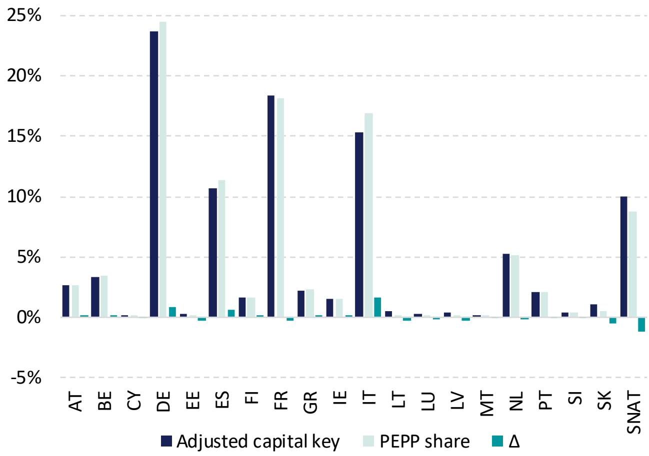
Breakdown of public sector securities under the PEPP

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

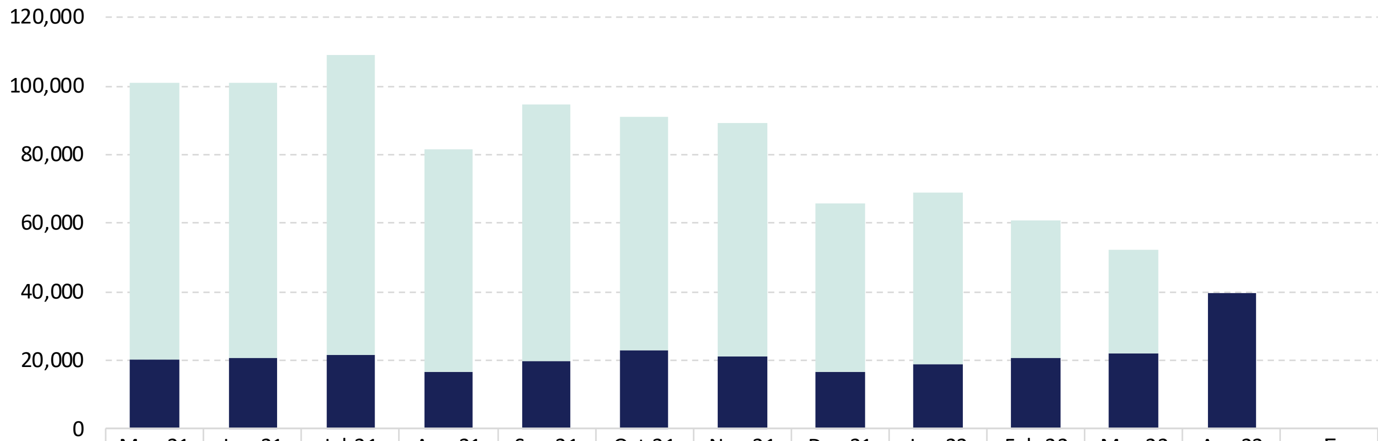
NORD/LB

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

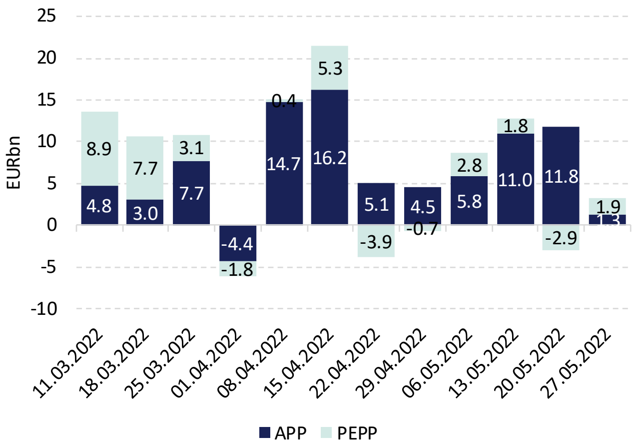
	APP	PEPP	APP & PEPP
Apr-22	3,218,441	1,718,071	4,936,512
May-22	3,248,674	1,718,061	4,966,735
Δ	+30,233	-10	+30,223

Monthly net purchases (in EURm)

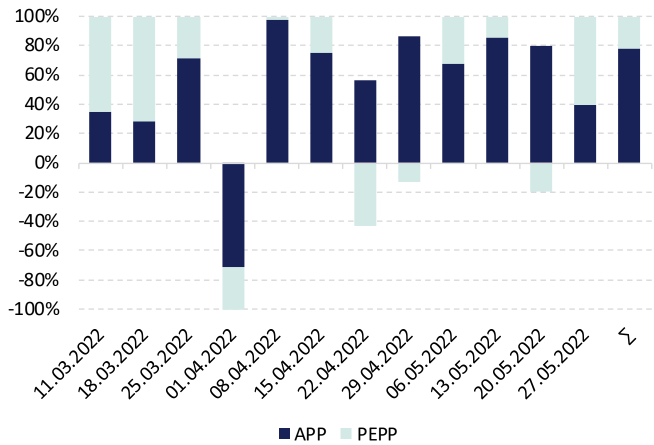


	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	∑
∑	100,841	100,808	109,154	81,799	94,710	90,872	89,245	65,971	68,951	60,882	52,143	39,480	954,856
PEPP	80,700	80,168	87,557	65,050	75,051	67,855	68,045	49,375	50,113	40,184	30,214	-4	694,308
APP	20,141	20,640	21,597	16,749	19,659	23,017	21,200	16,596	18,838	20,698	21,929	39,484	260,548

Weekly purchases



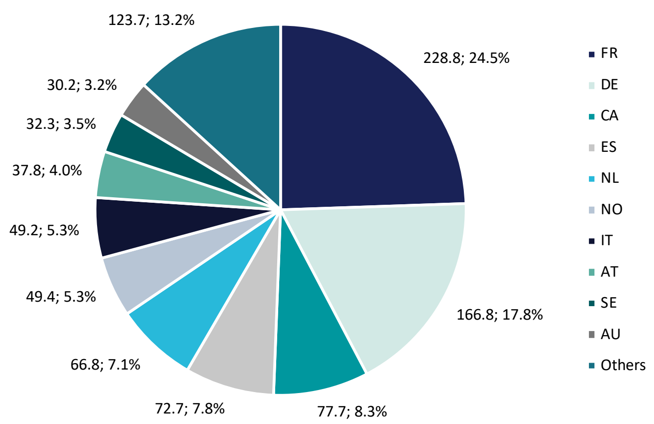
Distribution of weekly purchases



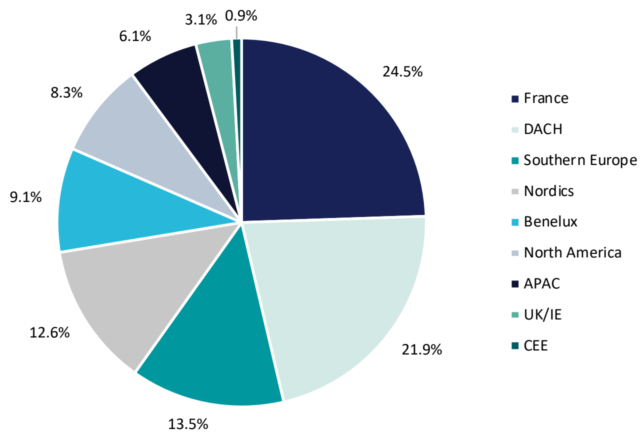
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



