Creating true value.

Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

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Marketing communication (see disclaimer on the last pages)

Agenda

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Market overview
Covered Bonds

Authors: Melanie Kiene, CIIA // Dr Frederik Kunze // Stefan Rahaus

Primary market: EUR 200bn in sight!

As we had predicted, the flood of new emissions continued in the previous reporting week to bring the total issuance volume for 2022 to EUR 192.125bn overall. We now believe that breaking through the EUR 200bn barrier is a distinct possibility before the end of the year. In expectation of quantitative tightening at the ECB (order share still at 20%, although this could change next month or at the meeting of the ECB Governing Council in December) and TLTRO III repayments, we anticipate pre-funding activities and therefore sustained brisk new issuance activities on the part of issuers up to and including December of this year. With its fifth deal of the year (EUR 750m; order book: EUR 1.04bn), Austria's BAWAG increased its covered funding volume last Thursday to EUR 4bn overall. While back in mid-August, a total of EUR 1.25bn with a maturity of ten years could be raised at ms +20bp, the current deal was already priced at ms +17bp for 4.5 years (new issue premium: 8bp). On Monday of this week, we saw a trio of new covered bonds: ING Bank (ticker: INTNED) raised a total of EUR 1.75bn from investors at a spread of ms +2bp for a term of three years. Finland's OPBANK opted for a maturity of 3.6 years and was able to raise EUR 1.25bn with an order book of EUR 1.4bn at a spread of ms +6bp (new issue premium: 8bp; at the end of March, 2bp was still being paid for 5.5y). With its deal worth EUR 1.0bn, Credit Agricole (Ticker: ACACB) increased its issuance volume for 2022 to EUR 6.0bn overall. Here, ms +15bp was the price for a term to maturity of 5.6 years (new issue premium: 8bp; last issuance in August: ms +12bp for 7.3 years). Yesterday, on Tuesday, we recorded the second deal in 2022 from the Australian issuer Westpac Banking Corp (ticker: WSTP; term: 5y; spread: ms+35bp; previous deal: March 2022, 5y at ms +12bp). The comparison values with previous deals clearly demonstrate the widened spread level that must currently be paid for new covered bonds, although the relative level to unsecured funding can still be described as moderate. To finish, we do not want to overlook the tap from Finland's Oma Saastopankki Oyj (ticker: OMASST) for EUR 250m, which has allowed the issuer to increase its EUR 350m deal from May 2022, which is set to fall due on 18 December 2026, to benchmark size.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
Westpac Banking Corp	AU	15.11.	XS2558574104	5.0y	0.75bn	ms +35bp	AAA / Aaa / -	-
Credit Agricole	FR	14.11.	FR001400E1P5	5.6y	1.00bn	ms +15bp	AAA/Aaa/ AAA	-
OP Mortgage Bank	FI	14.11.	XS2558247677	3.6y	1.25bn	ms +6bp	- / Aaa / AAA	-
ING Bank NV	NL	14.11.	XS2557551889	3.0y	1.75bn	ms +2bp	AAA/Aaa/AAA	-
BAWAG	AT	10.11.	XS2556232143	4.5y	0.75bn	ms +17bp	- / Aaa / -	-
Westpac Banking Corp	AU	15.11.	XS2558574104	5.0y	0.75bn	ms +35bp	AAA / Aaa / -	-

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

Secondary market: Under the influence of the primary market

The secondary market continues to be influenced by activities over on the primary market, as well as its spread levels and the new issue premiums on offer. We are observing increased swap activities against cheaply priced fresh supply, with modest spread widening tendencies in the 3-5y maturity segment as well. We expect that this movement will only come to an end once the primary market calms down.

vdp presents updated figures on the property price index

Rising mortgage interest rates, rampant inflation and an uncertain outlook across the board are also weighing on the international property markets. This applies both to commercial properties and – increasingly – to residential real estate as well. The highly regarded vdp property price index experienced a downturn in its most recent reporting period (Q3 2022) for the first time since 2011. As part of today's issue of our weekly publication, we shall again be looking at the details of the vdp property price index. The end of the upward trend also raises the question as to how things will progress on the German property market over the next few quarters. Although the market is expected to cool further, we would not fundamentally question the robustness of the market overall. At the same time, however, the market environment remains challenging for some commercial real estate assets in particular.

Moody's has been mapping potential price drops in commercial real estate since 2016 and refers to its own "through-the-cycle" approach in this context

In particular, projects in the area of Commercial Real Estate (CRE), for which financing was agreed in the zero or negative interest phase, are now becoming the focus of the debate with regard to refinancing risks. At the end of October, the risk experts at Moody's discussed the influence of rising general interest rates on the value development of commercial real estate. According to the authors of the "Sector in-depth" report, a significant decline in market values in this segment can be expected over the next 18 months. In turn, this will make it more difficult to refinance maturing loans or make it necessary to provide additional equity. In principle, such developments also have implications for covered bonds in general and German Pfandbriefe with high CRE shares in particular. In fact, Moody's "through-the-cycle" approach must be taken into account here with regard to possible rating changes for covered bonds. Accordingly, the agency has included risk discounts (haircuts) on real estate values in a CRE context since 2016 in connection with awarding ratings and subsequently validating them, which are intended to anticipate potential price declines in the future when deriving the relevant rating indicators. For the markets in Western Europe, Moody's is currently revising market values downwards by 20% to 40%, so that pronounced price declines in the future do not necessarily have to be accompanied by rating downgrades, since these setbacks are already part of the current collateral valuation.

