Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

18 January 2023 ♦ 02/2023

Marketing communication (see disclaimer on the last pages)

Agenda

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Market overview Covered Bonds

Author: Stefan Rahaus

Primary market: 10 new EUR benchmarks at a total volume of EUR 7.75bn

As expected, the primary market for the covered bond EUR benchmark segment remains highly dynamic. Since the previous edition of our weekly publication last Wednesday, a total of EUR 7.75bn was placed among investors, spread across 10 separate transactions. From Germany, NORD/LB (NDB (Issuer View); 7.2y; bid-to-cover ratio: 1.3x), Deutsche Pfandbriefbank (PBBGR; 6y; bid-to-cover ratio: 0.9x), LBBW (3.2y; bid-to-cover ratio: 3.4x), and Bausparkasse Schwäbisch Hall (BAUSCH, 9.4y; bid-to-cover ratio: 1.16x) were all active on the primary market. Austrian issuers that approached investors included Raiffeisen-Landesbank Steiermark (RFLBST; 4y; bid-to-cover ratio: 1.8x), UniCredit Bank Austria (BACA; 3.5y; bid-to-cover ratio: 1.6x) and Raiffeisen-Landesbank Tirol (RFLBTI; 5y; bid-to-cover ratio: 1.4x). A second Spanish issuer has also already been active on the market this year in the form of Banco Bilbao Vizcaya Argentaria (BBVASM; 4.5y; bid-to-cover ratio: 1.9x), while the jurisdiction of the Netherlands was represented by Rabobank (RABOBK; 10y; bid-to-cover ratio: 1.2x) and NIBC Bank (NIBCAP; 7y; bid-to-cover ratio: 1.5x) for the first time in 2023. Overall, the market remains receptive to new deals, with maturities up to 10 years possible. However, no issuer has yet tested the waters beyond this point. It remains striking that investor interest continues to be firmly fixed on shorter maturities. This can be seen from higher oversubscription ratios, lower new issue premiums and a significantly tighter final spread in comparison with the initial guidance for deals with terms to maturity under five years, although from what we have seen investors seemingly have a preference for even shorter deals in the two-to-three-year maturity segment. In our opinion, longer maturities will also have to show a higher spread premium to the secondary market curve in the future in order to ensure a seamless issuance process. This also applies to German Pfandbriefe, even if these have clearly outperformed deals from comparable jurisdictions. In addition to the investor structure (association, home bias), the fact that the average issue volume on the part of German issuers up to now has been comparatively small and that the only covered bonds with ESG character this year have come from Germany is having a supportive effect.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
NIBC Bank	NL	17.01.	XS2579199865	7.0y	0.50bn	ms +28bp	- / - / AAA	-
Raiffeisen-LB Tirol	AT	17.01.	AT0000A32661	5.0y	0.50bn	ms +29bp	- / Aaa / -	-
Bauspk. Schwaeb. Hall	DE	17.01.	DE000A30V8H6	9.4y	0.50bn	ms +17bp	- / Aaa / -	-
LBBW	DE	16.01.	DE000LB384E5	3.2y	1.00bn	ms -5bp	- / Aaa / -	-
Rabobank	NL	12.01.	XS2577836187	10.0y	1.25bn	ms +19bp	- / Aaa / -	-
UniCredit Bank Austria	AT	12.01.	AT000B049937	3.5y	1.00bn	ms +17bp	- / Aaa / -	-
Dt. Pfandbriefbank	DE	12.01.	DE000A30WF68	6.0y	0.50bn	ms +16bp	- / Aa1 / -	-
Banco Bilbao Vizcaya	ES	11.01.	ES0413211A75	4.5y	1.50bn	ms +27bp	- / Aa1 / -	-
Raiff.-LB Steiermark	AT	11.01.	AT000B093901	4.0y	0.50bn	ms +24bp	- / Aaa / -	-
Nord/LB	DE	11.01.	DE000NLB34Y2	7.2y	0.50bn	ms +15bp	- / Aa1 / -	-

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

Primary market: EUR sub-benchmark segment brought to life

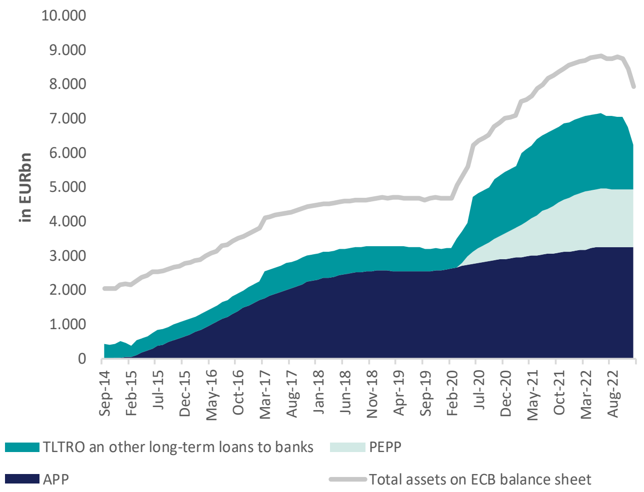
Last year, we repeatedly mentioned the importance of the EUR sub-benchmark covered bond segment (2022: 29 transactions with a total volume of EUR 7.95bn). With the last deal in the sub-benchmark segment dating back to the start of November 2022, Raiffeisen Landesbank Vorarlberg (RFVORA) brought this sub-market to life last Monday. It opted to place a bond in the amount of EUR 300m for four years at ms +23bpp (guidance: ms +26bp; bid-to-cover ratio: 2.4x). The appeal of the ultra-short end of just two years was underlined yesterday by DekaBank (DEKA), which issued a public-sector Pfandbrief. An order book of EUR 1.9bn was generated for the issue, which was fixed in advance at a volume of EUR 250m, resulting in a bid-to-cover ratio of a noteworthy 7.6x. Accordingly, the final issue spread narrowed from an initial guidance of ms -5bp area to ms -11bp. We expect the EUR sub-benchmark segment to play a significant role again this year and regard the market as being receptive to further issues. With ECB support potentially set to end in the second half of the year, this sub-market could, in particular, continue to provide access to public placements.

Secondary market: pretty robust despite high new issuance volumes

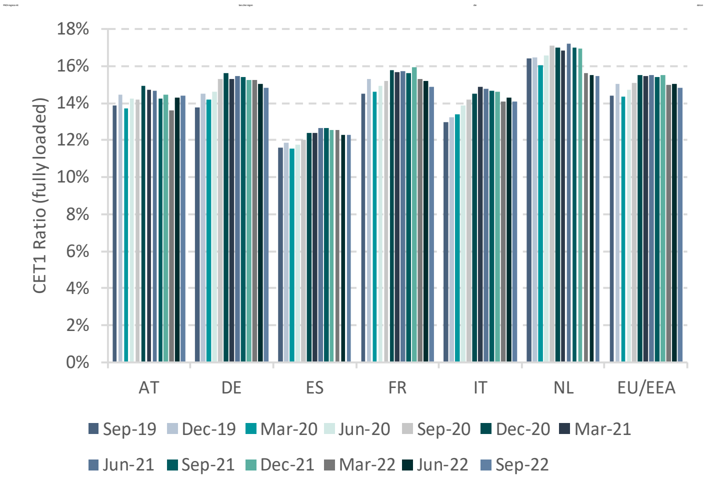
Up to yesterday, a total of 31 EUR-denominated benchmarks in a total volume of EUR 26.95bn had already been placed on the market so far this year. With the exception of the Bank of Nova Scotia, all issuers are based in the Eurozone, with the majority of the issuance volume (EUR 20.2bn) coming from the core Eurozone jurisdictions of Germany, France, Austria and the Netherlands. Swap operations on the secondary market seeking to benefit from a high new issue premium or a current coupon only took place among a relatively small group of issuers. Scandinavian, Italian and Eastern European issuers have not yet been active on the primary market, with the same situation applying to Australia, New Zealand and Singapore as well. In addition to the spread widening that already took place in 2022, the stability of the maturity segment under five years is contributing to the robustness of the secondary market. Here, we are also seeing purchases after the issues, while spreads additionally narrowed last week in the maturity segment under three years in particular. As the number of active jurisdictions on the primary market this year rises, we also expect to see increased secondary market activities as a result. In particular, we expect banks from the Nordic countries of Denmark, Sweden, Finland and Norway to appear on the primary market imminently due to the relatively high maturities totalling EUR 8.1bn in January and February 2023. For these reasons, among others, we do not believe that the spread widening trend has come to an end just yet.

ECB monetary policy: TLTRO III repayments amount to EUR 62.75bn in January.
Banks again have the opportunity this January to repay TLTRO funding that they have previously accessed. This is the third "voluntary repayment" deadline since the terms and conditions for refinancing operations were adjusted. As the Eurosystem announced last Friday, a total of EUR 62.8bn is set to be repaid on 25 January 2023. As such, the repayments in January are well below expectations and also fall short of the level of repayments made in November (EUR 296.3bn) and December (EUR 447.5bn). Overall, a total of EUR 806.6bn in TLTRO funds will therefore have been repaid ahead of schedule as at the January repayment date and the ECB balance sheet continues to shrink accordingly. While full reinvestments under the PEPP will be continued until at least the end of 2024, under the APP these will only run until the end of February 2023. From March through to the end of the second quarter, the ECB Governing Council announced a monthly reduction by an average of EUR 15bn and the relevant balance sheet item is gradually beginning to be scaled back here as well.

EZB: Zusammensetzung EZB-Bilanz



Risk Dashboard: CET1-Ratio (fully loaded)



Source: EZB, EBA, NORD/LB Markets Strategy & Floor Research

EBA Risk Dashboard paints a robust picture for Q3 2022 as well
On 12 January 2023, the European Banking Authority (EBA) published the Risk Dashboard for the third quarter of 2022. Overall, the data attests to robust capital and liquidity ratios on the part of the banks analysed. The average Common Equity Tier 1 (CET1 fully loaded) capital ratio decreased slightly to 14.8% from 15% in the previous quarter. Despite some declines in CET1 ratios, banks still have significant capital headroom vis-à-vis regulatory requirements, which can serve as an important backstop for lending to the real economy in times of economic difficulties. The average Liquidity Coverage Ratio (LCR) reached 162.5% (164.9% in Q2 2022), while the average Net Stable Funding Ratio (NSFR) remained stable at 126.9%. In the future, the downward trend in liquidity ratios is likely to continue on account of early repayments and ECB refinancing operations (TLTRO) falling due. In a market characterised by volatility and uncertainty, banks will in all probability have to face up to higher refinancing costs. Banks that increase their share of financing based on deposits could also suffer from rising interest expenses on account of the competition.

Market overview SSA/Public Issuers

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

Teaser: Belgium

Last week, we published an update on Belgium as part of our established product series "Beyond Bundeslaender". At the time of going to press, the overall regional market was worth EUR 50.9bn as against EUR 43.6bn around a year previously. FLEMSH and WALLOO are well ahead of other issuers at EUR 17.8bn and EUR 16.4bn respectively, followed by BRUCAP and LCFB – both at EUR 7.6bn. DGBE and FRBRTC come bottom of the list at EUR 679m and EUR 356m respectively. A brief summary of the key facts and figures on the regional Belgian market as a whole can be found in today's Management Summary of this publication.

L-Bank: development balance sheet summary 2022

According to the summary of L-Bank's 2022 promotional balance sheet, over EUR 5.9bn has been spent on the stability and restructuring of the economy in Baden-Wuerttemberg. Less exceptional Covid aid, the regional promotional bank saw an increase in its promotional spending of over 20% to more than EUR 3.9bn (previous year: EUR 3.2bn). At the presentation of the annual figures, L-Bank's CEO, Edith Weymayr, drew particular attention to the following four points: 1) development impact: More than 350,000 jobs were saved and 13,760 jobs were created. 2) Successful transformation incentives: The Innovation Financing 4.0 programme provided over EUR 890m in loans for innovation and new business models. 3) Strong support for start-ups: The bank paid out a record volume of EUR 736m for those wanting to set up their own business. 4) Effective crisis aid: major areas of activity for L-Bank were Covid programmes and, since December of last year, also cash loans in the wake of the Ukraine war. Over EUR 1.9bn was used to cushion the impact of Covid. A total of 93 companies took advantage of the new "Cash Loans Plus" programme to mitigate the impact of the Ukraine war, drawing down around EUR 45m within the space of just one month. Moreover, L-Bank initiated new climate protection incentives last year: A climate-protection component was added to the two development programmes most in demand from SMEs in mid-2022. Companies developing their own climate strategy – or which have already developed one – are granted a cheaper interest rate for any loan from either development programme. The aim is to reward companies which have a sustainable approach. By the end of 2022, 139 companies had benefited from a total promotional volume of EUR 108m. In addition, at the end of the year, L-Bank launched its "Energy Financing" development programme, which will support companies investing in the generation of electricity or heat from renewable energies and in the storage and distribution of the energy generated. For L-Bank, 2023 is again likely to be marked by the consequences of the current crises. Edith Weymayr has stressed that the first and foremost aim of the bank's activities and the yardstick by which they would be measured was the resilience of the economy at a time of crises.

Elections in four German Laender – one of them outside the regular cycle

The citizens of four German Laender are being called to the ballot box in 2023 to elect new regional parliaments or municipal representatives: voting will take place in Bremen, Bavaria and Hesse as per the normal cycle. However, the 2023 electoral year in Germany will begin in Berlin with an election which is outside the regular pattern. The election of 26 September 2021 to select the 19th parliament is having to be repeated due to irregularities established by Berlin's constitutional court. This has come as a surprise to experts and laymen alike. Voters in Berlin are being recalled to the ballot box in just a few weeks' time on 12 February. One of the questions surrounding the election, according to press reports, will be whether former Federal Minister for Family Affairs, Franziska Giffey, will be re-elected as Governing Mayor of Berlin. At present, she leads an alliance consisting of her own party, the SPD, the Greens and the Left. This will be interesting: since this is a re-run of the earlier election and not a fresh election, there cannot be any new candidates. You know our views: as little in the way of political topics as possible, as much classification as possible. The first scheduled election of this year falls on 14 May in Bremen. Around 476,000 people are entitled to vote in Germany's smallest Bundesland. Markus Söder will stand for re-election in Bavaria on 08 October, and the next Hesse parliament is also likely to be elected on the same day. One thing at a time though: The CSU won the last Landtag elections in Bavaria in 2018 with 37.2% of the votes, but the party lost its absolute majority and has since been governing with the support of the Free Voters of Bavaria. Whereas a re-election of the Bavarian Minister-President does not seem to be under any serious threat, nobody expects the CSU to regain their absolute majority. The search is on for a new or former coalition partner: Free Voters or Greens? There is still more than enough time for an electoral campaign. The Landtag election in Hesse in 2018 was characterised by ups and downs: the CDU came out on top in spite of a historically poor result. The SPD also suffered a double-digit loss in their share of the vote at the time; at 19.8%, this was its worst-ever result in a Hesse Landtag election. In contrast, the Greens scored a historical result in Hesse, taking second place just ahead of the SPD.

Provisional dates for the next Laender parliamentary (Landtag) elections (and frequency)

Baden-Wuerttemberg	Spring 2026	5 years
Bavaria	**08 October 2023**	**5 years**
Berlin	**12 February 2023**	**5 years**
Brandenburg	Autumn 2024	5 years
Bremen	**14 May 2023**	**4 years**
Hamburg	Spring 2025	5 years
Hesse	**08 October 2023**	**5 years**
Mecklenburg-Western Pomerania	Autumn 2026	5 years
Lower Saxony	Autumn 2027	5 years
North Rhine-Westphalia	Spring 2027	5 years
Rhineland-Palatinate	Spring 2026	5 years
Saarland	Spring 2027	5 years
Saxony	Summer 2024	5 years
Saxony-Anhalt	Summer 2026	5 years
Schleswig-Holstein	Spring 2027	5 years
Thuringia	Autumn 2024	5 years
Baden-Wuerttemberg	Spring 2026	5 years

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

Primary market

January is traditionally a strong month for new issues, but this year things have gone up a level with as many as ten new issues observed on our screens in the past trading week. Saarland (ticker: SAARLD) got the ball moving with a 7y bond (EUR 500m WNG) at ms -3bp (guidance: ms -3bp area, order book: EUR 740m). Meanwhile, the Finnish municipal bank MuniFin (ticker: KUNTA) issued a 5y bond with an outstanding volume of EUR 1.5bn at ms flat (guidance: ms +1bp area; order book: EUR 3.6bn). Three French issuers approached investors more or less simultaneously: Agence France Locale (ticker: AFLBNK) issued a 7y bond in the amount of EUR 750m (order book: EUR 1.9bn) at OAT +54bp (guidance: OAT +57bp area). This is the equivalent of around ms +29bp. The promotional bank SFIL (ticker: SFILFR) issued a 5y bond worth EUR 1.5bn at OAT +45bp (guidance: OAT +49bp). Based on an order book of EUR 4.6bn, this produces a bid-to-cover ratio of 3.1x. Agence française de développement (ticker: AGFRNC) was active in the sustainability format, issuing a EUR 1.5bn sustainability bond with a term of seven years at OAT +51bp. Canadian issuers also turned to the EUR market for their funding: Export Development Canada (ticker: EDC) raised EUR 2bn (5y, order book: EUR 2.6bn) and Quebec (ticker: Q) as much as EUR 2.25bn (10y, ms +41bp). The two issuers were last active in this market in January and February 2022 respectively. Supranational issuers were also present: World Bank Group-owned International Bank for Reconstruction & Development (ticker: IBRD) issued a 10y sustainability bond in the amount of EUR 3bn at ms +11bp (guidance: ms +12bp area; order book: EUR 4.3bn). KommuneKredit (ticker: KOMMUN) also turned to investors, raising EUR 500m (WNG) at ms +21bp for a 12y bond. The issue attracted an order book of EUR 475m; consequently, no tightening was possible against the guidance of the same level. From the Netherlands, Nederlandse Waterschapsbank (ticker: NEDWBK) issued a social bond (SDG Housing Bond) worth EUR 500m with a term of seven years at ms +5bp. There was no tightening against the guidance for this bond either in view of an order book of EUR 425m. KfW was also active, tapping its bond KFW 0.125% 01/09/32 by EUR 1bn at ms flat. The order book amounted to EUR 2.2bn and the spread tightened by one basis point against a guidance of ms +1bp during the marketing phase. In addition, the EU sent out RfPs to selected banks. In view of the new funding concepts, there is no longer any mention of the specific programme for which the funding will be carried out (cf. Issue #1). A mandate was also forthcoming yesterday: Brandenburg (ticker: BRABUR) is planning to issue bond with a volume of EUR 500m and a term to maturity of six years.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
NEDWBK	NL	16.01.	XS2579321337	6.9y	0.50bn	ms +5bp	- / Aaa / AAA	X
Q	CA	16.01.	XS2579050639	10.0y	2.25bn	ms +41bp	AA- / Aa2 / AA-	-
AGFRNC	FR	11.01.	FR001400F7C9	7.0y	1.50bn	ms +25bp	AA / - / AA	X
KOMMUN	Nordics	11.01.	XS2577526580	12.0y	0.50bn	ms +21bp	- / Aaa / AAA	-
IBRD	SNAT	10.01.	XS2577109049	10.0y	3.00bn	ms +11bp	- / Aaa / AAA	X
SFILFR	FR	10.01.	FR001400F7D7	5.0y	1.50bn	ms +15bp	- / Aa2 / AA	-
EDC	CA	10.01.	XS2577382059	5.0y	2.00bn	ms flat	- / Aaa / AAA	-
AFLBNK	FR	10.01.	FR001400F4B8	7.2y	0.75bn	ms +29bp	- / Aa3 / AA-	-
KUNTA	Nordics	10.01.	XS2577104321	5.0y	1.50bn	ms flat	- / Aa1 / AA+	-
SAARLD	DE	10.01.	DE000A3H3GK4	7.0y	0.50bn	ms -3bp	AAA / - / -	-

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

Covered Bonds
Focus on covered bond jurisdictions: Belgium in the spotlight

Author: Dr Frederik Kunze

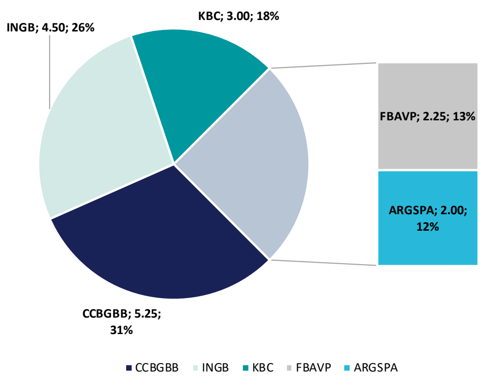
Covered bond market – Belgium: small, but not a niche market

In the context of our weekly publication, we regularly focus on specific covered bond markets. In this present edition, our attention turns to the established sub-market of EUR benchmark bonds from Belgium. Based on the ECBC's annual statistics, the country ranked 15th with respect to the currently outstanding volume of covered bonds (EUR 42.6bn) – ahead of Portugal (EUR 38.8bn) and behind Finland (EUR 47.1bn). Like a number of other jurisdictions in the eurozone, issuances in Belgium have also been shaped by the particular monetary policy conditions since the outbreak of the coronavirus crisis. Looking at the ECBC data, this is not least underlined by the high proportion of private placements. As per the ECBC data, the volume of EUR 25.4bn specified as at year-end 2021 includes retained bonds, though this data set is now comparatively old. However, based on the ECB eligible assets database in combination with Bloomberg figures on the "retained status" of relevant covered bonds, we still derive a volume of outstanding "own use covered bonds" amounting to EUR 18.5bn at present. We certainly believe that notable potential has developed for "new" publicly placed EUR benchmarks, on which we will elaborate in the following.