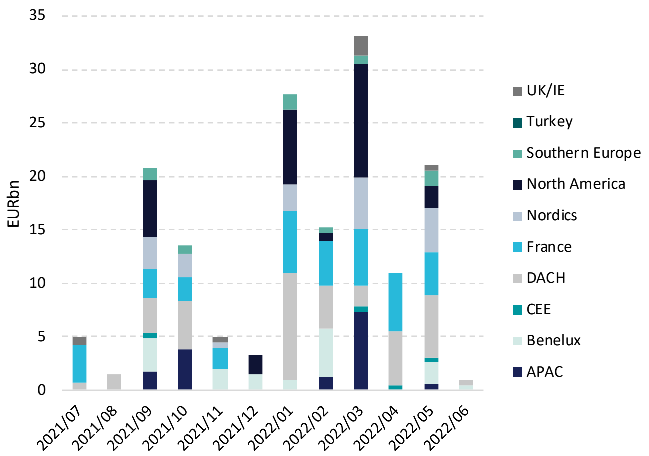
EUR benchmark volume by region (in EURbn)



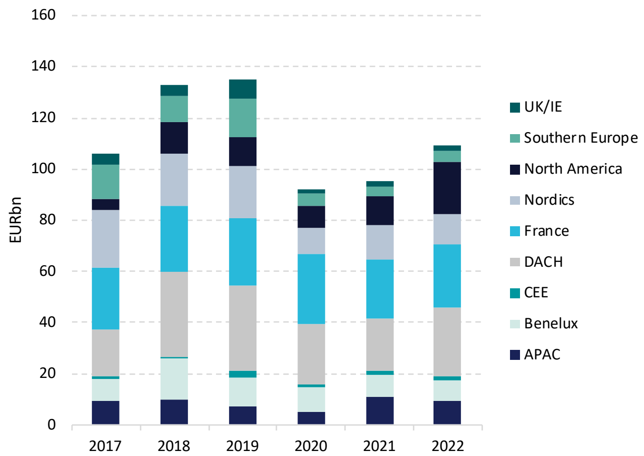
Top-10 jurisdictions

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	219	14	0.95	10.0	5.5	0.83
2	DE	166.8	242	19	0.63	8.4	4.5	0.45
3	CA	77.7	61	0	1.23	5.9	3.2	0.29
4	ES	72.7	59	5	1.12	11.7	3.7	1.73
5	NL	66.8	68	1	0.92	11.5	7.5	0.77
6	NO	49.4	58	9	0.85	7.5	4.0	0.40
7	IT	49.2	59	2	0.80	9.2	4.2	1.25
8	AT	37.8	69	3	0.54	9.5	6.0	0.60
9	SE	32.3	38	0	0.85	7.5	3.4	0.51
10	AU	30.2	31	0	0.97	8.2	3.9	0.88

EUR benchmark issue volume by month

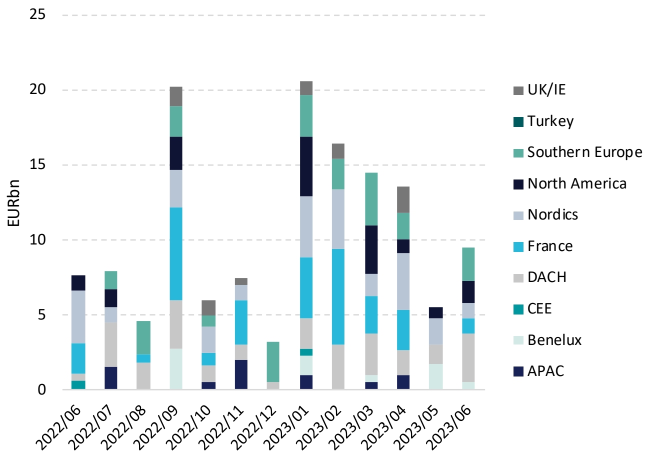


EUR benchmark issue volume by year

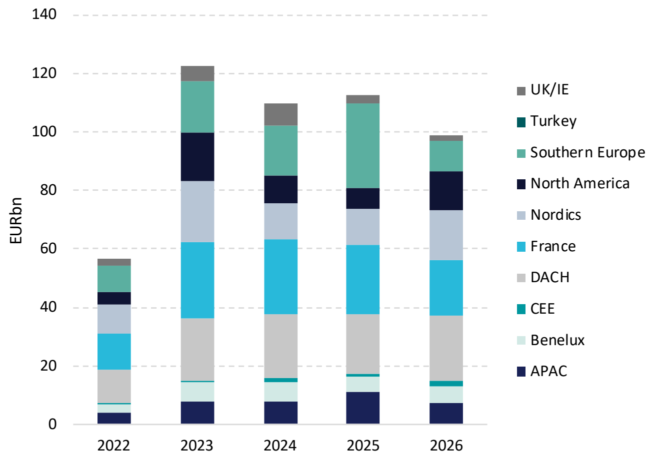


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

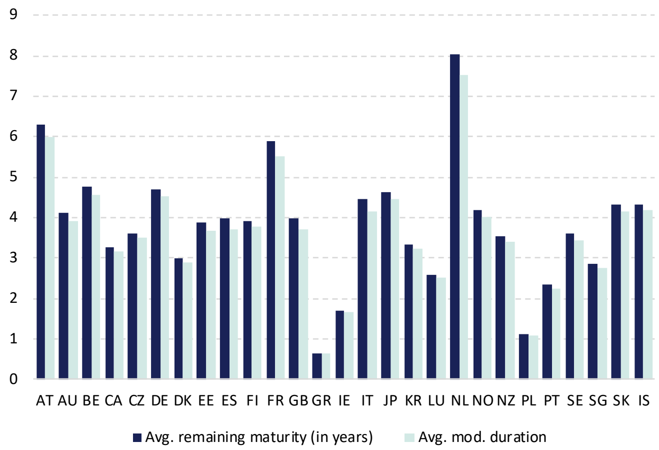
EUR benchmark maturities by month



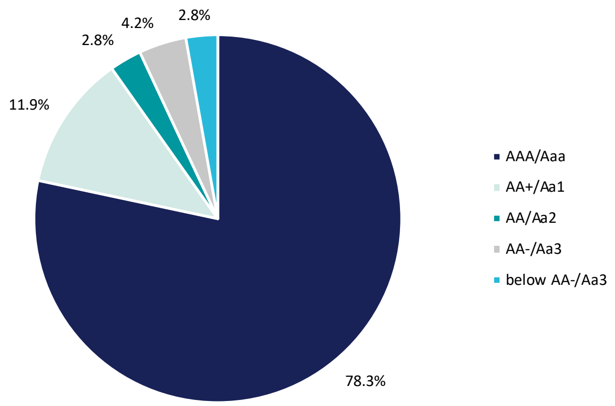
EUR benchmark maturities by year



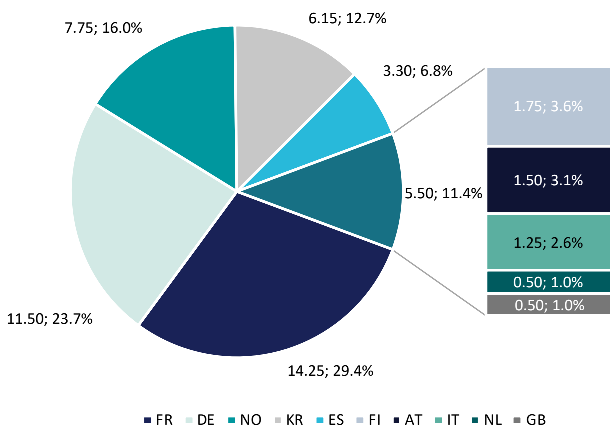
Modified duration and time to maturity by country