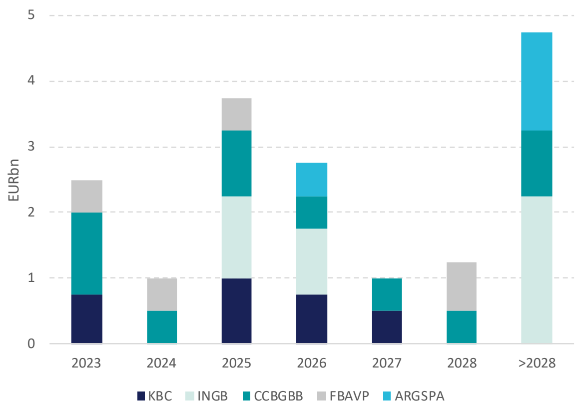
EUR benchmark segment Belgium: five banks issue from six cover pools

Five issuers are active on the market in the Belgian EUR benchmark segment, namely Argenta Spaarbank, Belfius Bank, BNP Paribas Fortis, ING Belgium and KBC Bank. Only Belfius Bank also has a public pool alongside its mortgage programme. The outstanding volume on the market as a whole comes to EUR 17bn (25 bonds) overall. With nine bonds and a volume of EUR 5.25bn, Belfius Bank is the largest benchmark issuer on the heterogeneous covered bond market. The bank has two public sector covered bonds (EUR 500m each) and seven mortgage covered bonds outstanding.

EUR benchmarks BE (outstanding, EUR bn)



EUR benchmarks BE (maturities, EUR bn)



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

Regulatory classification: risk weighting of 10% and LCR Level 1

The Belgian covered bond market is one of the jurisdictions that has been exclusively assigned the respective top ratings by the agencies Fitch, S&P and Moody's for its covered bonds. The mortgage cover pools can be described as granular across the board, with all primary coverage from residential mortgages. Moreover, all cover assets are located within Belgium. Belfius Bank's public sector cover pool comprises only Belgian cover assets, with the greatest share attributable to the category of "municipality". The nominal OC ratios of Belgian programmes considered here significantly exceed the statutory minimum requirement (5% nominal; see table below). In terms of regulatory classification, covered bonds benefit from a preferred risk weight of 10% pursuant to the CRR. According to our understanding, the EUR benchmarks are also eligible as Level 1 assets in the context of LCR management. They are also eligible for purchase under the CBPP3 and PEPP programmes, which are both being brought to an end, and as collateral in the context of ECB collateral management. In fact, based on the Bloomberg data mentioned at the outset, the ECB list of eligible marketable assets still includes high levels of retained bonds that are categorised as covered bonds eligible for "own-use". With the roll back of the central bank balance sheet (key word: TLTRO III) and the consequent scarcity of liquidity provided by the Eurosystem, we also expect a long-term reduction in retained covered bonds. This releases excess cover and cover assets for publicly placed deals.

Belgian EUR benchmark issuers (cf. NORD/LB Issuer Guide – Covered Bonds 2022)

Institut *(Link)*	Type	Cover Pool (EURm)	Outst. Volume (EURm)	OC (%)	BMK	LCR level / Risk weight	Maturity Type	Covered Bond rating (Fitch / Moody's / S&P / DBRS)
Argenta Spaarbank (ARGSPA)	M	2,430	2,000	21.5	BMK	1 / 10%	SB	- / - / AAA / -
Belfius Bank (CCBGBB)	M	12,132	9,992	21.4	BMK	1 / 10%	SB	AAA / - / AAA/ -
	P	1,686	1,211	39.2	BMK	1 / 10%	SB	- / Aaa / AAA / -
BNP Paribas Fortis (FBAVP)	M	2,950	2,250	31.1	BMK	1 / 10%	SB	- / Aaa / AAA / -
ING Belgium (INGB)	M	11,100	8,500	30.6	BMK	1 / 10%	SB	AAA / Aaa / - / -
KBC Bank (KBC)	M	16,416	11,920	37.7	BMK	1 / 10%	SB	AAA / Aaa / - / -

Source: Issuer, rating agencies, NORD/LB Markets Strategy & Floor Research

European Covered Bond Directive implemented: Belgian issuers also able to use the "European Covered Bonds (Premium)" label

Amendments to covered bond legislation in the course of EU harmonisation have also improved the credit quality in relation to Belgian covered bonds overall. Examples in this regard include the more concrete specification of possibilities for maturity extensions. Among others, the rating agency Fitch took this as an opportunity to raise the payment continuity uplift (PCU) assessment for the rated covered bond programmes from Belgium to six notches from five. Also worth highlighting is that Belgium is among the jurisdictions that have not introduced any new types of eligible cover assets, which ultimately also means that Belgian covered bonds issued after 8 July 2022 can carry the "European Covered Bond (Premium)" label. In Article 3 of the Royal Decree Covered Bonds, residential and commercial mortgage loans (each without MBS), public sector exposures and exposures to credit institutions are listed as eligible categories. The current issuance limit of 8% will no longer be valid as of 1 January 2024, although the supervisory authority can apply issuer-specific limits in future in this area.

Overview covered bond laws: Belgium and Germany

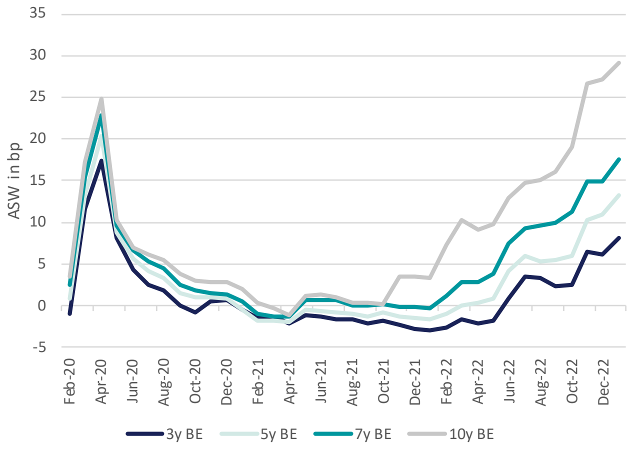
Country	Belgium	Germany
Name	Belgian Pandbrieven / Lettres de Gage	Öffentliche Pfandbriefe, Hypotheken-, Schiffs- & Flugzeugpfandbriefe
Special act	Ja	Yes
Cover assets (incl. substitute cover, if applicable)	Mortgage loans, public sector loans, bank loans (max. 3 month)	Mortgage loans, public sector loans, ship loans, aircraft loans
Owner of the assets	Issuer	Issuer
Specialist bank principle	No	No
Geographical restriction – mortgage cover	EEA	EEA, CH, US, CA, JP, AU, NZ, SG, UK9 , Schipfe and Flupfe worldwide
Geographical restriction – public sector cover	OECD	EWR, CH, US, CA, JP, UK[10]
LTV ratio – mortgage cover	Residential: 80%; Commercial: 60%	60% of mortgage lending value
Legal priority in bankruptcy	Yes	Yes
Cover register	Yes	Yes
Derivatives in the cover pool	Yes	Yes
Substitute cover	Yes	Yes
Substitute cover limit	15% /10%	15% Öpfe, 20% Hypfe, Schipf, Flupfe
Minimum overcollateralisation	5% nominal value	Hypfe/Öpfe: 2% Schipfe/Flupfe: 5%
Asset encumbrance	8% of total assets (issue limit)*	-
Deferral of maturity	Yes	Yes
Triggers for deferral of maturity	Insolvency; inability to pay	Bankruptcy/resolution
CRD met	Lettres de Gage/ Belgian Pandbrieven: Yes	Yes (Öpfe / Hypfe / Schipfe) No (Flupfe)
ECB-eligibility	Yes	Yes

Source: National legislation, ECBC, NORD/LB Markets Strategy & Floor Research; * valid up until 31 December 2023

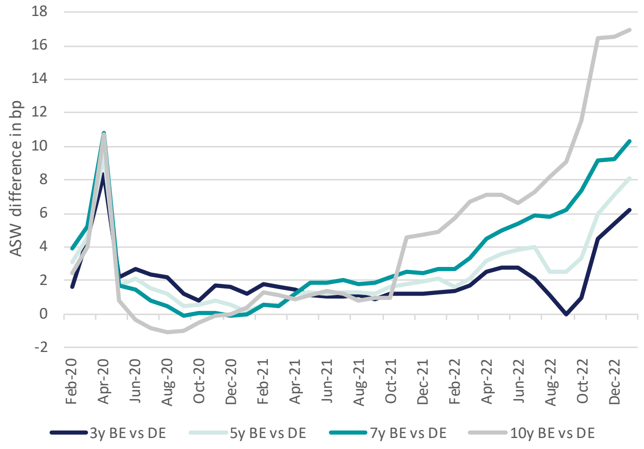
Spread trend and issuance forecast for 2023

With regard to the EUR benchmark segment as a whole, we expect 2023 to once again be characterised by extremely dynamic primary market activity. We anticipate the volume of newly placed EUR benchmarks to reach EUR 197.5bn. Given maturities amounting to EUR 115.5bn, this results in net supply of EUR 82bn. While the "big" jurisdictions such as Canada, France and Germany will be the ones driving supply and net supply, we rate the momentum to be expected from the "smaller" sub-markets as being of great significance. This not least applies to the diversification possibilities for investors. In this respect, notable activity from countries such as Belgium is also to be welcomed. As previously mentioned, we certainly see considerable potential for new bonds on the Belgian covered bond market in 2023 as well. For our supply forecast, we derived an expected issue volume of EUR 3bn by means of a bottom-up approach. This value exceeds the previous year's level (EUR 2.5bn). With maturities in 2023 amounting to EUR 2.5bn, the signs for the coming 12 months point towards generic growth (positive net supply: EUR 500m). In relation to the spread level, the difference versus generic Pfandbrief spreads has widened significantly since the fourth quarter and year-end 2022. We believe that this trend represents a return to a more normal spread structure in the EUR benchmark segment rather than being a general fundamental revaluation, although the current monetary policy and geopolitical drivers are impacting Belgium's macro profile, the banking sector and cover assets.

Covered bonds: ASW BE (3y, 5y, 7y, 10y, gen.)



Covered bonds: ASW BE vs. DE (3y, 5y, 7y, 10y, gen.)



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

Conclusion

Belgium's covered bond market is unequivocally one of the established jurisdictions, but with an outstanding volume of EUR 17bn it is nowhere near reaching the levels of the major sub-markets such as France and Germany. All the same, we see great potential for new EUR benchmarks from Belgium. Alongside the refinancing of upcoming maturities, we believe this will be down to the reduction in the holdings of covered bonds classified as retained bonds. With regard to spread expectations for Belgian EUR benchmarks, we do not predict any country-specific movements. Rather, the modest widening trend driven by the Eurosystem's monetary policy withdrawal and general market-technical aspects, which are impacting the whole EUR benchmark segment, is likely to continue.

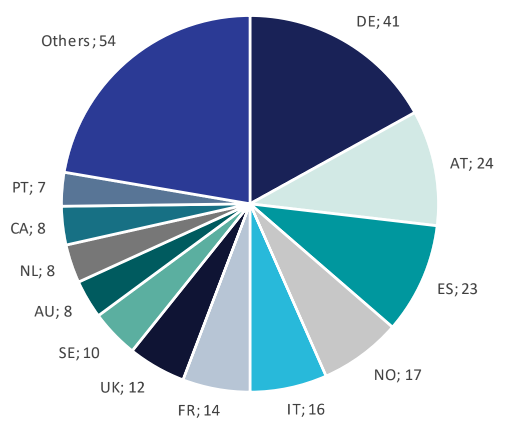
Covered Bonds
The Moody's covered bond universe: An overview

Author: Dr Frederik Kunze

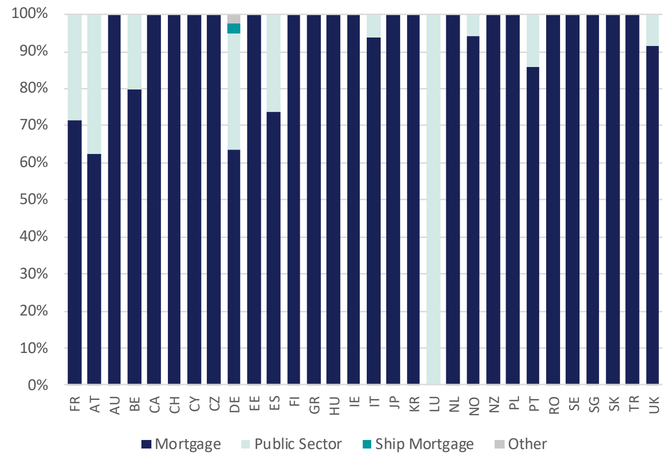
250 rated covered bond programmes

We have been providing a regular overview of the covered bonds rated by Moody's for several years now. Moody's published its most recent quarterly report in December 2022. In the majority of cases, Moody's bases this report on the rating reports relating to the second quarter of 2022. Accordingly, it rated 242 covered programmes in total. This means that the agency covers a significant portion of the total covered bond universe. Mortgage-backed programmes account for 83% of Moody's covered bond universe, or 201 programmes. Moody's also rates 39 public-sector programmes (16.1%), which are, however, concentrated in Germany (13 programmes), Austria (9), Spain (6) and France (4). With regard to the breakdown by jurisdiction, it can be seen that nearly 78% of the programmes are attributable to those 12 countries in which at least seven programmes have been rated, whereas the remaining 54 programmes are spread across 18 jurisdictions in total.

Number of programmes rated by Moody's



Breakdown of programme types by country



Source: Moody's, NORD/LB Markets Strategy & Floor Research

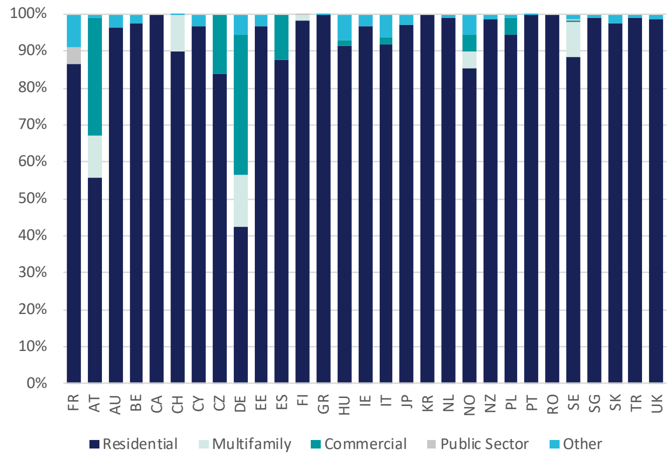
Focus on mortgage programmes from EUR benchmark jurisdictions

Looking at the Moody's covered bond rating universe, there can be no doubt that the agency focuses on mortgage-backed programmes, which are also located almost entirely in EUR benchmark jurisdictions. The only countries from which we currently register no outstanding covered bond issues in the EUR benchmark segment are Turkey (3), Hungary (2), Cyprus (1) and Romania (1). For these reasons, we focus on those mortgage-backed programmes that were set up in EUR benchmark jurisdictions in the following report. However, it must be noted here that EUR benchmarks do not necessarily have to have been issued from the programmes considered for this purpose. Rather, the limitation with regard to the Moody's covered bond universe as a whole aims to facilitate comparability of the figures from an investor's perspective.

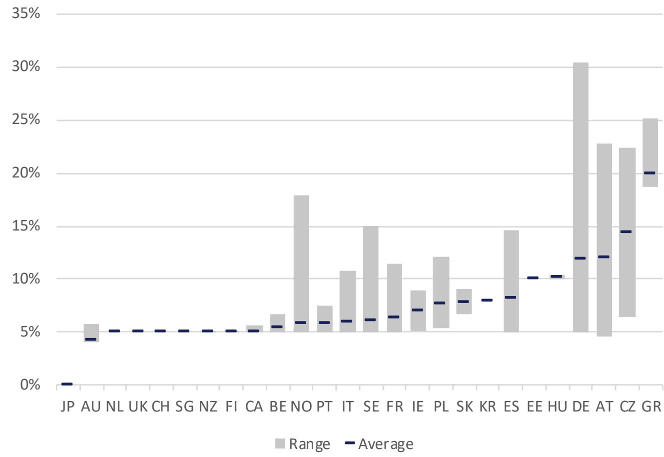
Majority of the mortgage-backed programmes are residential

Looking at Moody's classification of the cover assets of the individual programmes, it is apparent that issues are 84.1% backed by residential assets on average. Only Germany (42.4%) and Austria (55.8%) have average quotas below 75%. Besides Germany (14.0%), Austria (11.3%) and Switzerland (9.8%) also have significant percentages of multi-family assets. The proportion of commercial assets is also comparatively high in Germany (38.2%), Austria (31.8%), the Czech Republic (16.1%) and Spain (12.2%). Public-sector assets are only recorded to a noteworthy extent in France (4.5%) and Sweden (0.5%); in both cases, however, only at a fraction of the amount of the mortgage cover pool.

Structure of the cover pools (mortgage programmes)



Collateral score by country (mortgage programmes)



Source: Moody's, NORD/LB Markets Strategy & Floor Research

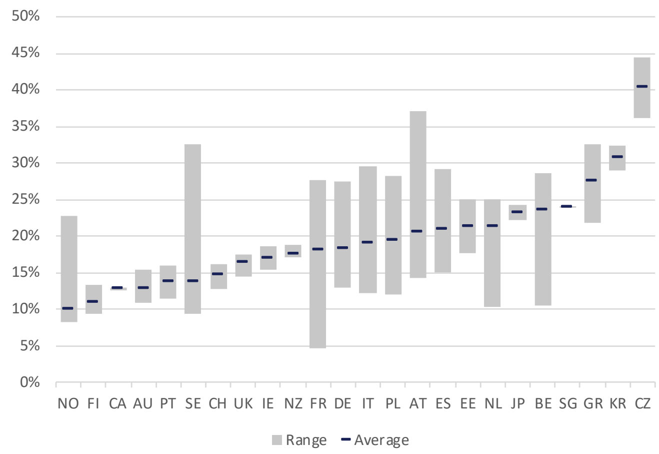
Collateral score as an indicator of the cover pool quality

An important indicator in Moody's covered bond universe is the collateral score. This is used by the rating agency to assess the quality of the cover assets, with a low value indicating a high-quality cover pool. In principle, we consider it appropriate to compare collateral scores across programmes and jurisdictions as well. Nevertheless, some specific characteristics must be taken into account here. For example, with the majority of the mortgage programmes, Moody's provides for a lower limit of 5% for the collateral score. In Australia, however, the collateral scores also go down to 4%, whereas collateral scores of 0% can be set in Japan – because of the RMBS structure of the respective programmes. In addition to the average collateral score at a national level in each case, the above diagram also shows the range of forms. The jurisdictions UK, Switzerland, the Netherlands and Singapore have scores of exclusively 5%. Finland and New Zealand are also characterised by a very narrow range (maximum: 5.1%). As a result of the amended cover bond legislation in Spain, which significantly restricts the groups of assets permitted in Spanish cover pools, we understand that the average collateral score in Spain has been significantly reduced and the range has also noticeably narrowed. Germany has the broadest range, which is directly related to the less granular nature of commercial cover assets.

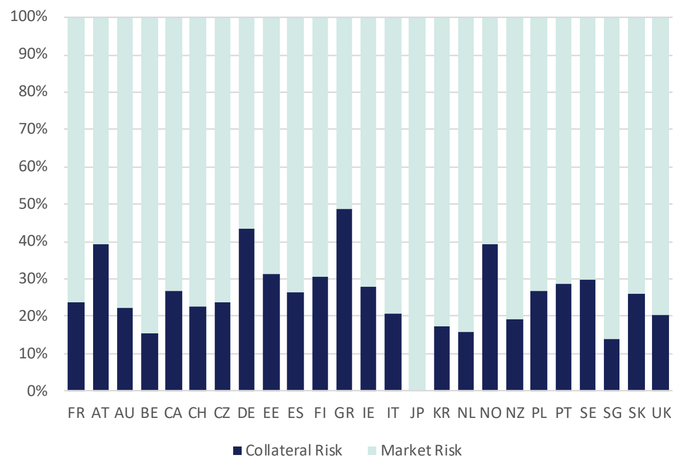
Cover pool losses figure based on two components

Moody's rating experts use cover pool losses (CPL) to reflect the anticipated losses in the cover pool following a default by the issuer. Here, the risk consists of two components – market risk (refinancing, interest rate and currency risks) and collateral risk (asset quality and credit risk). When compared globally, it is again clear that there is a high level of heterogeneity, just as there is with the collateral score, which is apparent not only in relation to the average cover pool losses but also in terms of the range of national forms. For example, the cover pool losses in Norway, Finland, Canada and Australia are especially low. In addition, programmes from Canada, New Zealand and Singapore have a narrow range, which is, however, attributable in part to the low number of programmes.

Cover pool losses by country (mortgage programmes)



CPL risk components by country (mortgage programmes)



Source: Moody's, NORD/LB Markets Strategy & Floor Research

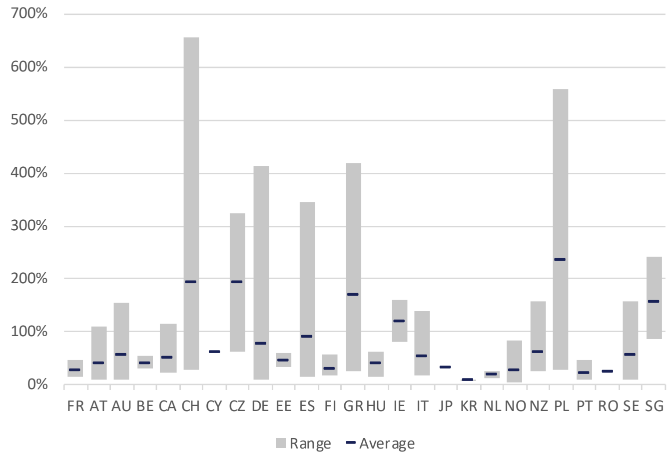
Refinancing, interest rate and currency risks determine the anticipated losses

The image above right shows that there are quite considerable differences in the contribution of the two components (collateral risk and market risk) at a national level. For instance, the share of the collateral risk in the cover pool losses is relatively high in Greece, Germany and Austria, in particular. However, a deterioration in the quality of the cover pool accounts for a comparatively minor share of the cover pool losses in the event of issuer insolvency in Belgium, Japan and Singapore. The two programmes from Japan, which feature no collateral risk because of their cover pool structure (solely RMBS transactions as cover assets), again play a special role. In principle, it can be inferred that in most cases, cover pool losses are influenced by market risk, i.e. losses would be attributable to the categories refinancing, interest rate and currency risk, and less to the quality of the cover assets, in the event of the issuer becoming insolvent.

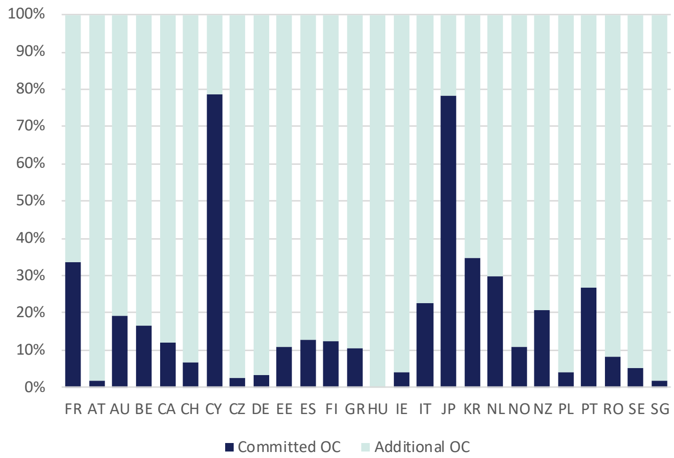
Ranges of overcollateralisation remain heterogeneous

It should hardly come as a surprise to learn that an international comparison of the levels of overcollateralisation of the programmes rated by Moody's reveals marked differences. The greatest national heterogeneity is now actually no longer in Spain, for the reasons already mentioned, although the range is still significantly high. We also see high ranges in Germany, Switzerland and Poland. Narrow ranges can frequently be explained by a smaller number of issuers in the respective jurisdiction.

Overcollateralisation by country (mortgage programmes)



Composition of the overcollateralisation (mortgage programmes)



Source: Moody's, NORD/LB Markets Strategy & Floor Research

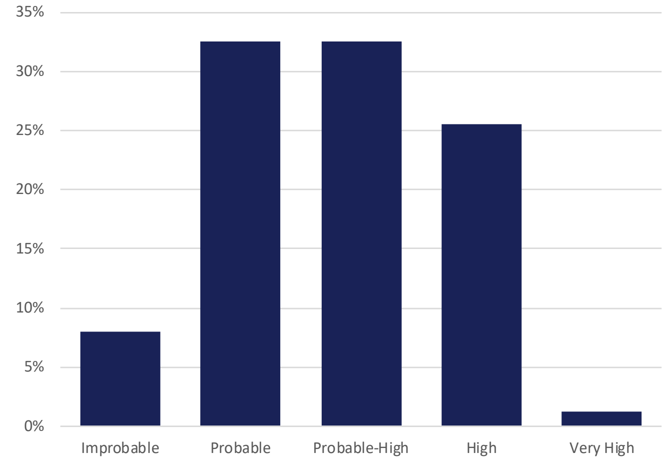
Committed OC as the starting point for voluntary overcollateralisation

Overcollateralisation can also be divided into subcomponents. It might have been committed to the rating agency to ensure a certain rating or as a legal requirement. Committed OC can therefore be seen as a kind of lower threshold, meaning that overcollateralisation should not readily or must even under no circumstances fall below this level. In contrast, actual overcollateralisation might just be a temporary status, which is potentially subject to certain volatilities through new issuances or maturities. In our opinion, this effect may be temporarily reinforced by issuers replacing their retained issues with a lower volume of publicly placed bonds but leaving the assets in the cover pool. Looking at the proportion of committed OC in the OC levels, it is clear that the overcollateralisation in Austria, Germany and Singapore, for example, is largely provided on a voluntary basis and could accordingly be reduced comparatively easily. This is also due to low requirements for committed OC, which averages 0.8% in Austria, for example. In Germany and Singapore, the equivalent values are 2.6% and 3.0% respectively. In contrast to this, overcollateralisation in Japan, the Netherlands and South Korea largely consists of committed OCs. By and large, it must be noted that the greater proportion of overcollateralisation is provided by issuers on a voluntary basis, which is, however, definitely attributable to a low level of committed OC. It is also true that a high proportion of committed OC does not automatically mean a high level of overcollateralisation in general.

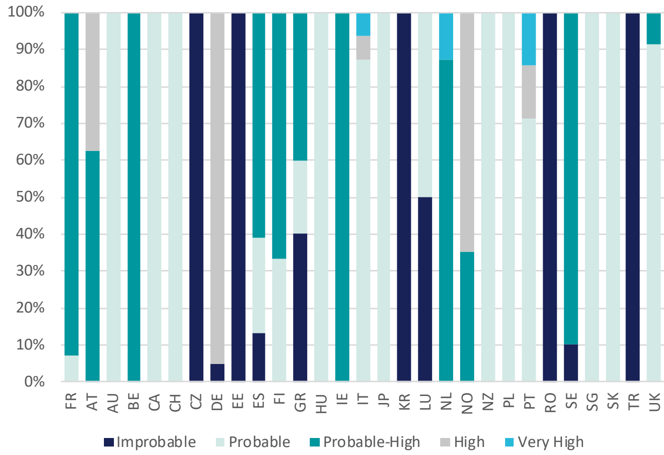
TPI links covered bond rating to the issuer rating

The timely payment indicator (TPI), which indicates how probable it is that payment obligations will be met in a timely manner following an issuer default and differentiates between six notches from “very high” to “very improbable” (see table below), is another metric provided by Moody’s. The TPI also calculates the potential covered bond rating at a specific number of notches above the issuer rating. In contrast, the TPI leeway indicates the number of notches by which the covered bond anchor point can be downgraded without this involving a rating downgrade based on the TPI methodology for the covered bond programme. It is clear from the following diagram that 33% of all the mortgage programmes rated by Moody’s have a TPI of “probable” or “probable-high”. In contrast, the margins are less heavily represented with shares of 7.9% (improbable) and 1.3% (very high) respectively. In twelve EUR benchmark jurisdictions in total, the programmes are awarded the same TPI score in each case.

Timely payment indicator (TPI) (mortgage programmes)



TPIs by country (mortgage programmes)

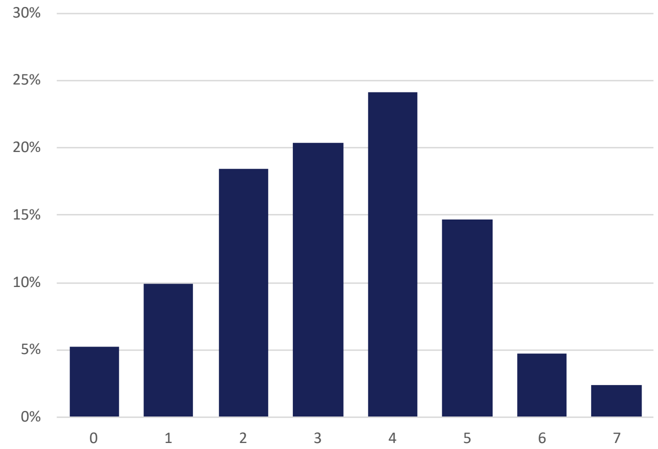


Source: Moody’s, NORD/LB Markets Strategy & Floor Research

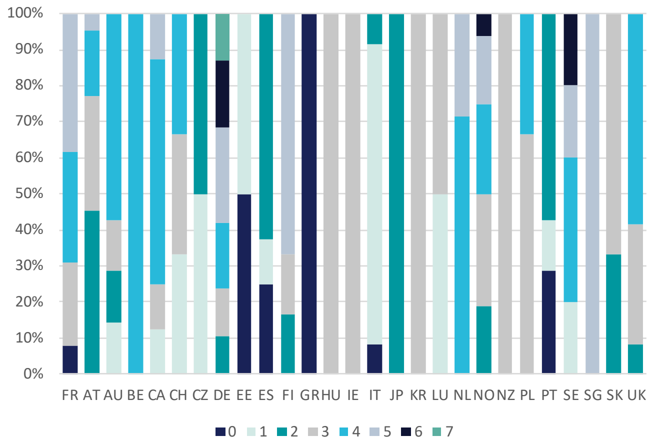
Sufficient buffer with regard to downgrades

As mentioned previously, Moody’s also provides the TPI leeway metric in addition to the TPI, which indicates the number of notches by which the covered bond anchor point can be downgraded without this entailing a downgrade for the covered bond programme, as laid down in the TPI framework. Accordingly, 11 (5%) of the covered bond programmes rated by Moody’s do not have a buffer of this kind. This means that in the event of the covered bond anchor being downgraded, the programme would be downgraded directly. A TPI leeway of four notches (51 programmes; 24%) is most common score. More than 44% of the programmes are attributable to the two middle, most frequent categories of 3 and 4 notches.

TPI leeways in notches (mortgage programmes)



TPI leeways in notches by country (mortgage programmes)



Source: Moody's, NORD/LB Markets Strategy & Floor Research

Conclusion

Moody's quarterly data on the rating-specific character of the cover pools for mortgage-backed and public-sector covered bonds still largely provides a robust picture of the situation at present. However, a certain degree of heterogeneity remains in some jurisdictions, for example with regard to the assessment of the credit quality of the cover assets. In our view, it is important to emphasise that the credit quality of cover pools remains high, especially for the EUR benchmark segment. Perhaps we should contextualise this conclusion by mentioning that the database mainly refers to the second quarter of 2022. Nevertheless, Moody's covered bond rating outlooks - as well as the outlooks of Fitch and S&P, for example - indicate a high level of stability for the coming year. The rating agencies have already taken into account the potential for setbacks on the property markets, among other aspects.

SSA/Public Issuers
Beyond Bundeslaender: focus on Belgian issuers

Authors: Dr Norman Rudschuck, CIIA // Assisted by Valentin Jansen

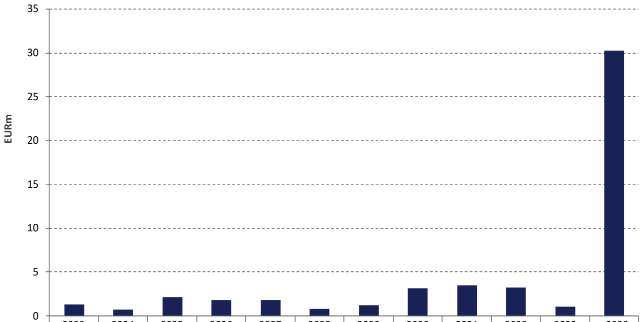
Update to our Public Issuer Special – Beyond Bundeslaender: Belgium

Last week, we published an update to our established publication Beyond Bundeslaender: Belgium, taking another look at the regional governments and local authorities with capital market relevance in Belgium. As part of our Public Issuer Special series, we are always interested in seeing your growing interest in "niche products". We will therefore continue to develop the "Beyond Bundeslaender" segment: This year, we are also planning relevant research publications on Canada, France and Spain. In the present analysis, another new issuer is included in our coverage – Deutsche Gemeinschaft Belgien (ticker: DGBE). Due to the variety of issuers and what are occasionally pick-ups (in certain maturities) in comparison with Belgian government bonds and German Laender, the regional governments and local authorities analysed in this publication may offer opportunities for investors. The focus here will once again be on the levels below the federal state and the communities, namely the regions and provinces. There are three regional institutions which take the name of their respective territory. From north to south, they are as follows: the Flemish Region (Flanders), the Brussels-Capital Region and the Walloon Region (Wallonia). Aside from these three regions, Belgium also comprises three communities defined by their language: these are the Flemish, French and German-speaking communities.

Belgian regions offer pick-up vs. OLOs and German peers

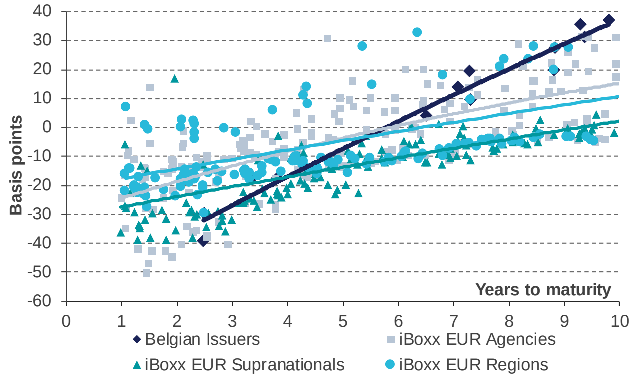
It should not come as any great surprise that Belgian regions (benchmark size) are trading at the widest spreads to Belgian government bonds and the German peer group. The Flemish Community is rated at (AA/ Aa2 / -), while Wallonia has been awarded ratings of (- / A3 / -). Belgian sovereign bonds are rated at (AA- / Aa3 / AA). From a regulatory point of view, Belgian regions and sovereign bonds can be regarded as identical to their German counterparts (LCR Level 1; RW 0%, Solvency II: preferred), which are almost universally rated AAA and can generally be traded on a far more liquid basis on the secondary market. In view of limited liquidity, including in a peer-group comparison, we have declined to look at these bonds in any more detail. In addition, Belgian regions are open to private placements and bespoke maturity requests on the part of institutional investors.

Generic ASW spreads – a comparison



	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	>2033
Other	0	0	0	0	0	0	0	0	0	0	0	0
EUR	1.284	665	2.147	1.820	1.764	762	1.197	3.133	3.479	3.213	1.034	30.296

ASW spreads of Belgian Issuers vs. iBoxx

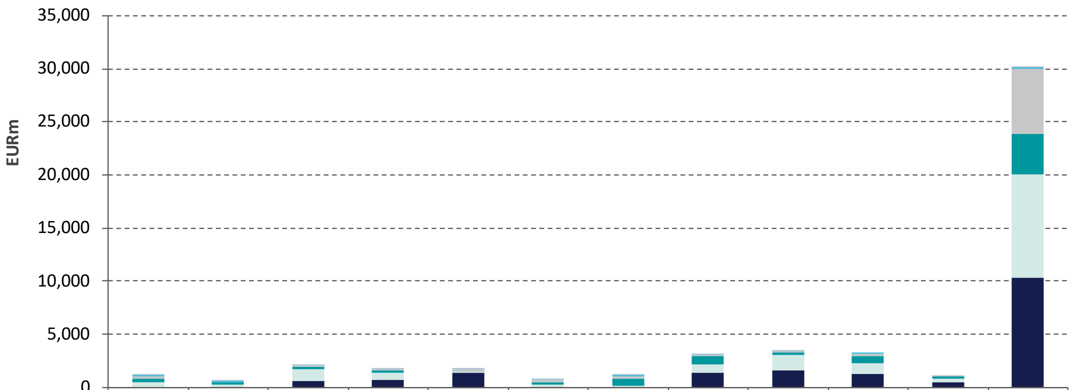


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research; data as at 20 Dec. 2022 eod

Outstanding volumes on the Belgian sub-sovereign market

Altogether, the regional market currently amounts to EUR 50.9bn as against EUR 43.6bn roughly 12 months ago. Here, FLEMSH (EUR 17.8bn) and WALLOO (EUR 16.4bn) lead the way, followed at some distance behind by BRUCAP and LCFB (EUR 7.6bn each). DGBE and FRBRTC bring up the rear at just EUR 679m and EUR 356m respectively. FLEMSH has been top of the table in this regard for many years. Due to its increased issuance activity with benchmark bonds, WALLOO has climbed the rankings and is now the second largest regional Belgian issuer. Private placements of up to 100 years in maturity also ensure that the structure of outstanding Belgian sub-sovereign bonds can be described as highly granular overall. This situation is also illustrated by the chart below. In this regard, liquidity is suffering, although there is a pick-up on offer in the form of an illiquidity premium. Incidentally, the issuers SOCWAL and FRBRTC are defined as Local Authorities included on the purchase list of the Eurosystem under "Agencies". Both are classified as local public-sector issuers (Société Wallone du Credit Social and Brussels Municipalities Regional Fund [FRBRTC guaranteed by BRUCAP]).