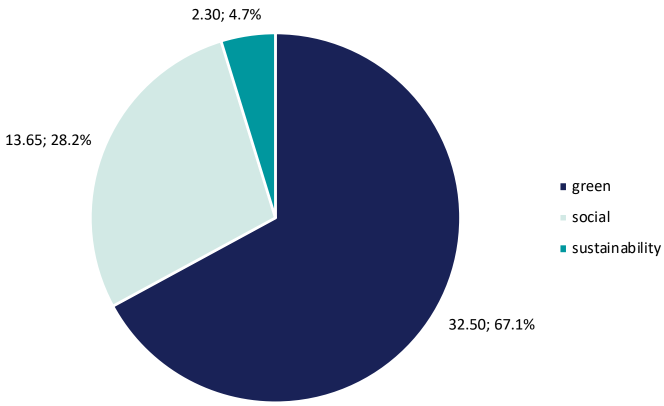
Rating distribution (volume weighted)



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

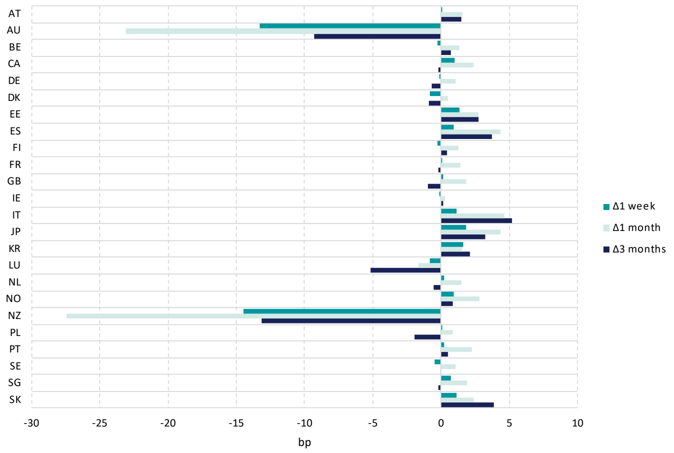


EUR benchmark volume (ESG) by type (in EURbn)

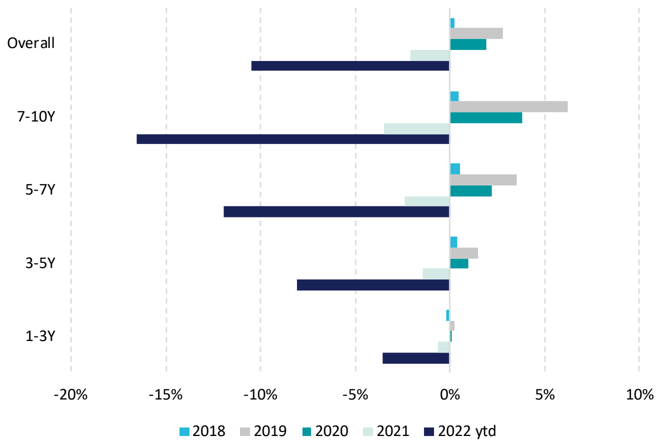


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

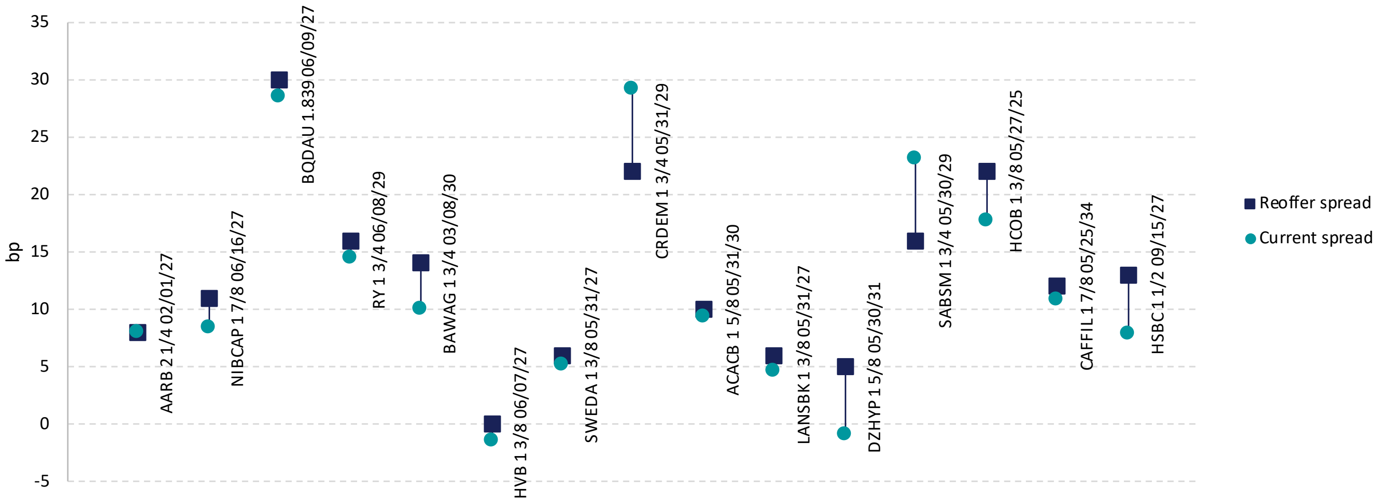
Spread development by country



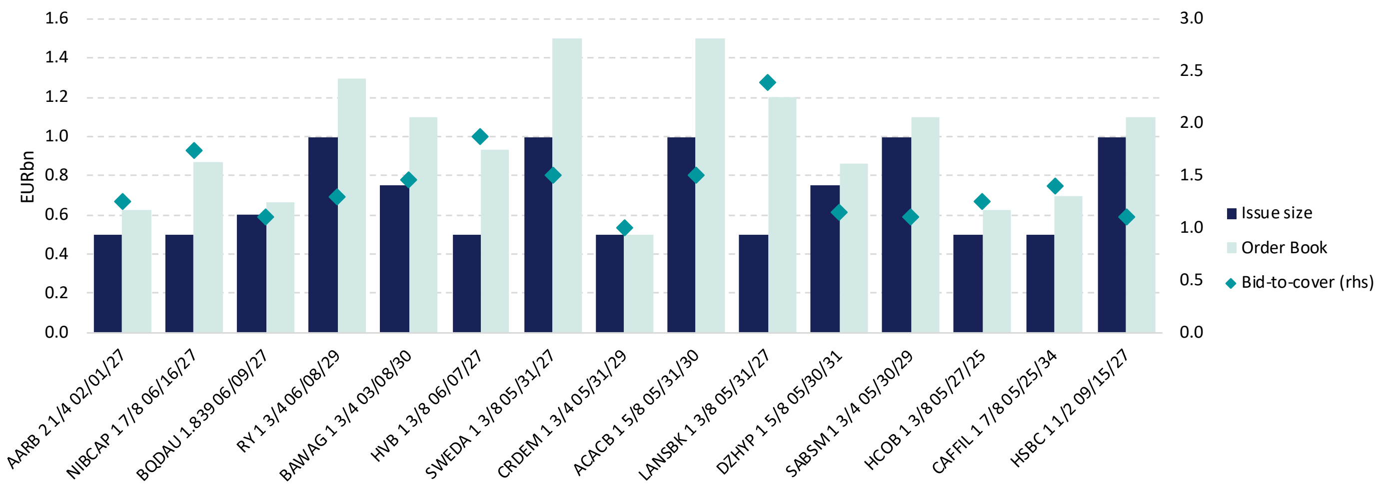
Covered bond performance (Total return)



Spread development (last 15 issues)