Maturity profile of the Belgian issuers



	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	>2033
FRBRTC	22	44	14	25	24	18	26	38	34	0	0	113
DGBE	113	65	55	68	54	35	33	46	45	25	0	140
BRUCAP	160	70	85	55	140	185	233	95	134	273	35	6,107
LCFB	350	180	235	290	20	245	665	765	200	600	214	3,833
WALLOO	515	255	1,085	595	184	259	188	802	1,420	1,065	285	9,679
FLEMSH	0	0	627	750	1,320	0	0	1,377	1,640	1,250	500	10,358

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

Conclusion

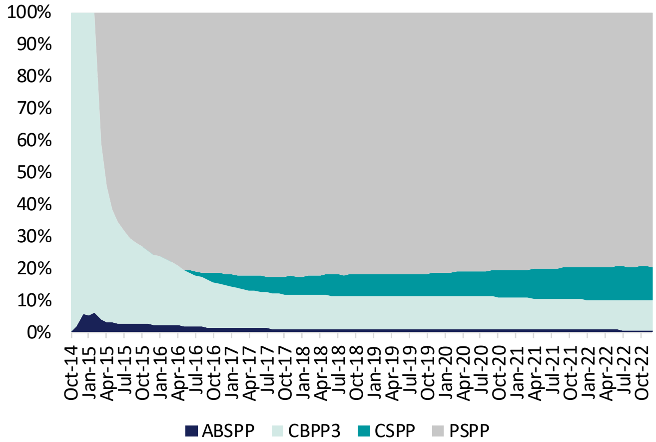
Against the backdrop of current developments in the interest rate environment, interesting investment opportunities are repeatedly arising in certain niche markets – partly reinforced by the ongoing consequences of the pandemic and Russia's war of aggression. The RGLAs covered in this Public Issuer Special supplement the classic SSA portfolio in terms of maturity and/or yield, but in any case, contribute to diversification. The outstanding volume, which has risen significantly again versus the level recorded in 2021, shows that opportunities are regularly opening up here. Greater attention should be paid to FLEMSH and WALLOO with regard to their issuance volumes. It is interesting to note that there is still no currency diversification. Second and third tier issuers are regularly the focus of attention when it comes to rare investment alternatives, not least because the Eurosystem has already purchased Belgian regional bonds as part of the PSPP and PEPP. These bonds are therefore interesting from a yield and regulatory point of view, while the issuers are additionally open to private placements.

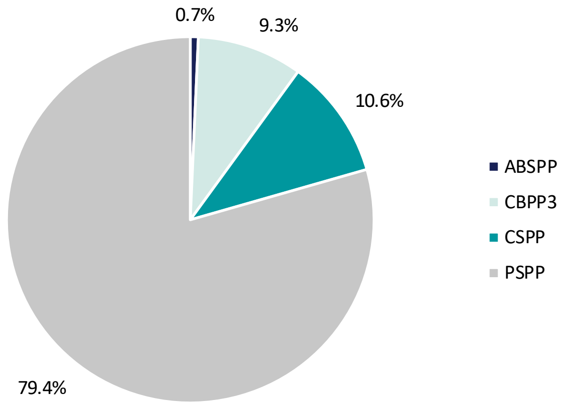
ECB tracker

Asset Purchase Programme (APP)

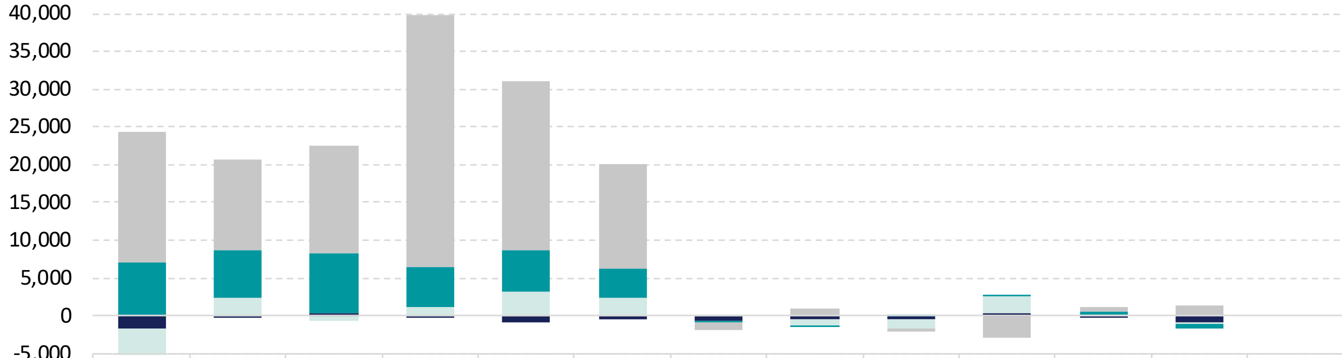
	ABSPP	CBPP3	CSPP	PSPP	APP
Nov-22	23,822	302,482	345,039	2,585,720	3,257,063
Dec-22	22,915	301,973	344,119	2,584,666	3,253,673
Δ	-893	-269	-609	+1,398	-373

Portfolio structure





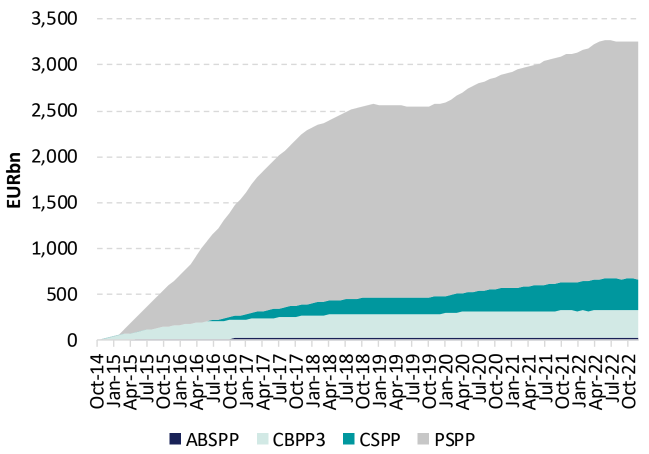
Monthly net purchases (in EURm)



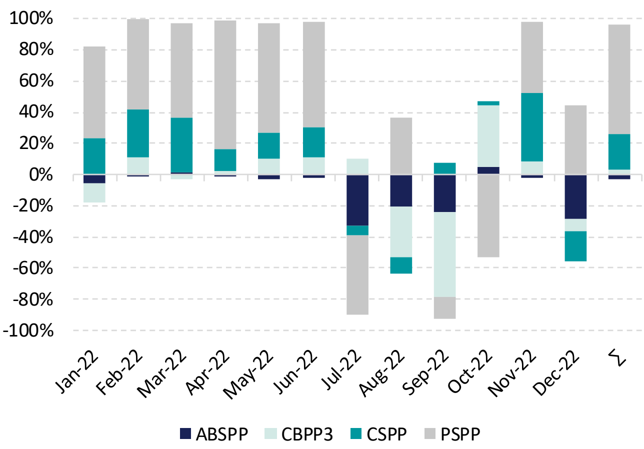
	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	∑
APP	18,838	20,698	21,929	39,397	30,232	19,722	-1,759	-656	-1,884	-320	1,128	-373	146,952
PSPP	17,292	12,095	14,172	33,238	22,443	13,924	-1,114	869	-315	-2,938	540	1,398	111,604
CSPP	6,970	6,272	8,042	5,461	5,366	3,858	-141	-253	164	139	513	-609	35,782
CBPP3	-3,761	2,376	-606	1,074	3,247	2,339	217	-787	-1,210	2,229	97	-269	4,946
ABSPP	-1,663	-45	321	-376	-824	-399	-721	-485	-523	250	-22	-893	-5,380

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

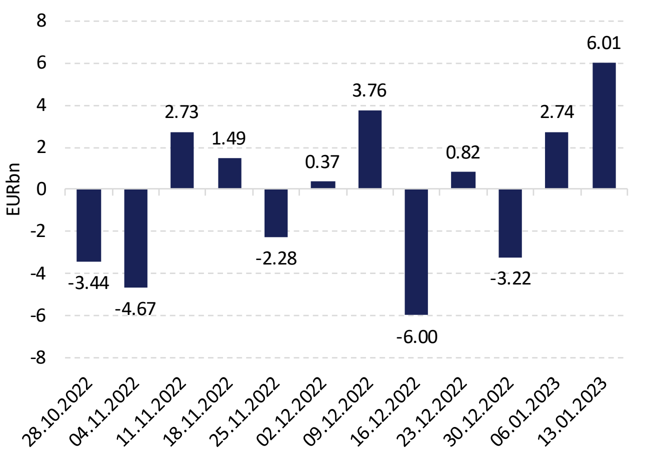
Portfolio development



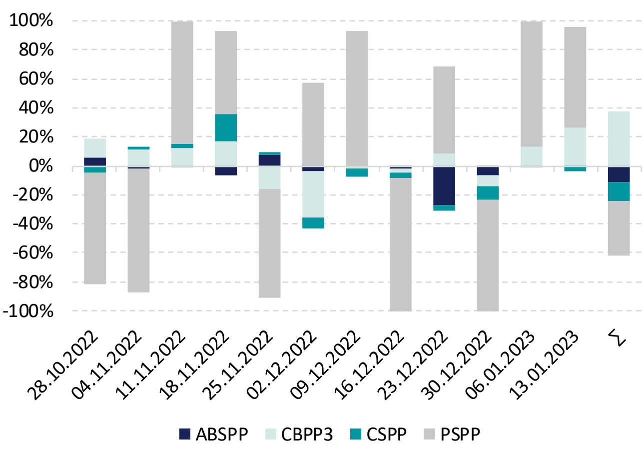
Distribution of monthly purchases



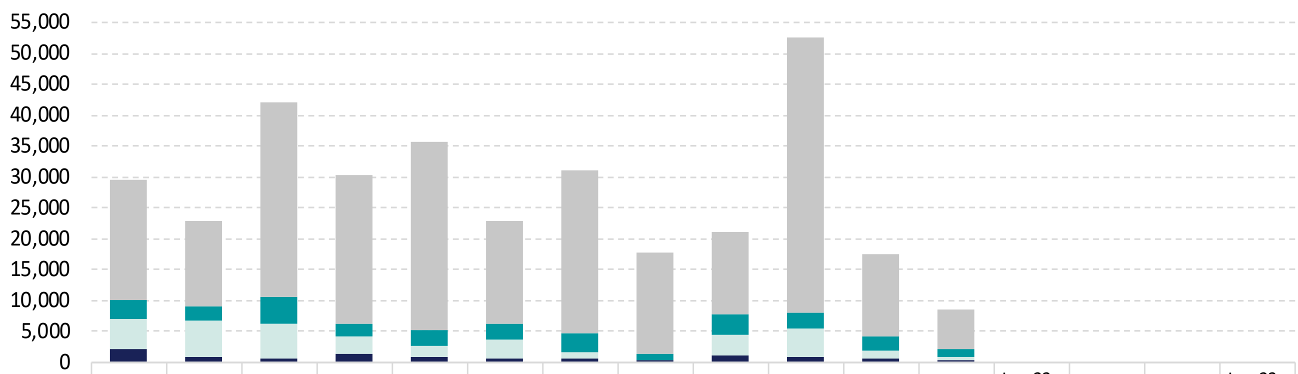
Weekly purchases



Distribution of weekly purchases



Expected monthly redemptions (in EURm)

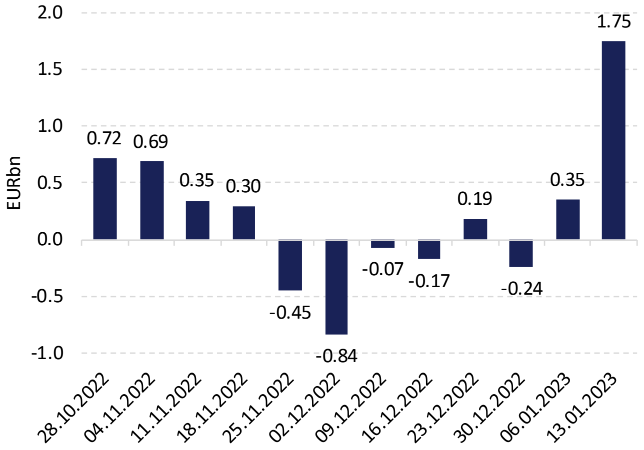


	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-23 - Dec-23	2021	2022	Jan-23 - Dec-23
APP	29,406	22,745	42,019	30,201	35,807	22,842	30,999	17,811	21,185	52,718	17,421	8,512	331,666	247,069	299,122	331,666
PSPP	19,469	13,625	31,494	23,889	30,559	16,619	26,287	16,445	13,367	44,729	13,259	6,336	256,078	188,494	228,585	256,078
CSPP	3,010	2,352	4,219	2,162	2,579	2,557	3,038	986	3,362	2,616	2,342	1,336	30,559	17,134	17,670	30,559
CBPP3	4,786	6,065	5,631	2,937	1,874	3,112	1,170	0	3,346	4,465	1,351	408	35,145	30,143	41,244	35,145
ABSPP	2,141	703	675	1,213	795	554	504	380	1,110	908	469	432	9,884	11,298	11,623	9,884

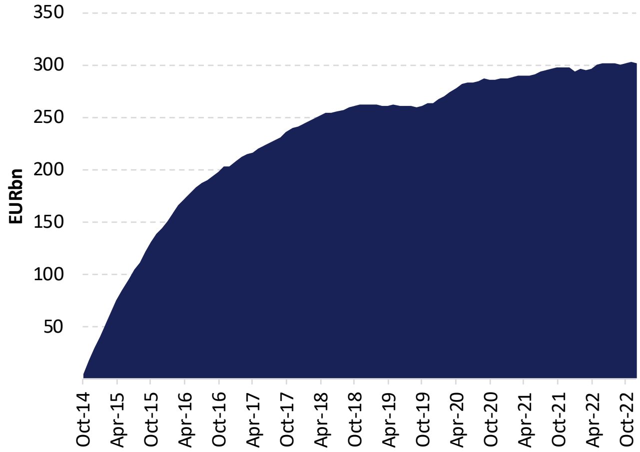
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

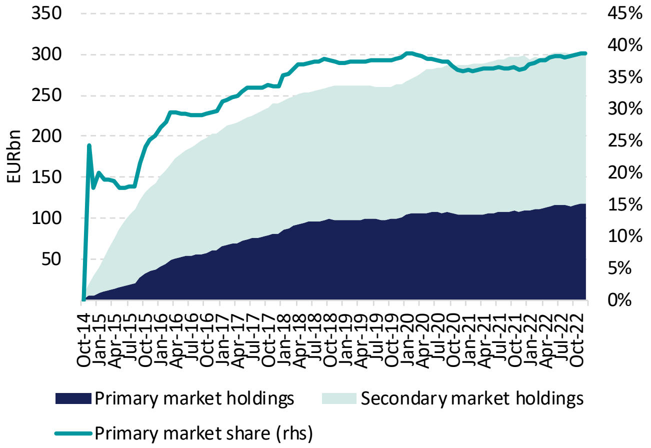
Weekly purchases



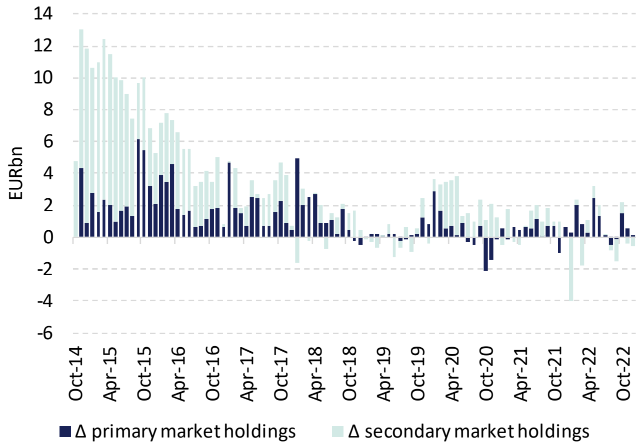
Development of CBPP3 volume



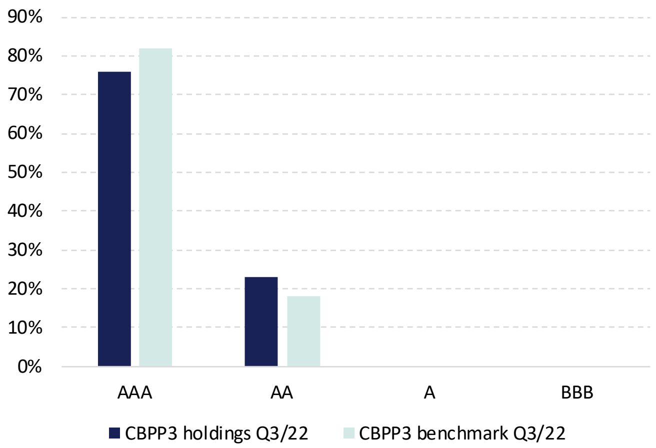
Primary and secondary market holdings



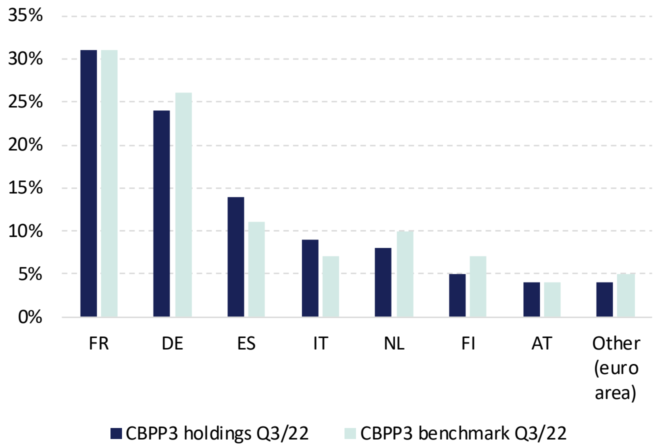
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating



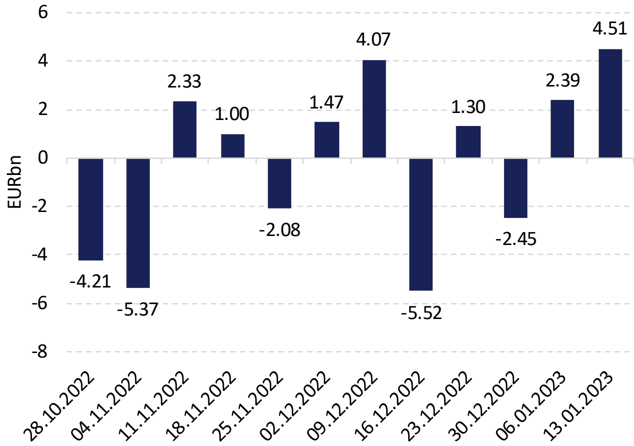
Distribution of CBPP3 by country of risk



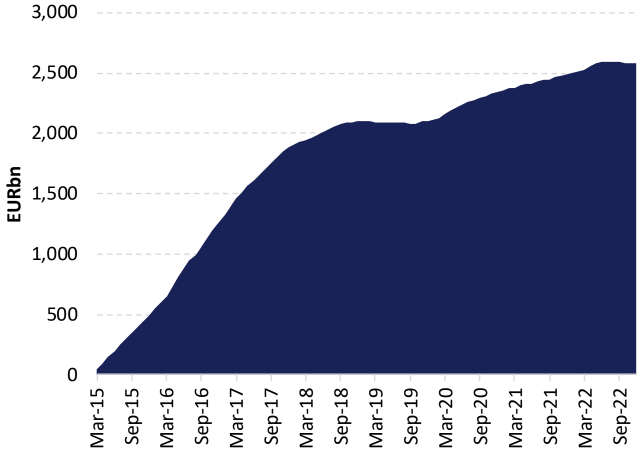
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



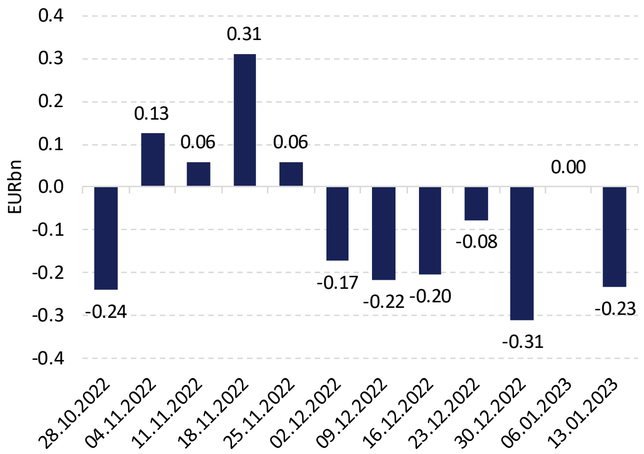
Overall distribution of PSPP buying at month-end

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%	75,137	74,083	1,054	7.5	8.4	-0.9
BE	3.4%	94,346	92,215	2,131	7.2	10.4	-3.1
CY	0.2%	4,507	5,446	-939	8.3	8.8	-0.6
DE	24.3%	665,594	667,243	-1,649	6.7	7.9	-1.3
EE	0.3%	564	7,130	-6,566	7.9	8.4	-0.5
ES	11.0%	316,322	301,827	14,495	7.7	8.2	-0.5
FI	1.7%	44,368	46,494	-2,126	8.0	8.8	-0.8
FR	18.8%	533,975	516,966	17,009	6.7	8.6	-1.9
GR	0.0%	0	0	0	0.0	0.0	0.0
IE	1.6%	42,925	42,862	63	8.3	10.1	-1.8
IT	15.7%	443,559	430,001	13,558	7.2	7.9	-0.7
LT	0.5%	6,021	14,649	-8,628	10.0	9.6	0.4
LU	0.3%	3,947	8,338	-4,391	5.6	7.5	-1.9
LV	0.4%	3,934	9,863	-5,929	8.6	8.6	0.0
MT	0.1%	1,435	2,655	-1,220	11.0	9.4	1.5
NL	5.4%	134,573	148,335	-13,762	7.6	9.3	-1.7
PT	2.2%	53,694	59,241	-5,547	7.5	7.8	-0.4
SI	0.4%	11,226	12,187	-961	9.3	9.5	-0.2
SK	1.1%	18,646	28,987	-10,341	7.7	8.5	-0.7
SNAT	10.0%	288,028	274,280	13,748	8.2	9.6	-1.4
Total / Avg.	**100.0%**	**2,742,802**	**2,742,802**	**0**	**7.2**	**8.5**	**-1.3**

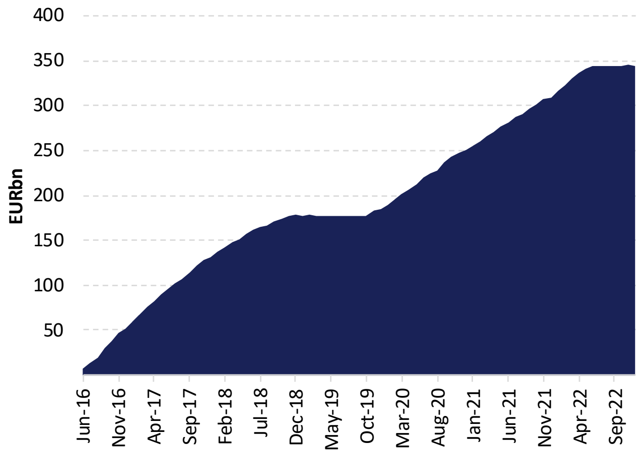
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of PSPP portfolio holdings
[4] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP
Source: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

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

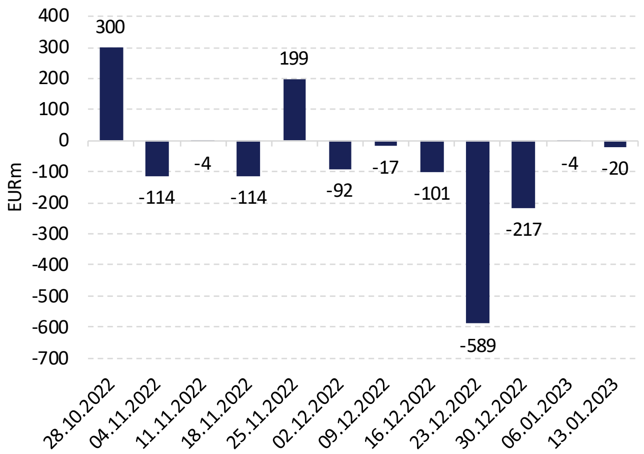


Development of CSPP volume

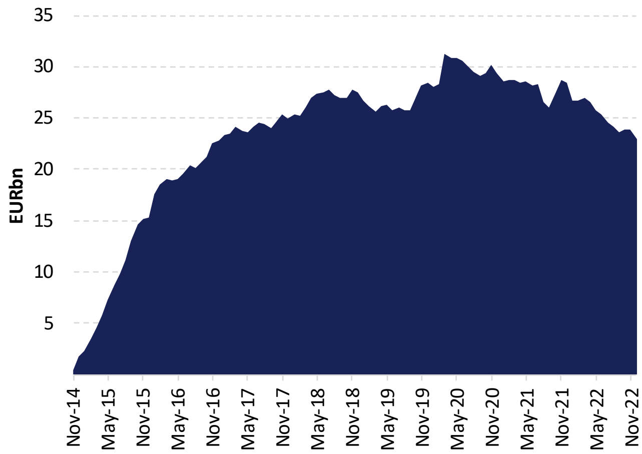


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



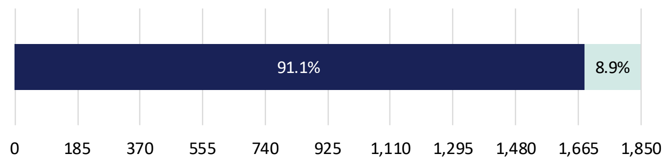
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

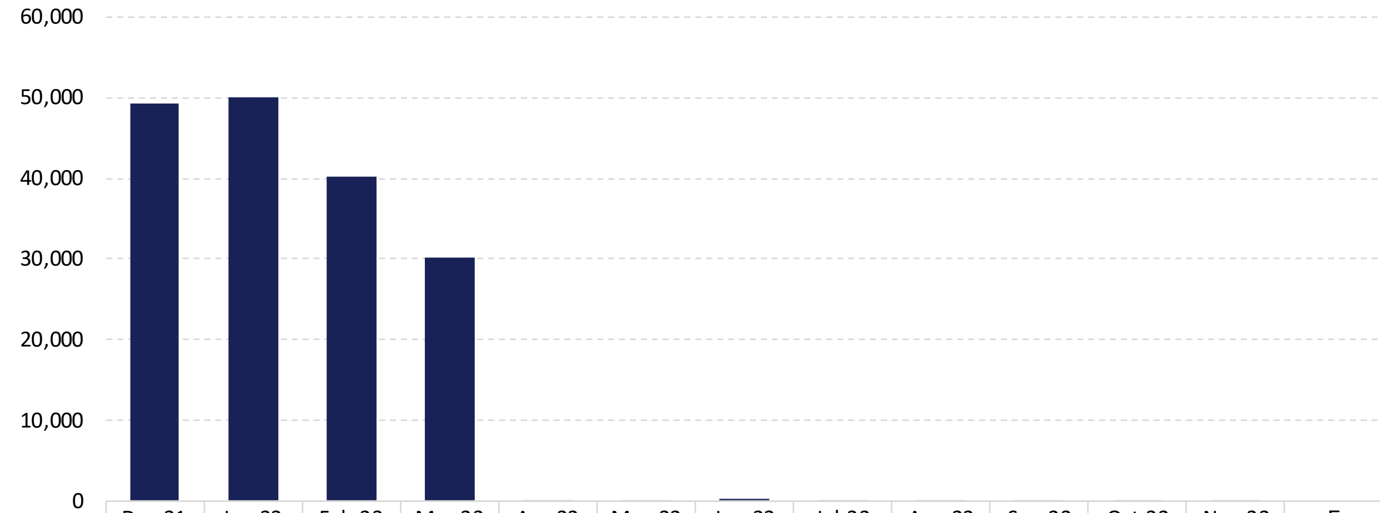
Holdings (in EURm)

	PEPP
Oct-22	1,712,889
Nov-22	1,712,753
Δ (net purchases)	-136

Invested share of PEPP envelope (in EURbn)

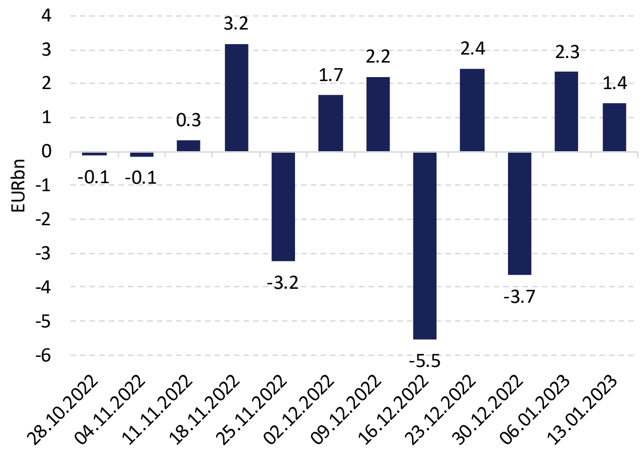


Monthly net purchases (in EURm)

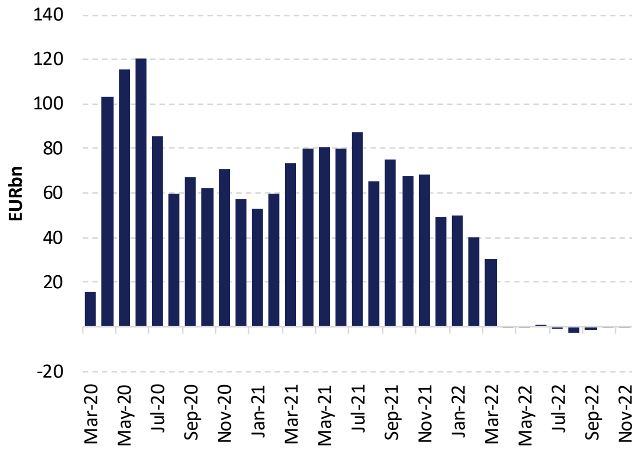


	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	∑
■ PEPP	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	-146	-136	164,562

Weekly purchases



Development of PEPP volume

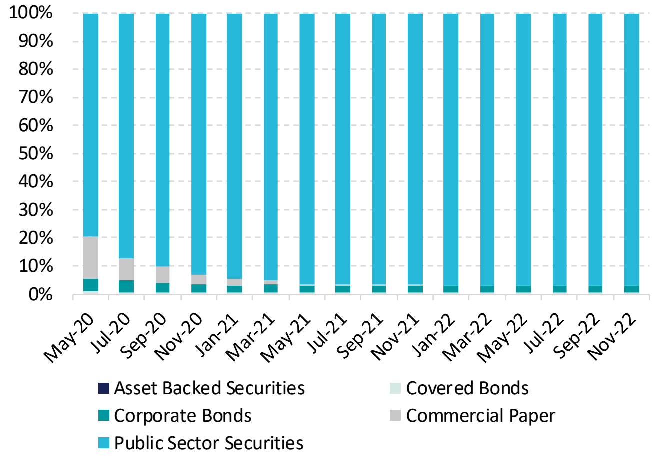


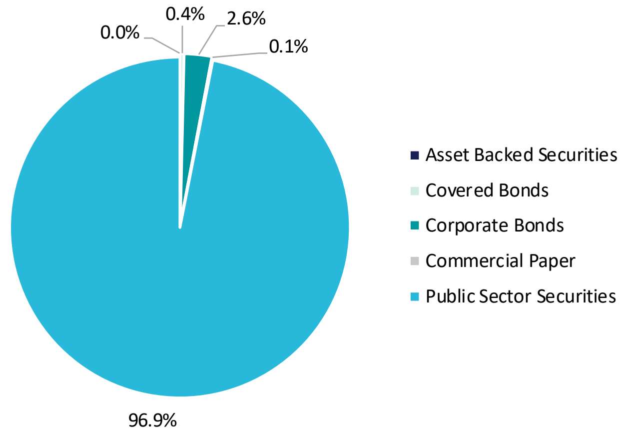
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Holdings under the PEPP (in EURm)

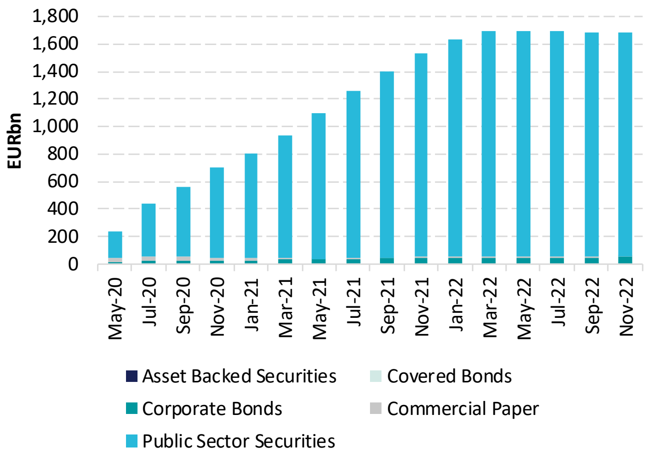
	Asset-backed Securities	Covered Bonds	Corporate Bonds	Commercial Paper	Public Sector Securities	PEPP
Sep-22	0	6,056	43,233	2,871	1,631,176	1,683,336
Nov-22	0	6,056	44,012	2,091	1,630,895	1,683,054
Δ (net purchases)	0	0	+780	-780	-281	-282

Portfolio structure

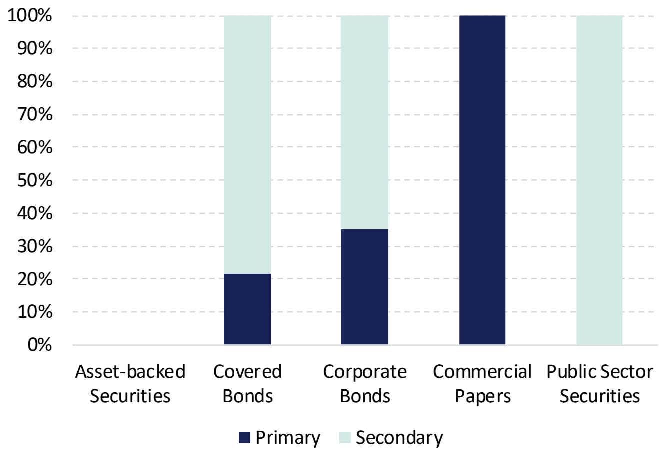




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

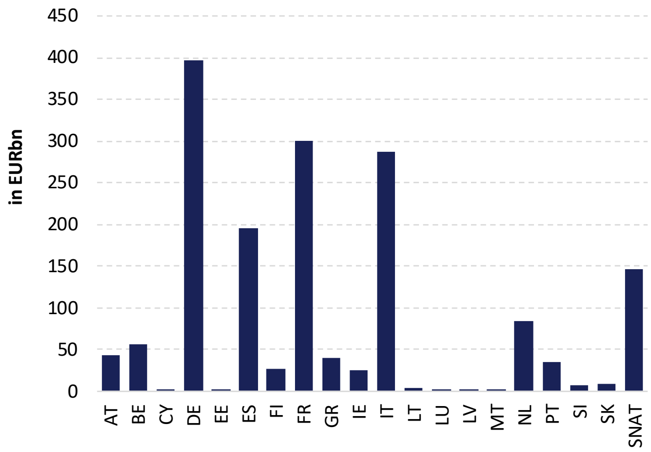
Nov-22	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,299	4,757	15,481	28,531	2,091	0
Share	0.0%	0.0%	21.4%	78.6%	35.2%	64.8%	100.0%	0.0%

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

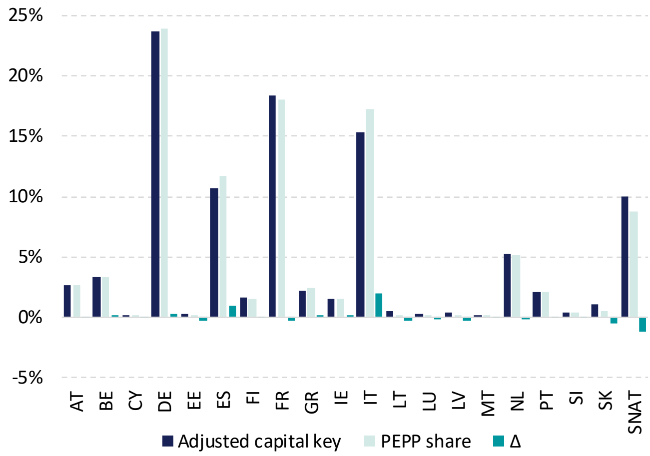
Breakdown of public sector securities under the PEPP