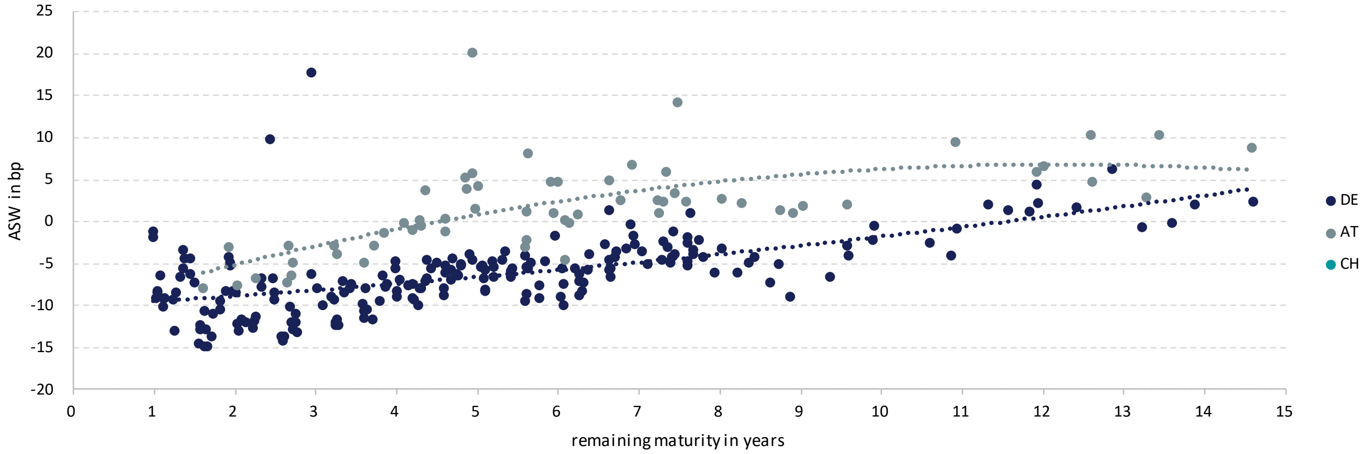
Order books (last 15 issues)



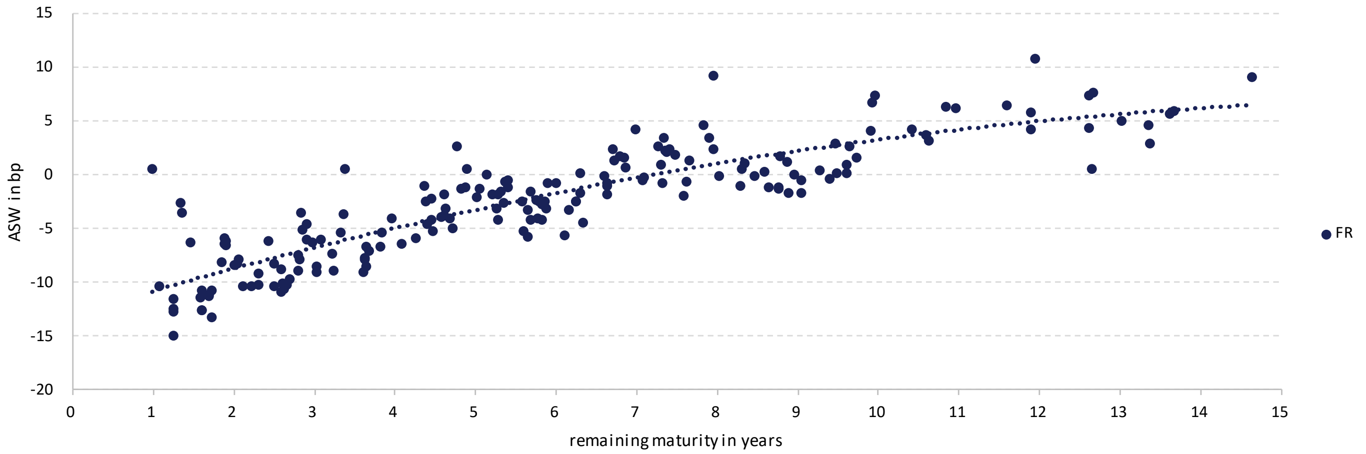
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread overview[1]

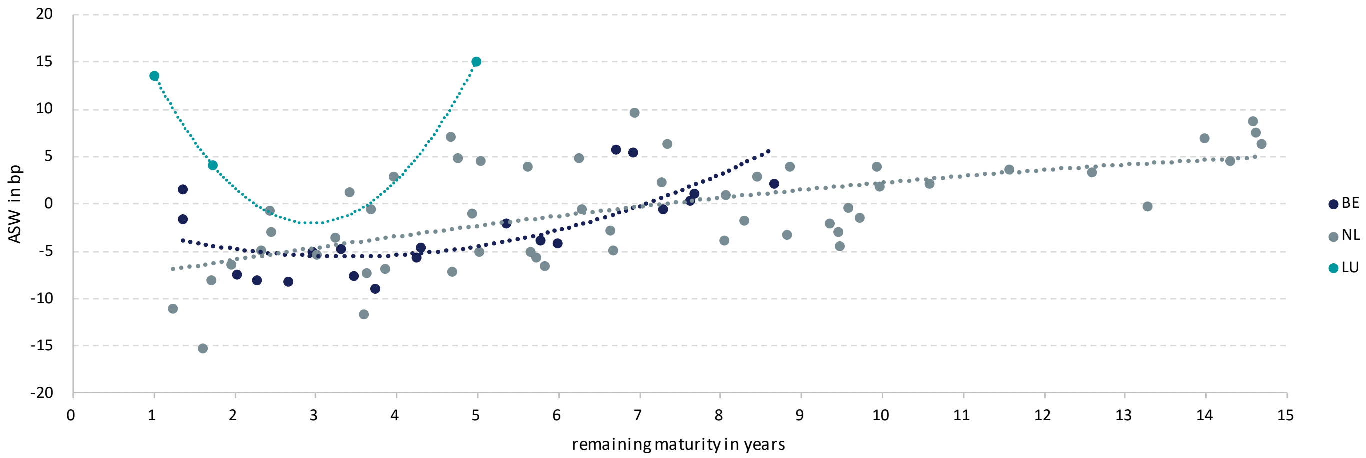
DACH



France

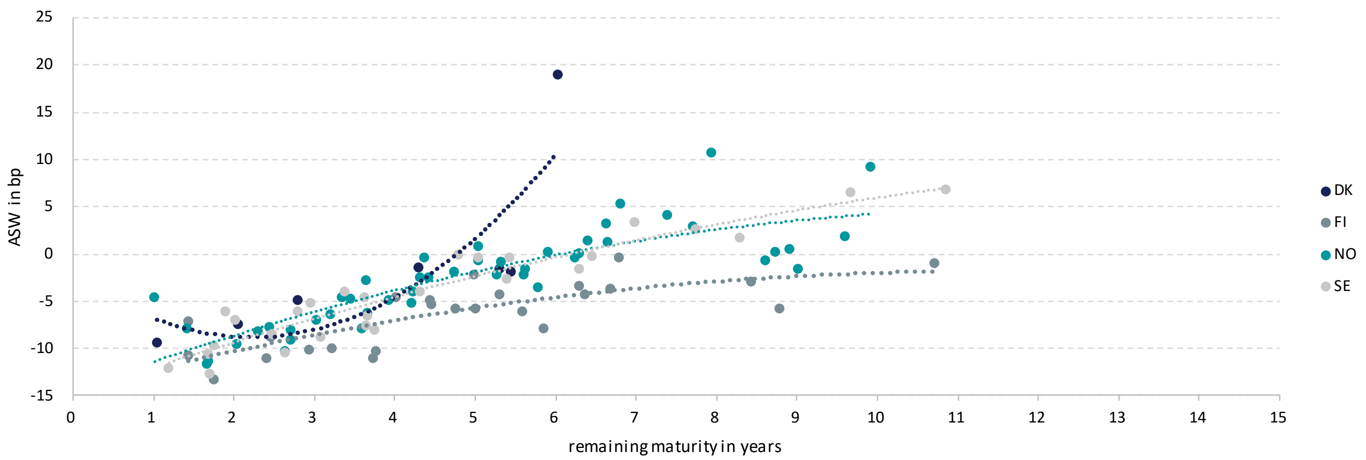


Benelux

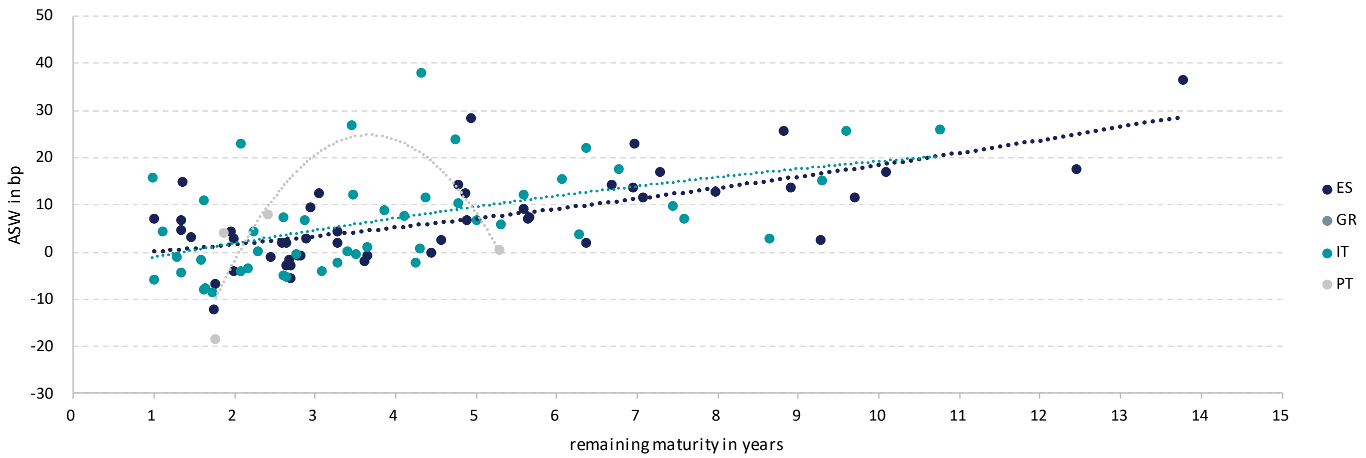


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

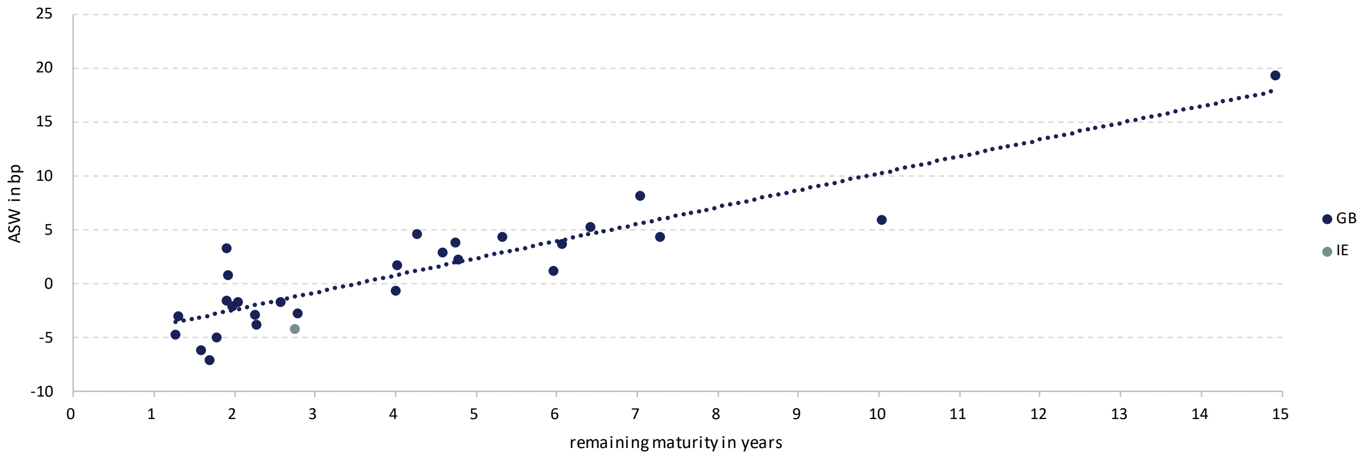
Nordics



Southern Europe

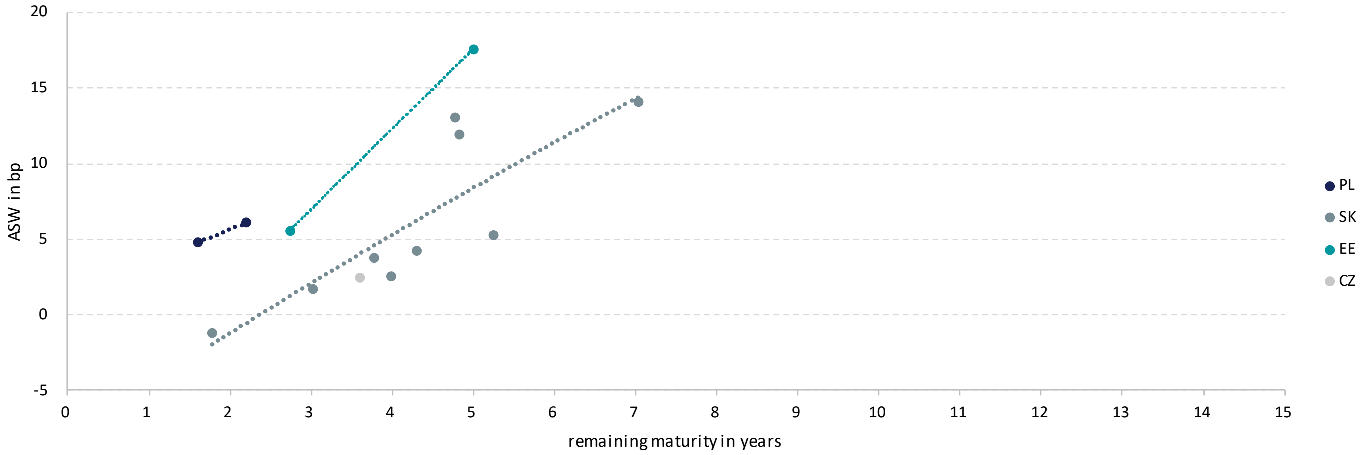


UK/IE

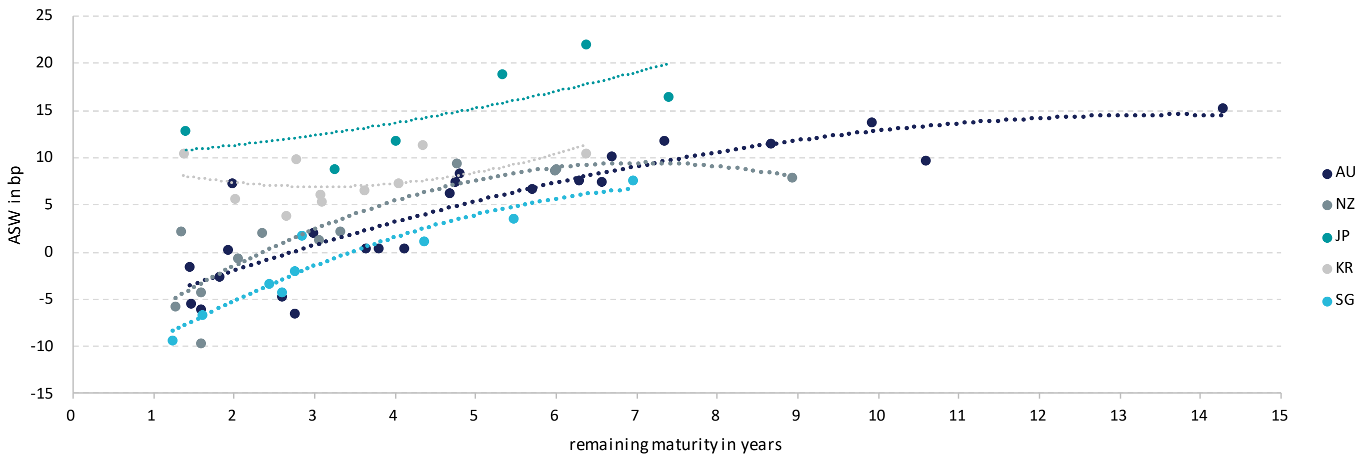


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

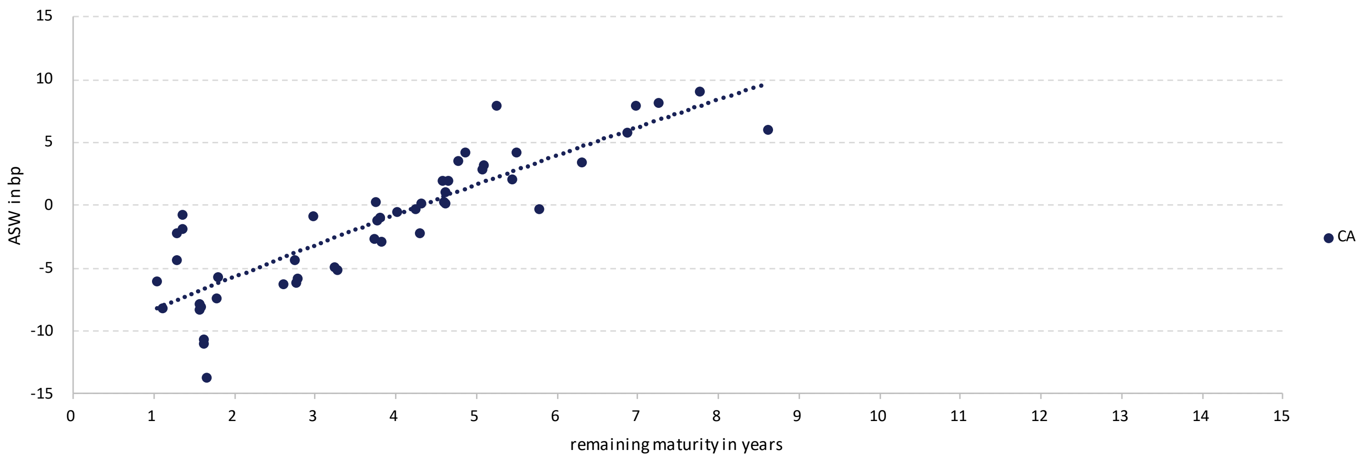
CEE



APAC



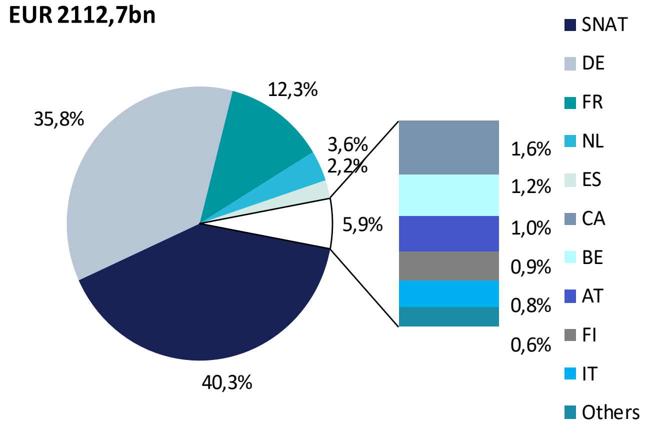
North America