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	43,449	2.6%	2.6%	0.0%	7.7	7.3	0.3
BE	56,175	3.3%	3.4%	0.1%	6.4	9.5	-3.1
CY	2,487	0.2%	0.1%	0.0%	8.4	8.3	0.2
DE	397,704	23.7%	24.0%	0.2%	6.8	6.8	0.0
EE	256	0.3%	0.0%	-0.2%	7.5	7.5	0.1
ES	194,758	10.7%	11.7%	1.0%	7.4	7.4	0.0
FI	26,208	1.7%	1.6%	-0.1%	7.6	7.7	-0.1
FR	299,751	18.4%	18.1%	-0.3%	7.8	7.7	0.0
GR	39,607	2.2%	2.4%	0.2%	8.2	9.6	-1.4
IE	25,825	1.5%	1.6%	0.0%	8.8	9.7	-0.9
IT	287,027	15.3%	17.3%	2.0%	7.2	6.9	0.4
LT	3,222	0.5%	0.2%	-0.3%	9.7	8.9	0.8
LU	1,898	0.3%	0.1%	-0.2%	6.0	6.7	-0.7
LV	1,890	0.4%	0.1%	-0.2%	8.1	7.7	0.4
MT	606	0.1%	0.0%	-0.1%	10.6	8.8	1.8
NL	84,558	5.3%	5.1%	-0.2%	7.7	8.6	-0.9
PT	34,425	2.1%	2.1%	0.0%	6.8	7.2	-0.5
SI	6,586	0.4%	0.4%	0.0%	8.7	9.1	-0.4
SK	7,966	1.0%	0.5%	-0.6%	8.3	7.9	0.4
SNAT	145,915	10.0%	8.8%	-1.2%	10.4	8.8	1.6
Total / Avg.	**1,660,313**	**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



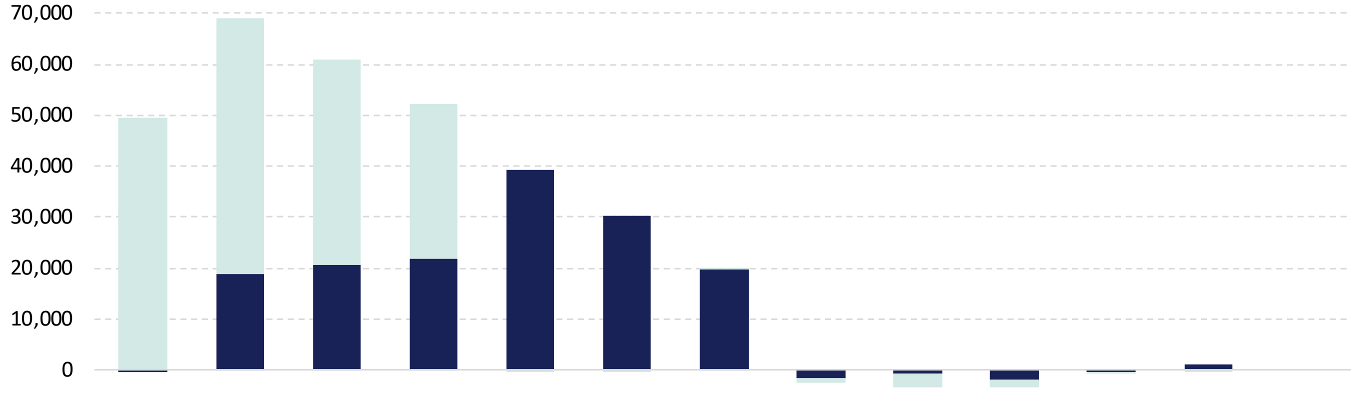
[1] Based on the ECB capital key, adjusted to include supras [2] Based on the adjusted distribution key
[3] Current WAM of public sector securities holdings under the PEPP [4] WAM of eligible universe of public sector securities holdings under the PEPP
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

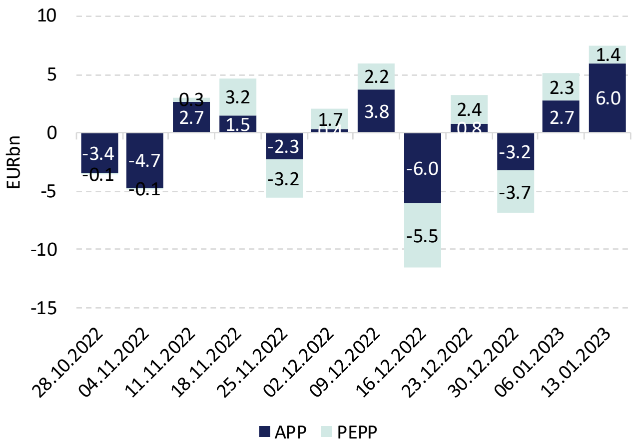
	APP	PEPP	APP & PEPP
Oct-22	3,257,063	1,712,889	4,969,952
Nov-22	3,253,673	1,712,753	4,966,426
Δ	-373	-136	-509

Monthly net purchases (in EURm)

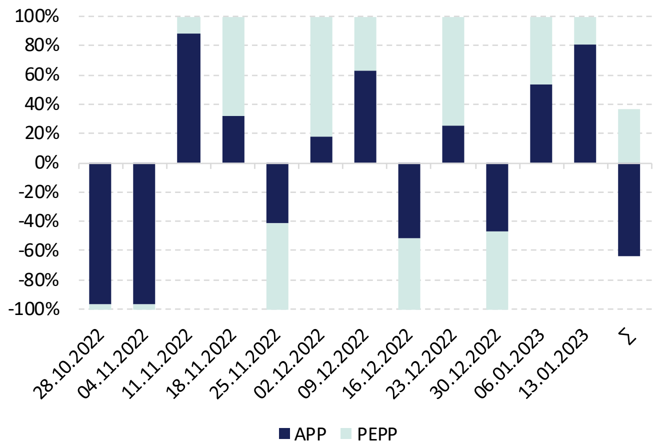


	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	∑
∑	49,363	68,951	60,882	52,143	39,393	30,222	19,734	-2,481	-3,469	-3,389	-466	992	311,875
PEPP	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	-146	-136	164,562
APP	-12	18,838	20,698	21,929	39,397	30,232	19,722	-1,759	-656	-1,884	-320	1,128	147,313

Weekly purchases



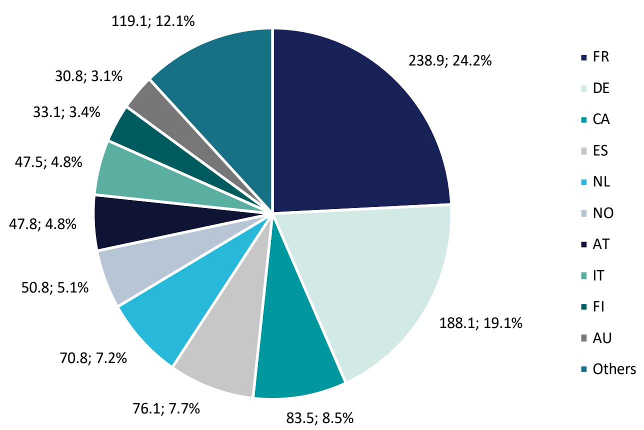
Distribution of weekly purchases



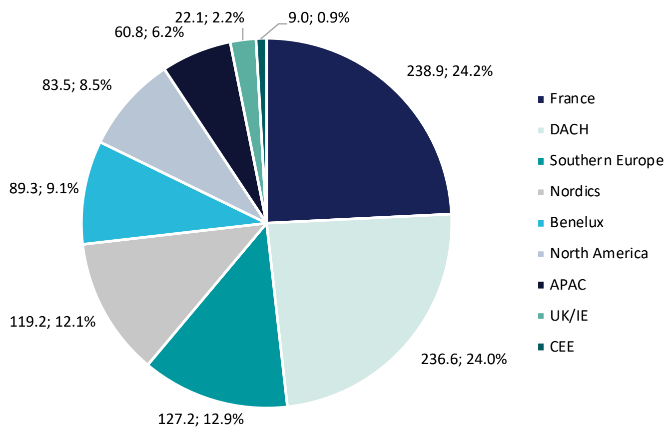
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



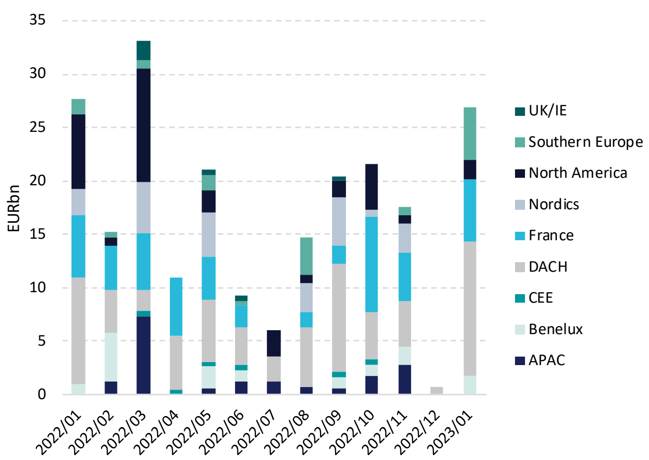
EUR benchmark volume by region (in EURbn)



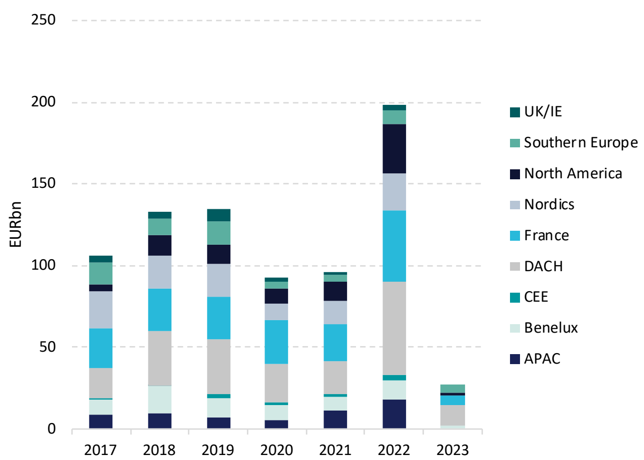
Top-10 jurisdictions

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	238.9	230	15	0.96	9.7	5.2	1.00
2	DE	188.1	270	30	0.64	8.2	4.4	0.80
3	CA	83.5	64	0	1.27	5.6	2.8	0.58
4	ES	76.1	60	5	1.16	11.2	3.6	1.81
5	NL	70.8	72	1	0.92	11.2	7.0	0.87
6	NO	50.8	60	11	0.85	7.2	3.7	0.52
7	AT	47.8	83	3	0.57	8.8	5.5	1.00
8	IT	47.5	58	2	0.79	9.2	3.7	1.24
9	FI	33.1	35	3	0.94	7.3	3.7	0.75
10	AU	30.8	31	0	0.99	7.7	4.0	1.12

EUR benchmark issue volume by month

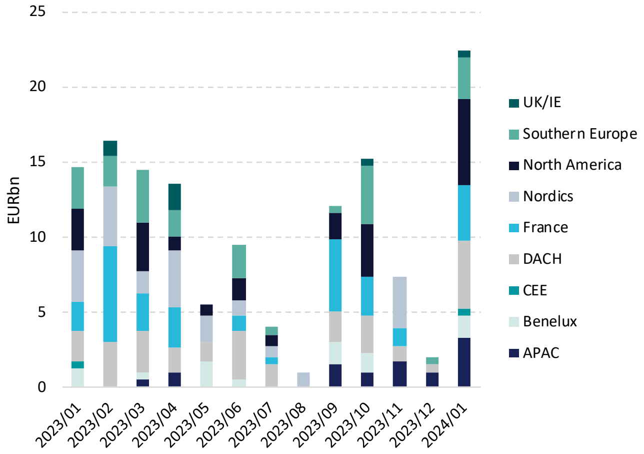


EUR benchmark issue volume by year

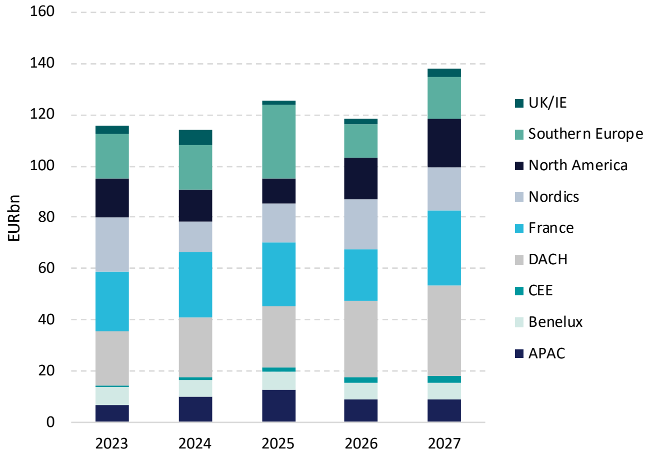


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

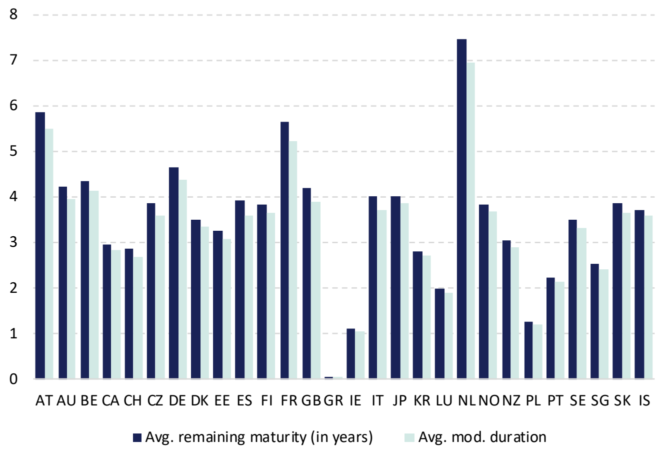
EUR benchmark maturities by month



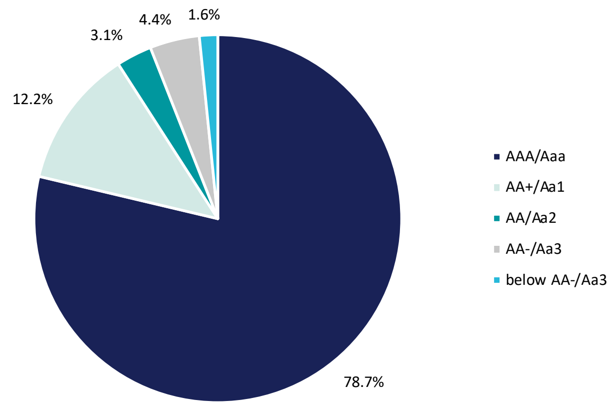
EUR benchmark maturities by year



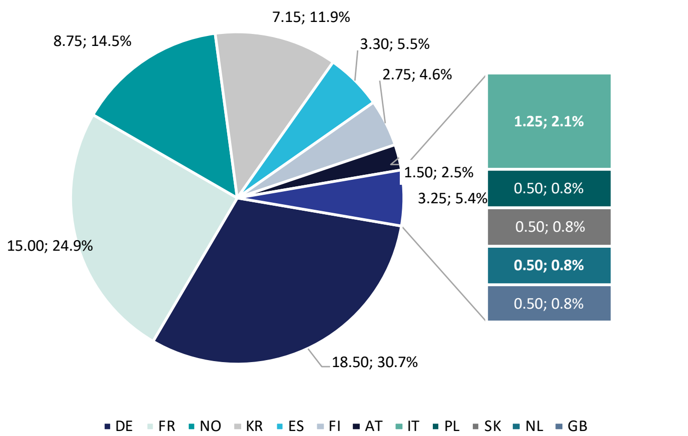
Modified duration and time to maturity by country



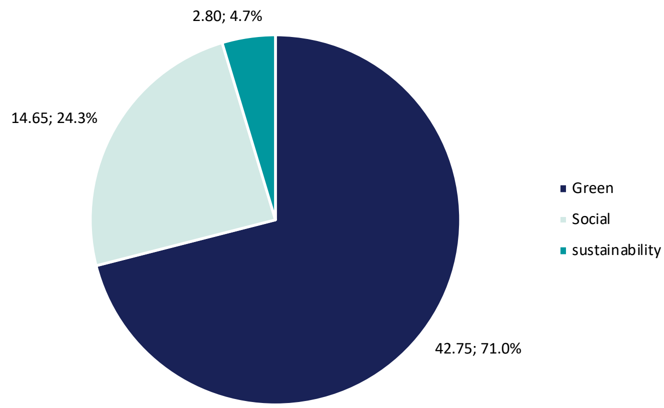
Rating distribution (volume weighted)



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

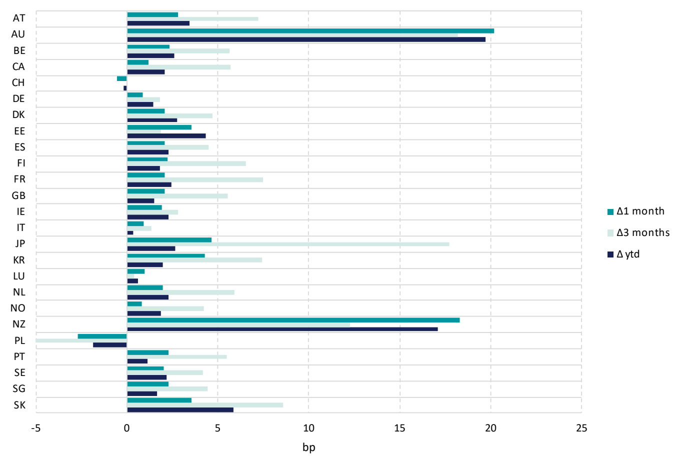


EUR benchmark volume (ESG) by type (in EURbn)