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

Charts & Figures
SSA/Public Issuers

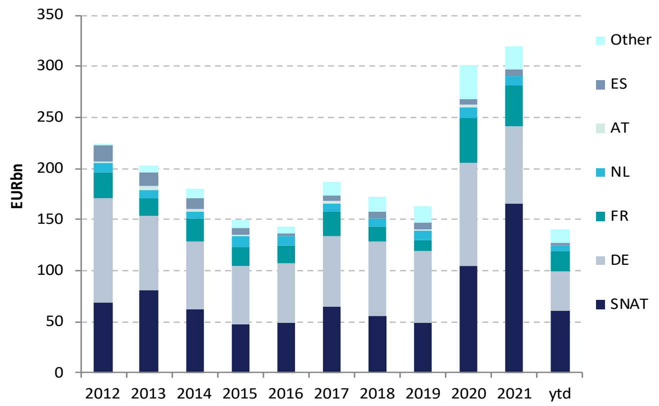
Outstanding volume (bmk)



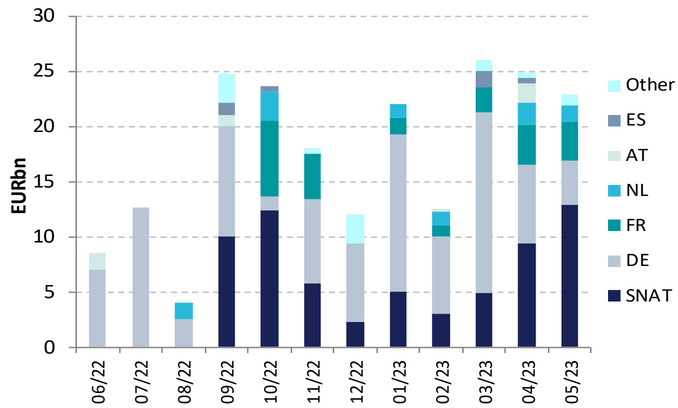
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	850,5	208	4,1	8,3
DE	756,3	569	1,3	6,4
FR	259,3	175	1,5	6,5
NL	76,0	68	1,1	6,6
ES	45,8	59	0,8	5,0
CA	33,2	22	1,5	5,0
BE	24,5	28	0,9	12,5
AT	21,2	23	0,9	4,4
FI	18,0	22	0,8	5,7
IT	16,0	19	0,8	5,3

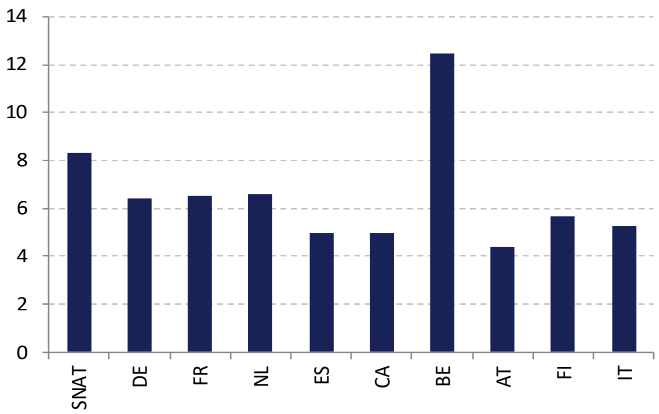
Issue volume by year (bmk)



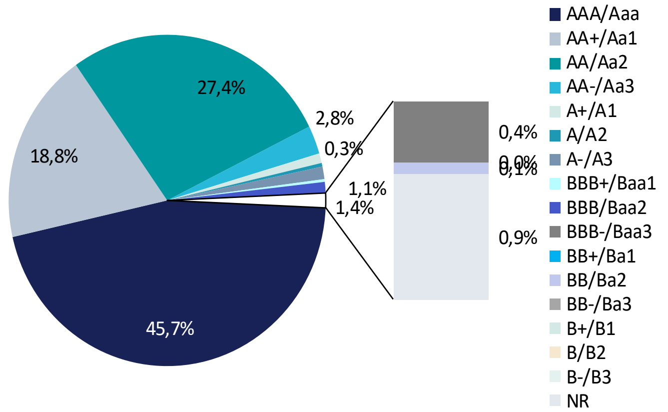
Maturities next 12 months (bmk)



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

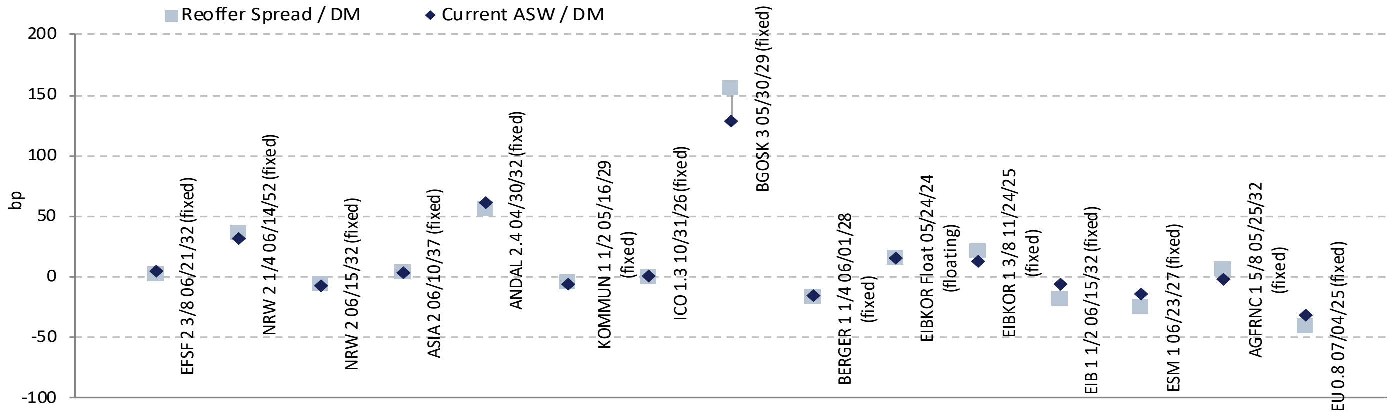


Rating distribution (vol. weighted)

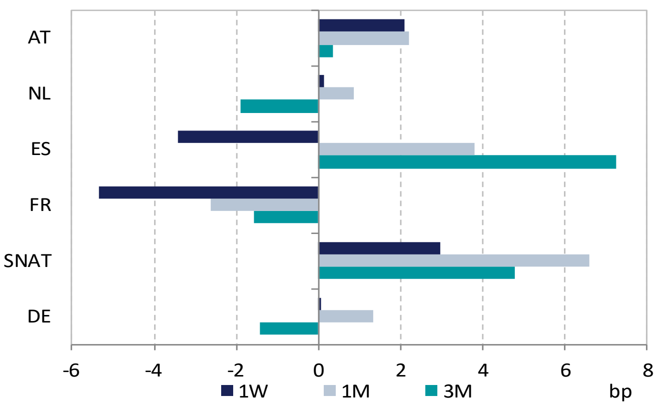


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

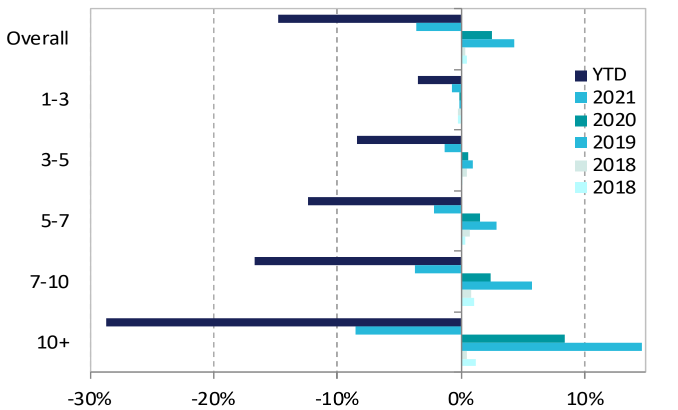
Spread development (last 15 issues)



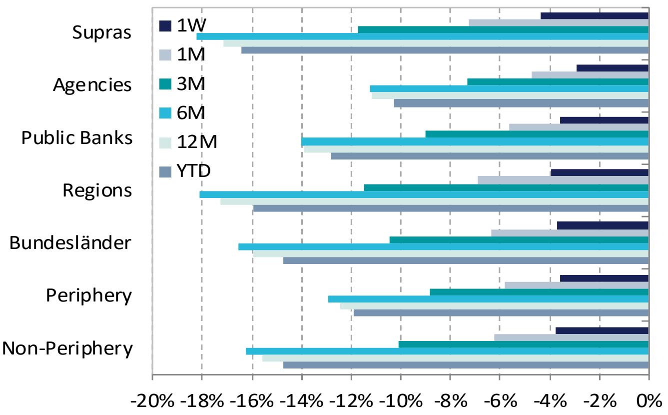
Spread development by country



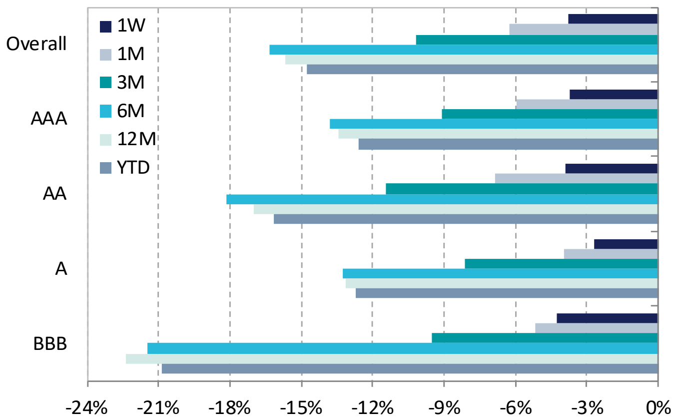
Performance (total return)