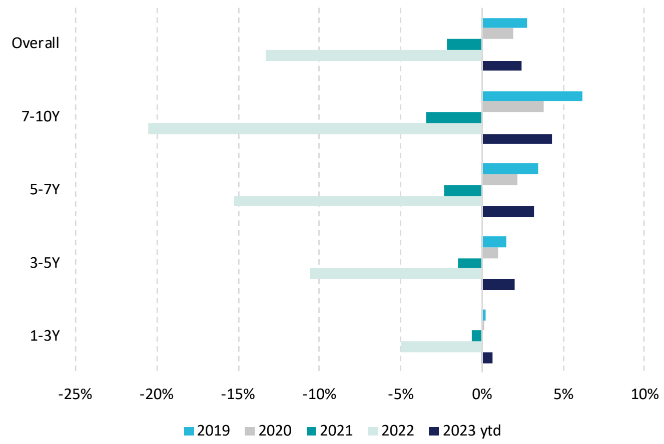


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

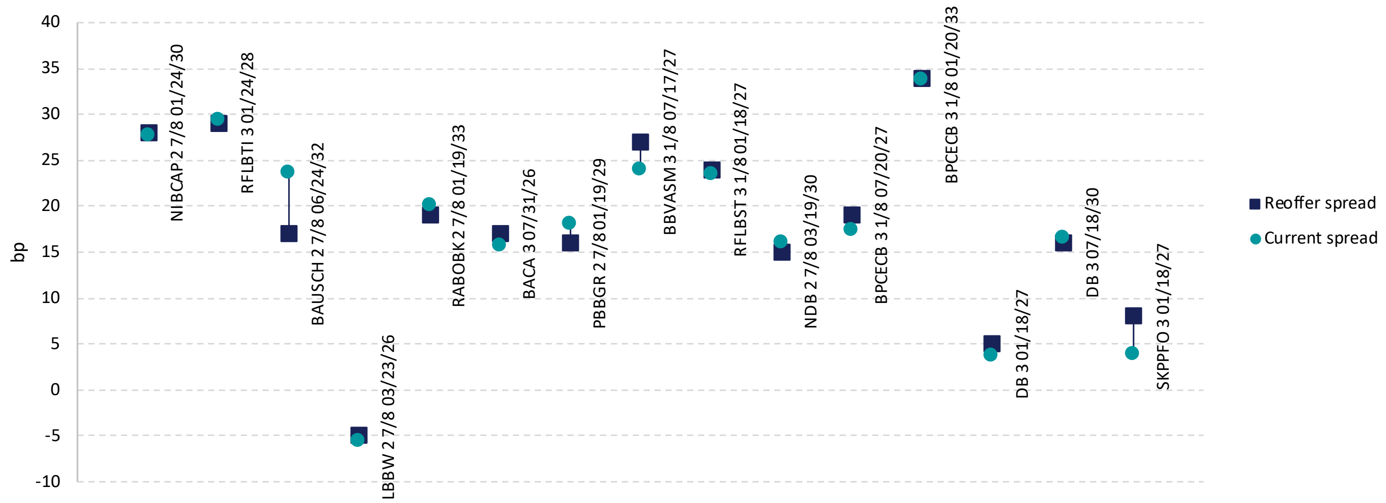
Spread development by country



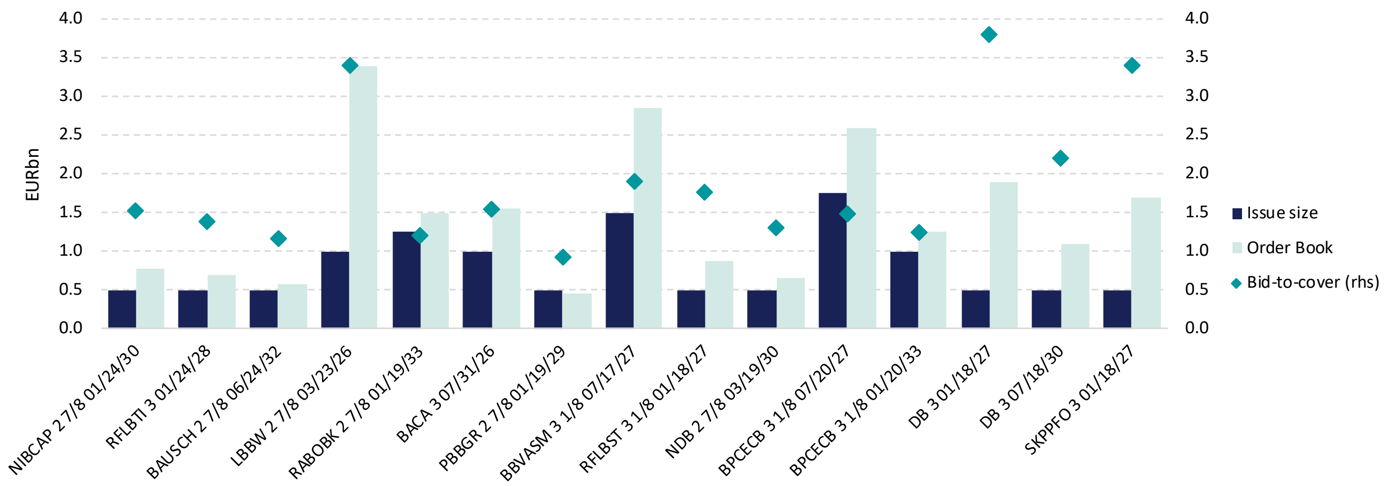
Covered bond performance (Total return)



Spread development (last 15 issues)



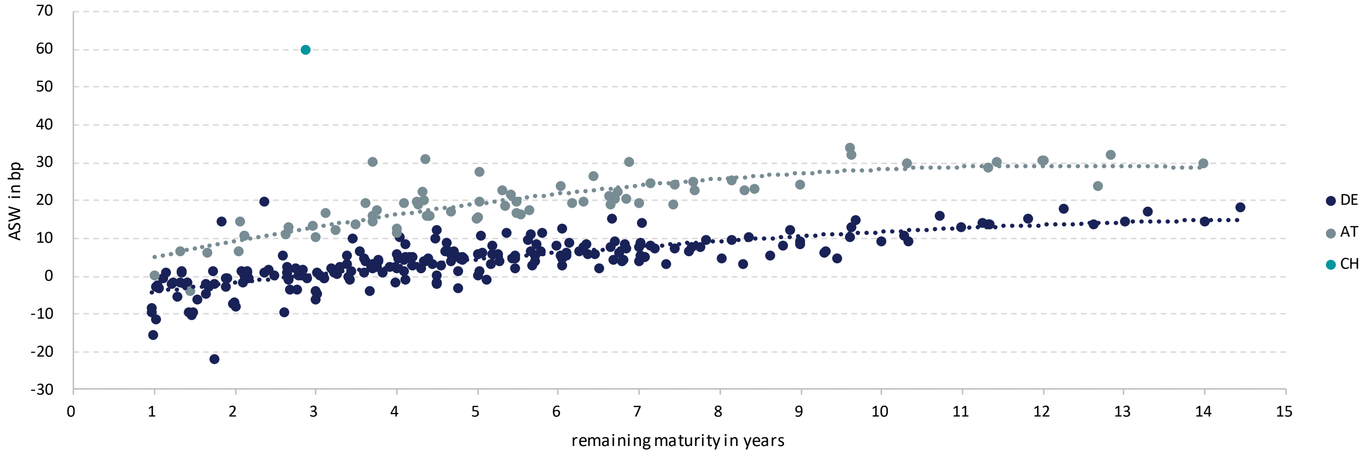
Order books (last 15 issues)



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

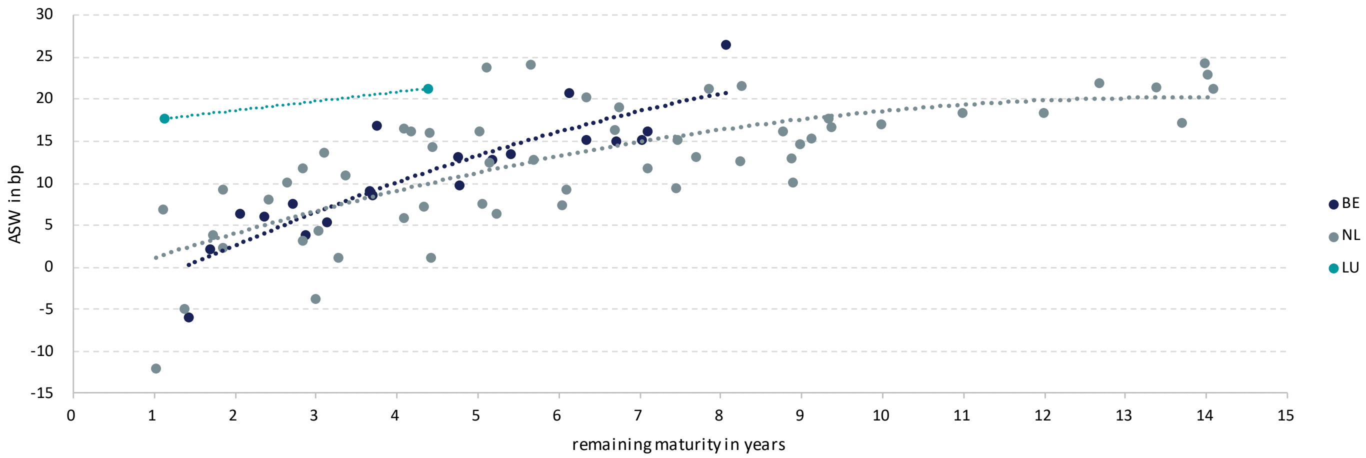
Spread overview[1]

DACH



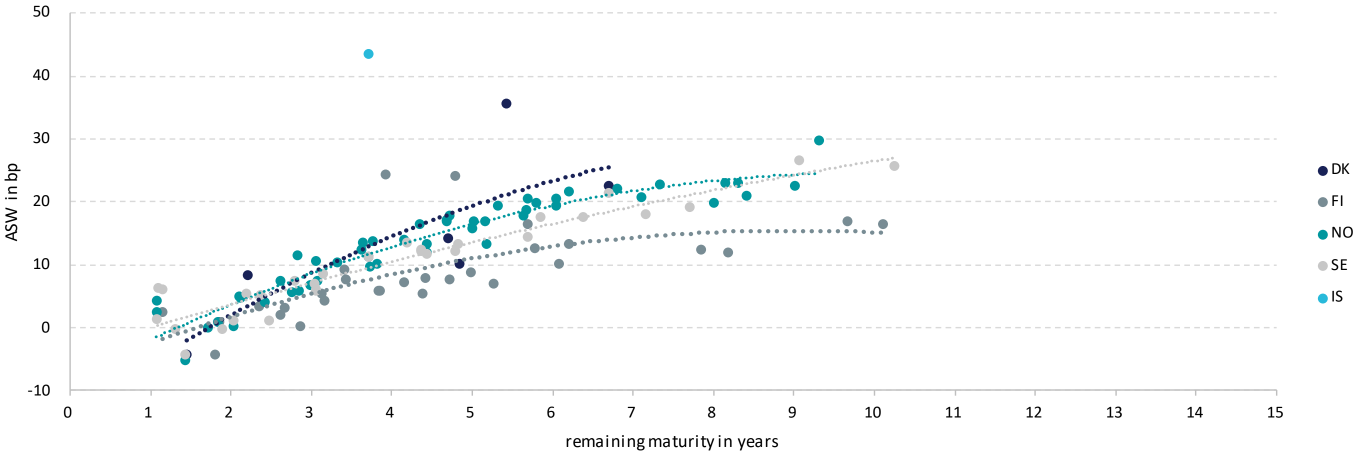
France

Benelux

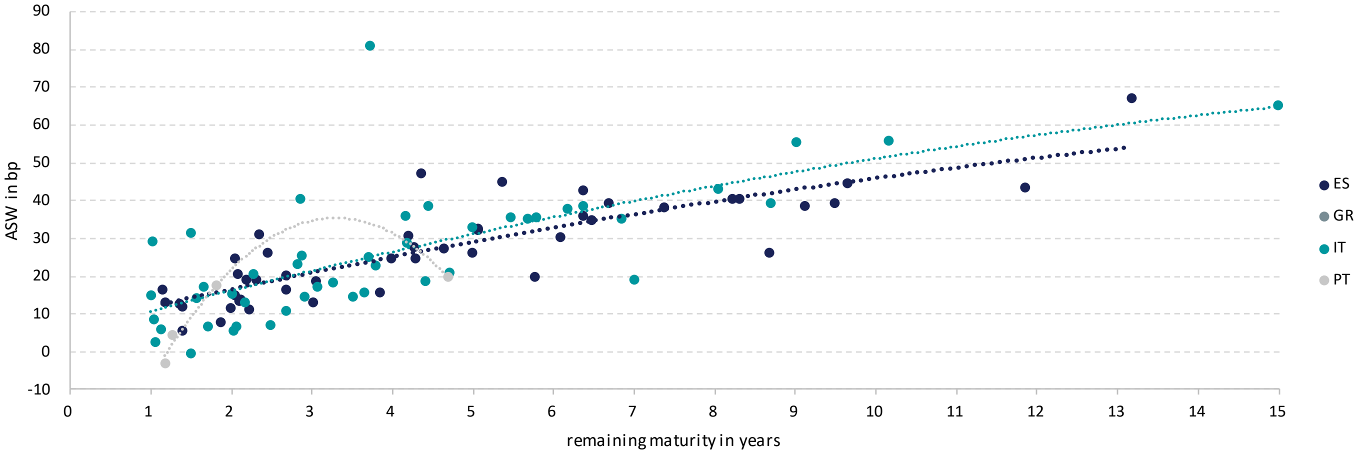


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

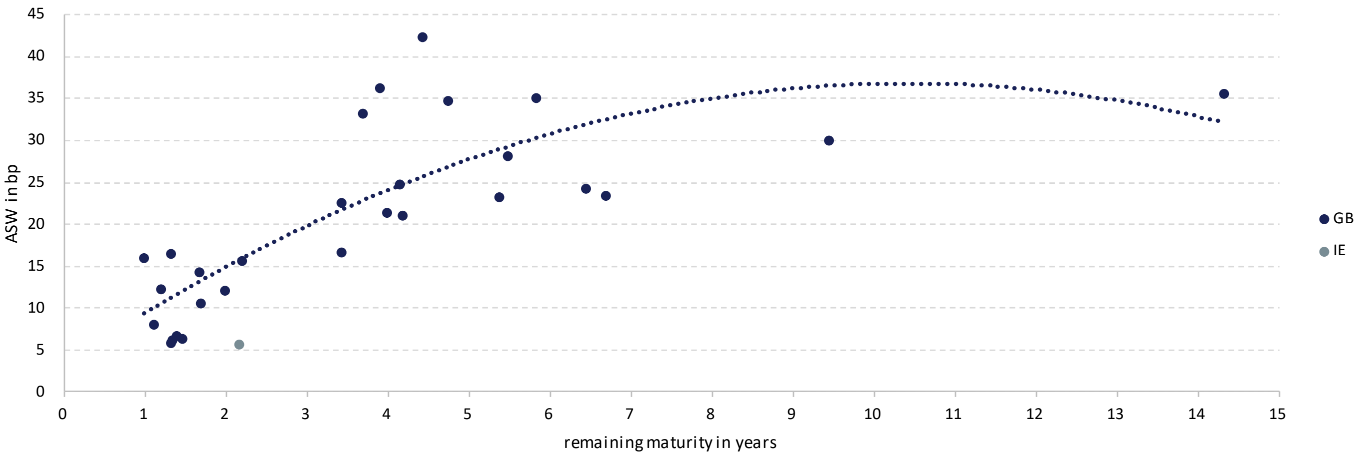
Nordics



Southern Europe

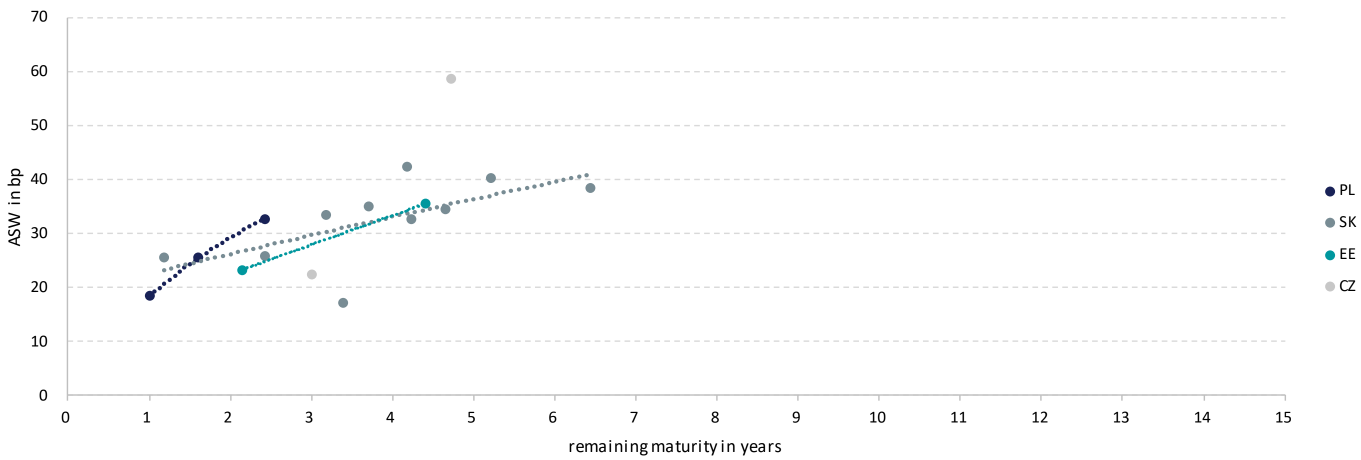


UK/IE

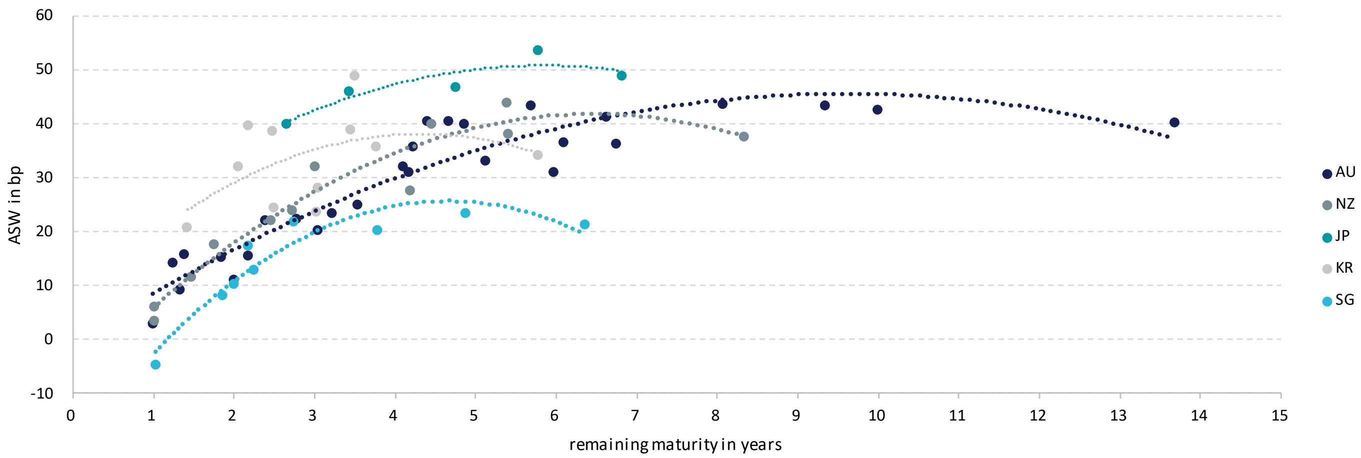


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

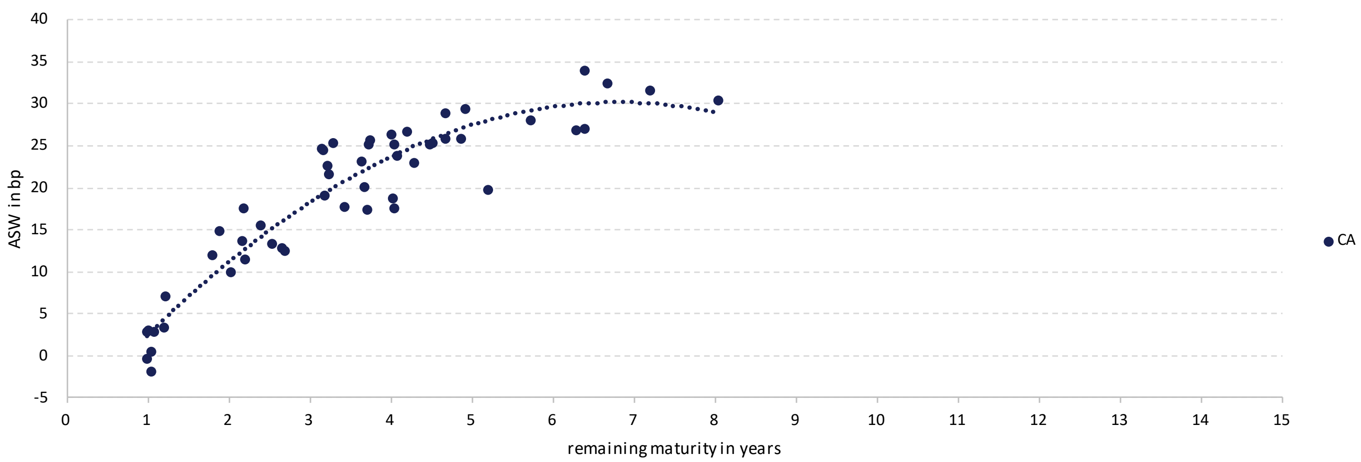
CEE



APAC



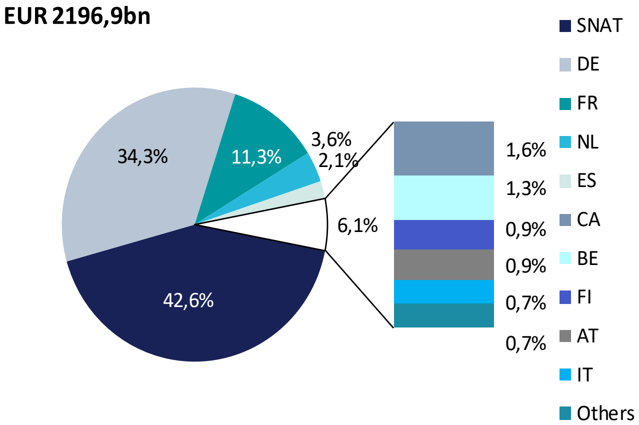
North America



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

Charts & Figures
SSA/Public Issuers

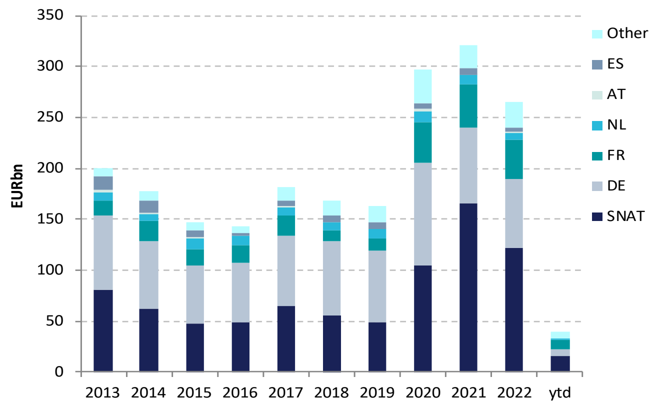
Outstanding volume (bmk)