Performance (total return) by segments

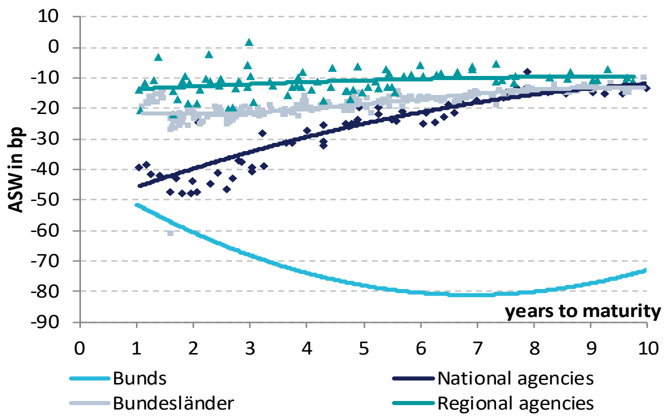


Performance (total return) by rating

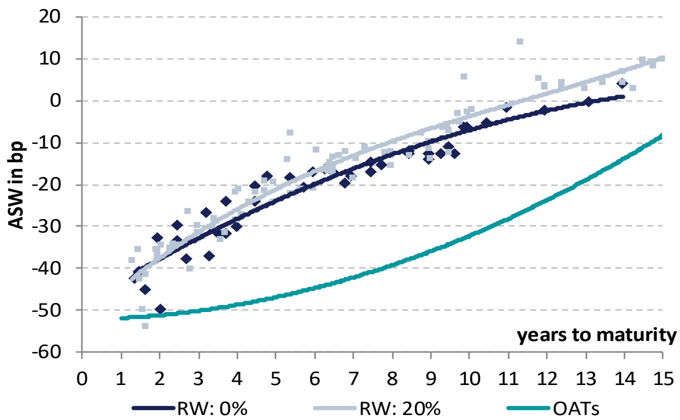


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

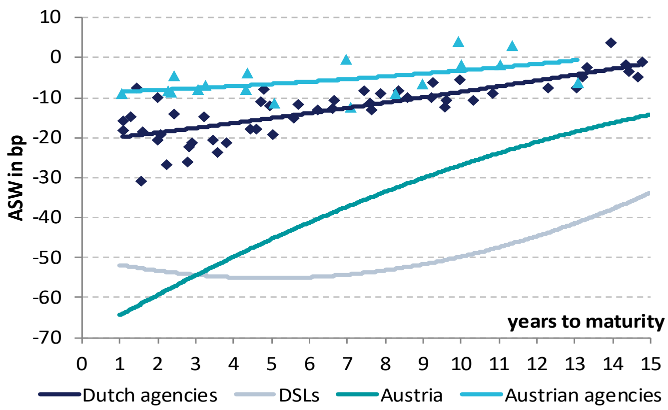
Germany (by segments)



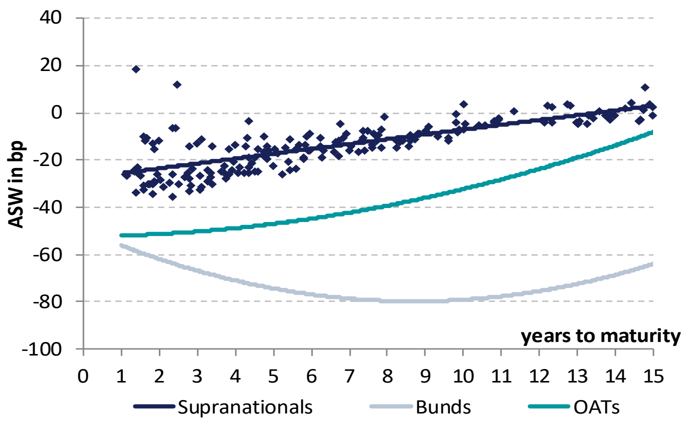
France (by risk weight)



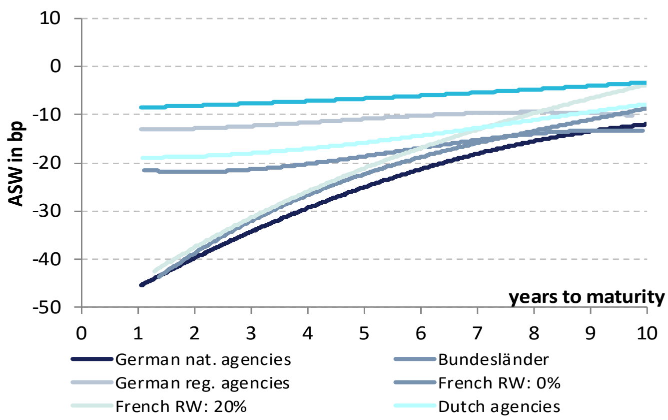
Netherlands & Austria



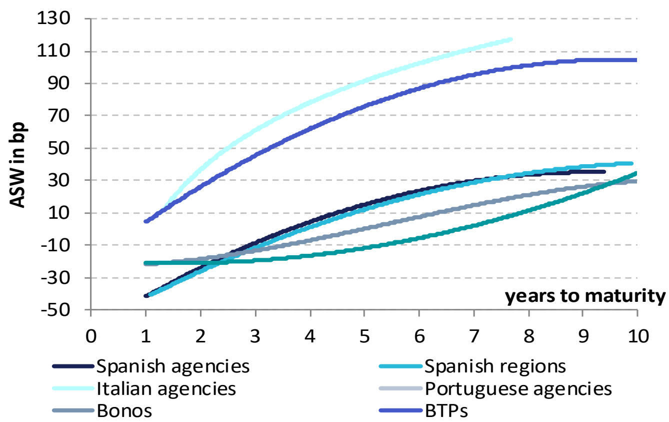
Supranationals



Core



Periphery



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

NORD/LB

Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
19/2022 ♦ 01 June	▪ ECB: 3, 2, 1 – lift-off! Decisive June, active summer ahead ▪ The covered bond universe of Moody's: an overview ▪ 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 ▪ ESG: EUR-benchmarks 2022 in the SSA segment (ytd)
17/2022 ♦ 18 May	▪ Development of the German property market ▪ 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 ▪ Update on DEUSTD – Joint German cities (bond No. 1)
15/2022 ♦ 04 May	▪ Focus on covered bond jurisdictions: Spotlight on Sweden ▪ ESG covered bonds from Germany: DKB issues social Pfandbrief in the form of a "Berlin Social Housing Bond" ▪ Issuer Guide SSA 2022: The Spanish agency market
14/2022 ♦ 13 April	▪ First ECB meeting after the end of the PEPP: (Not) a non-event!? ▪ PEPP reporting: (Not) an obituary
13/2022 ♦ 06 April	▪ ECB adjusts order behaviour in time for the new quarter ▪ United Kingdom: spotlight on the EUR benchmark segment ▪ Issuer Guide SSA 2022: the Nordic agency market
12/2022 ♦ 30 March	▪ An overview of the market for ESG covered bonds ▪ Issuer Guide SSA 2022: the Austrian agency market
11/2022 ♦ 23 March	▪ ESG update 2022 in the spotlight ▪ The ratings approach of DBRS
10/2022 ♦ 16 March	▪ What does the recent ECB meeting mean for covered bonds? ▪ Credit authorisations of the German Laender for 2022
09/2022 ♦ 09 March	▪ Transparency requirements § 28 PfandBG Q4/2021 ▪ Issuer Guide SSA 2022: The Dutch agency market
08/2022 ♦ 02 March	▪ ECB: Not everyone can get their act together at a turning point ▪ Welcome expansion of the covered bond ESG universe: Banco BPM green covered bond ▪ War in Ukraine and sanctions on Russia: spotlight on the European banking landscape
07/2022 ♦ 23 February	▪ ECB banking regulator also views the residential real estate market as a potential risk driver for banks ▪ Development of the German property market ▪ Beyond Bundeslaender: Paris metropolitan area (IDF and VDP)
06/2022 ♦ 16 February	▪ PEPP reporting: Finish line in sight, but no photo finish expected ▪ DZ HYP issues inaugural green Pfandbrief: ESG market in Germany continues its growth trajectory
05/2022 ♦ 09 February	▪ ECB: full speed, throttling, U-turn – or wrong turn? ▪ Insurance companies as covered bond investors: the bank-insurer nexus

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

Issuer Guide – Canadian Provinces & Territories 2020

Issuer Guide – Supranationals & Agencies 2019 (update planned for 2022)

Issuer Guide – Down Under 2019

Fixed Income Specials:

ESG-Update 2022

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

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

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

ECB launches PEPP (Pandemic Emergency Purchase Programme)

NORD/LB

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 +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, 15 June 2022 (08:54h)