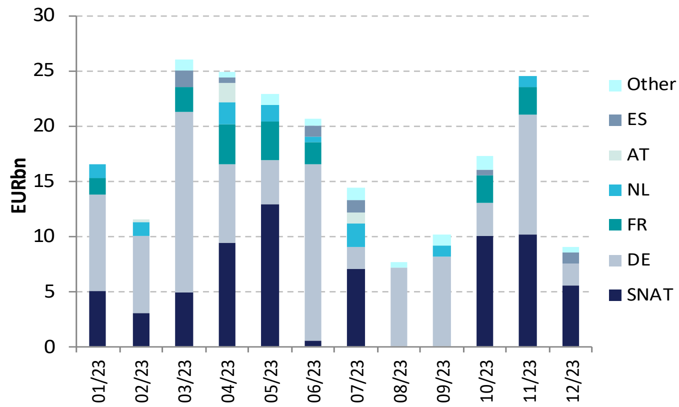
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	936,1	222	4,2	8,2
DE	753,1	558	1,3	6,3
FR	248,5	162	1,5	6,5
NL	79,3	71	1,1	6,5
ES	45,6	60	0,8	4,6
CA	35,7	25	1,4	4,7
BE	28,0	31	0,9	11,8
FI	20,0	23	0,9	5,3
AT	19,8	23	0,9	4,4
IT	15,0	19	0,8	4,9

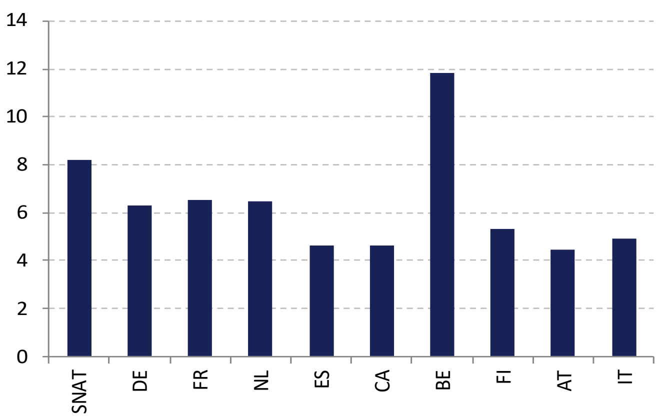
Issue volume by year (bmk)



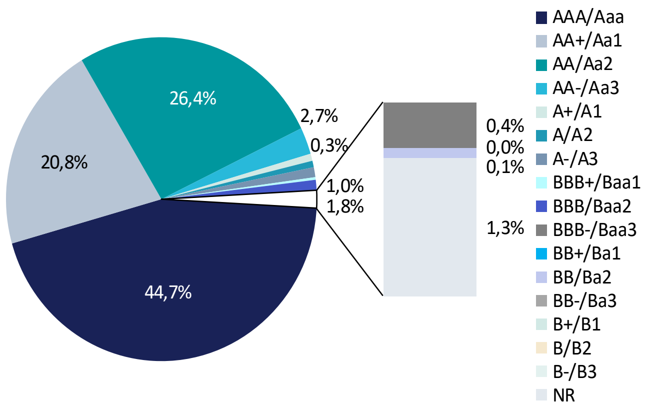
Maturities next 12 months (bmk)



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

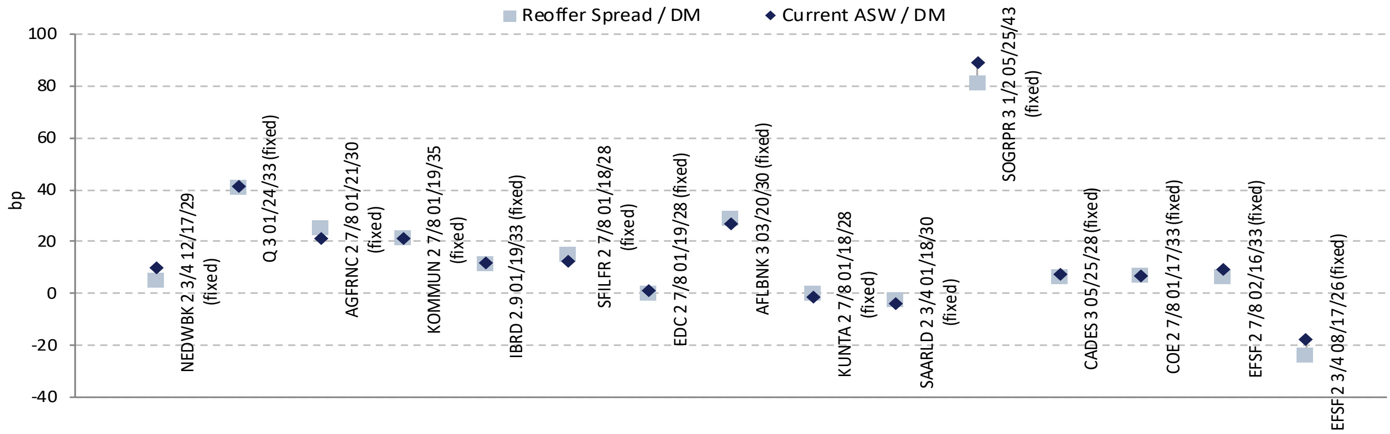


Rating distribution (vol. weighted)

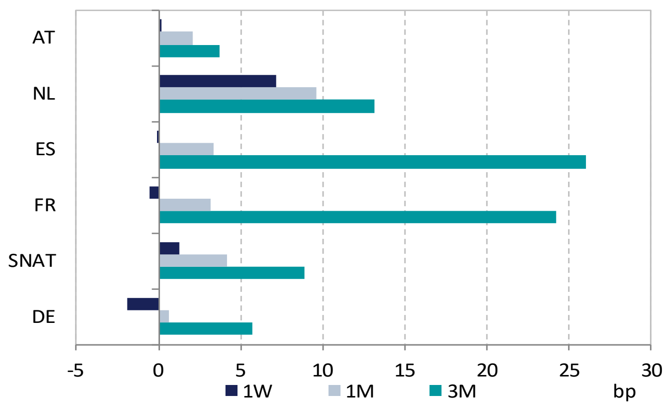


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

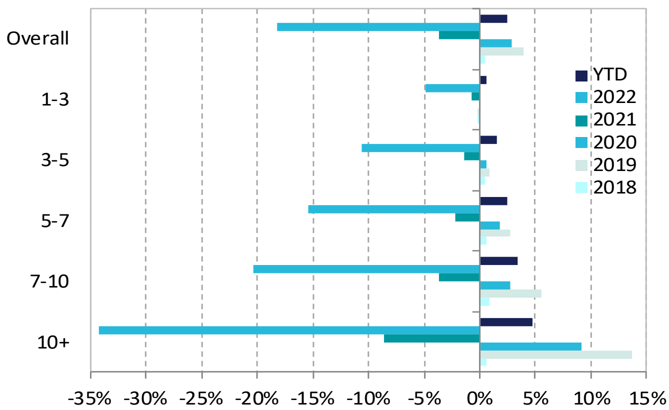
Spread development (last 15 issues)



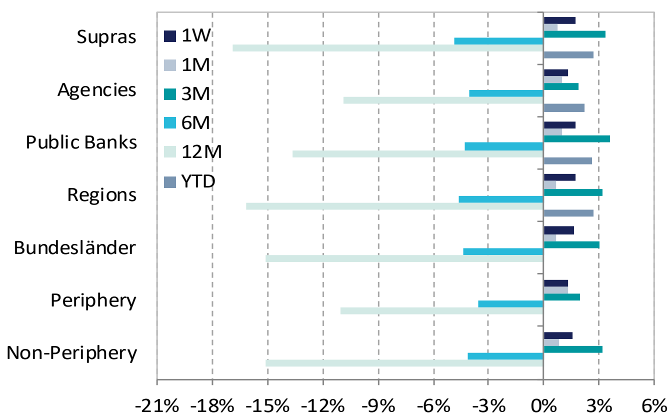
Spread development by country



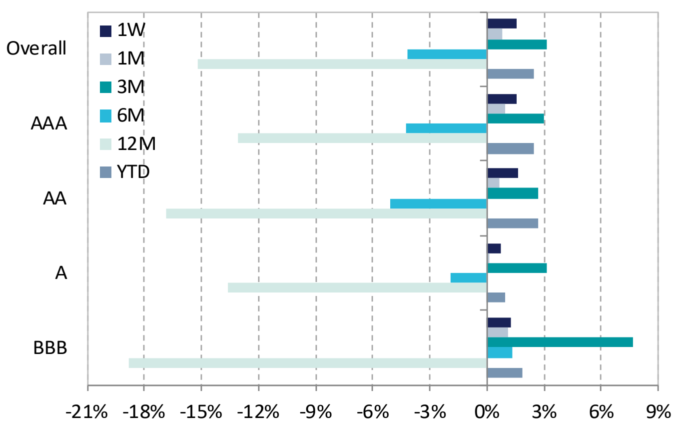
Performance (total return)



Performance (total return) by segments

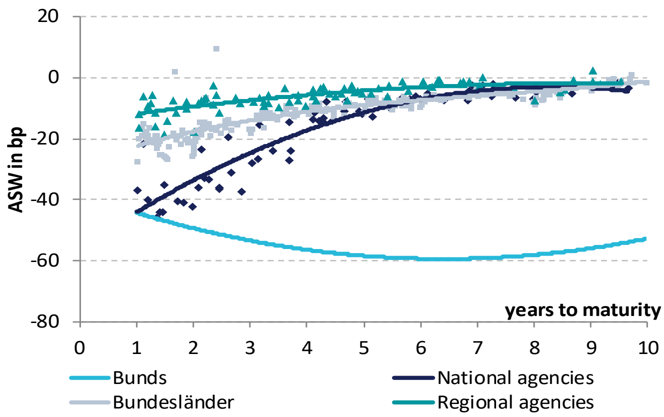


Performance (total return) by rating

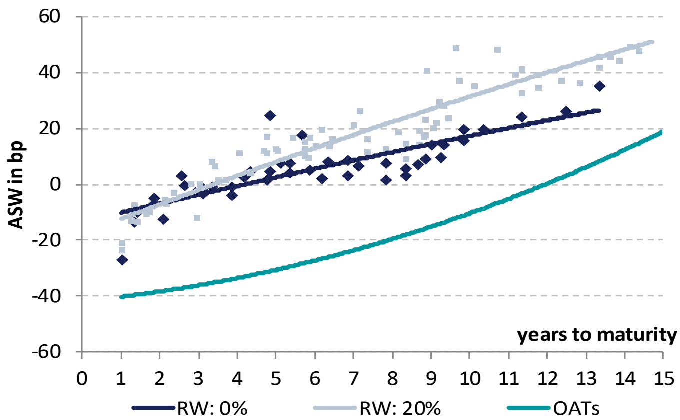


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

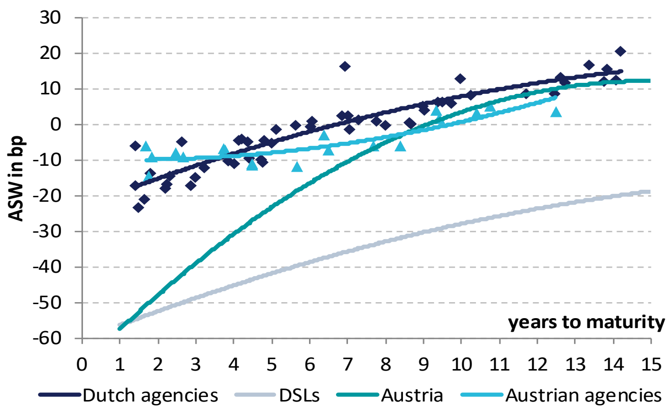
Germany (by segments)



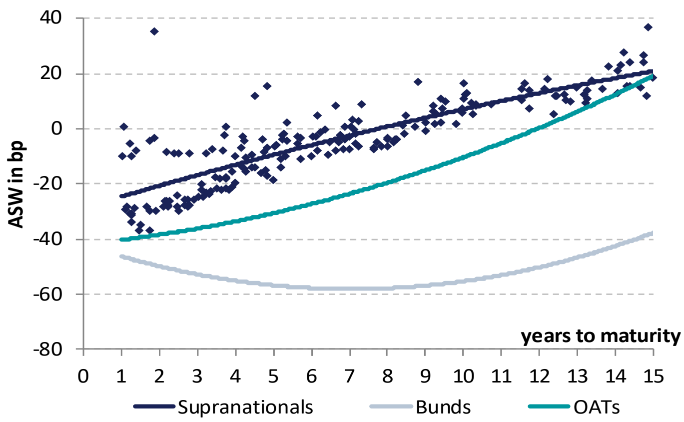
France (by risk weight)



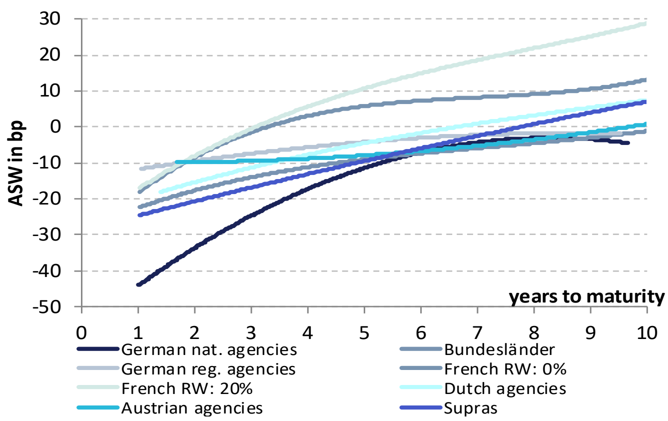
Netherlands & Austria



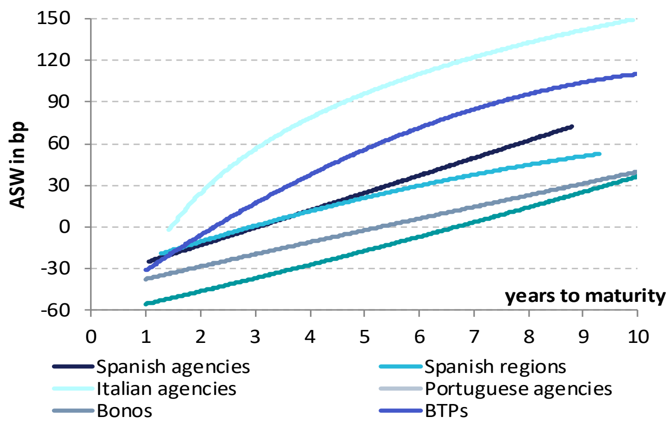
Supranationals



Core



Periphery



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

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Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
01/2023 ♦ 11 January	▪ ECB review: 2022 entailed all manner of monetary policy action ▪ Covered Bonds Annual Review 2022 ▪ SSA: Annual review of 2022
39/2022 ♦ 14 December	▪ Our view of the covered bond market heading into 2023 ▪ SSA outlook 2023: ECB, NGEU and the debt brake in Germany
38/2022 ♦ 07 December	▪ ECB preview – next hike but total assets (finally) reduced?! ▪ Covered bond jurisdictions in the spotlight: a look at Spain
37/2022 ♦ 30 November	▪ Transparency requirements §28 PfandBG Q3 2022 ▪ ECB repo collateral rules and their implications for Supranationals & Agencies
36/2022 ♦ 23 November	▪ ESG covered bonds - another record year ▪ Current LCR classifications for our SSA coverage
35/2022 ♦ 16 November	▪ Covered bond jurisdictions in the spotlight: a look at Austria ▪ Development of the German property market ▪ EIB goes Blockchain… again!
34/2022 ♦ 09 November	▪ Covered bond jurisdictions in the spotlight: a look at Norway ▪ Tenth edition of the NORD/LB Issuer Guide Covered Bonds ▪ SSA primary stats ytd before the final sprint
33/2022 ♦ 26 October	▪ Repayment structures on the covered bond market: EU harmonisation project consigns hard bullets to the shadows ▪ The debt brake at Laender level
32/2022 ♦ 19 October	▪ ECB preview: +75bp and the balance sheet question ▪ EBA Risk Dashboard paints a robust picture in Q2 2022 ▪ An overview of the German Laender
31/2022 ♦ 12 October	▪ The covered bond rating approach of S&P ▪ Benchmark indices for German Laender
30/2022 ♦ 28 September	▪ Focus on covered bond jurisdictions: Singapore in the spotlight ▪ German Laender: more ESG issues on the horizon?
29/2022 ♦ 21 September	▪ ECBC publishes annual statistics for 2021 ▪ Update: Gemeinschaft deutscher Laender (Ticker: LANDER)
28/2022 ♦ 07 September	▪ Primary market: A little more to come! ▪ ECB: PEPP visibly active as first line of defence
27/2022 ♦ 31 August	▪ ECB rate hikes: minimum of +100bp still to come by year-end ▪ Australia: Macquarie returns to the EUR benchmark segment
26/2022 ♦ 24 August	▪ Development of the German property market ▪ Transparency requirements §28 PfandBG Q2/2022
25/2022 ♦ 27 July	▪ ECB likes abbreviations: After OMT and SMP, we now have TPI ▪ Covereds vs. Senior Unsecured Bonds

Appendix
Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2022

Covered Bond Directive: Impact on risk weights and LCR levels

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

Transparency requirements §28 PfandBG Q3/2022 (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

Issuer Guide – German Laender 2022

Issuer Guide – German Agencies 2022

Issuer Guide – Dutch Agencies 2022

Beyond Bundeslaender: Greater Paris (IDF/VDP)

Spotlight on Belgian regions

Spotlight on Spanish regions

Fixed Income Specials:

ESG-Update 2022

ECB interest rate decision: delivered as expected?

ECB acts as the 'House of Hikes' - or: Winter is coming!

ECB frontloads rate hike by +50bp and breaches pre-commitment

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

Appendix
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Liquidity Management	+49 511 9818-9620 +49 511 9818-9650

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Governments	+49 511 9818-9660
Länder/Regionen	+49 511 9818-9550
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