NORD/LB Capital Market Spotlight: "Austrian Day" on 24 November

The Austrian covered bond markets can certainly be regarded as something of a surprise in 2022. We are again expecting a high level of "Made in Austria" issuance activity for 2023 as well. As part of today's edition of our weekly publication, we shall again be focusing on the covered bond market in Austria. Furthermore, we would like to invite our readers to take part in our first "Austrian Day" - another NORD/LB Capital Market Spotlight event - on 24 November, which will provide a more in-depth overview of the market in this Alpine nation. Two reputable Austrian issuers will be making presentations during the event, namely HYPO NOE Landesbank and BAWAG P.S.K, and they will also be available to answer questions from participants too. Simply click on the following link to access the invitation to NORD/LB Capital Market Spotlight: "Austrian Day", which will be held in digital format and German language only.

Market overview SSA/Public Issuers

Author: Jan-Phillipp Hensing

KfW quarterly figures reflect extraordinary promotional year in 2022

The quarterly figures of Kreditanstalt für Wiederaufbau (ticker: KFW) are truly impressive and confirmed a promotional business volume totalling EUR 127.9bn in the first nine months of 2022. Compared with EUR 73.1bn in the same period of the previous year, this represents significant growth. A key driver for this extraordinary business volume has been support provided to the German economy in coping with the consequences of Russian war of aggression against Ukraine. The volume of assistance for energy suppliers alone amounted to EUR 46.4bn. With this extraordinary figure for total lending, total assets also rose significantly. At the end of September 2022, total assets of EUR 585.5bn were up by EUR 34.6bn on the figure recorded at year-end 2021. Conversely, at EUR 1,199m, the operating result (before promotional expense) in the first nine months of the year was down on the previous year's figure of EUR 1,363m. In view of rising interest rates and the associated higher demand for interest reductions, promotional expenses of EUR 181m were considerably higher than the previous year's figure of EUR 94m. The capital ratio and the (common equity) tier 1 capital ratio amounted to 24.9% and 24.8% respectively. Looking at promotional activities in the various business sectors, commitments in the SME Bank and Private Clients division totalled EUR 57.2bn at the end of September 2022 (previous year: EUR 53.6bn). The momentum seen in the first half of 2022 slowed down noticeably, as the promotional conditions under the Bundesförderung für effiziente Gebäude (BEG, German federal funding for efficient buildings) have been tightened. The volume of new business totalling EUR 54.7bn in terms of Customised Finance and Public Clients was significantly higher than the previous year's figure of EUR 6.4bn in view of special financing to secure the supply of energy. KfW Capital also recorded a sharp increase (+149%) in new business (EUR 572m). At EUR 11.7bn, the promotional business volume of export and project finance – which is the responsibility of KfW IPEX-Bank – was also higher than in 2021. KfW Development Bank commitments totalling EUR 2.5bn were up EUR 0.1bn on the previous year's figure. We would also like to mention capital market-related figures: in the period from January to September 2022, KfW raised a total of EUR 78.2bn in the international capital markets. In the same period of the previous year, the amount was EUR 70.9bn. KfW used 13 different currencies for this, with the euro accounting for the lion's share at 63%. According to KfW, this was due to the significant importance of the domestic currency as well as favourable funding terms. Despite a more challenging environment in the USD market, the share of funding in US dollar of 21% was at a high level. With regard to the funding instruments used, the bulk of the funding was raised with benchmark bond issues (63%), while green bond issues and private placements each accounted for 10% of total funding. By the end of October, KfW had already raised EUR 86.5bn (96%) of its EUR 90bn funding target for 2022 as a whole. In addition, the promotional bank has also been able to make use of loans from the Economic Stabilisation Fund (Wirtschaftsstabilisierungsfonds, WSF) since the end of October 2022 for the purpose of funding transactions assigned to it by the German federal government that are linked to the energy industry and to energy supply.

PSPP includes a new name – Infrabel SA

The ECB has purchased bonds from Belgium's Infrabel SA (ticker: INFBEL) for the first time under its PSPP. INFBEL is an infrastructure company which emerged from the privatisation of the Belgian railway network in 2005 and is a member of the NMBS/SNCB Group (National Railway Company of Belgium). The purchased bond (INFBEL 4% 04/19/27) was issued in 2012 and the outstanding volume is EUR 75m.

European Commission proposes support package for Ukraine

Last week, the European Commission proposed a support package for Ukraine with a volume totalling EUR 18bn for 2023. Building on the Macro-Financial Assistance (MFA) programme, this would be a new MFA+ instrument. Prior to the rescue package coming into force, the European Parliament, the EU member states and the European Council will need to approve the package. This support aims to secure a steady, regular and predictable payment flow to Ukraine of approximately EUR 1.5bn per month, ensuring that essential public services (e.g. hospitals and schools) can continue to be funded, in addition to allowing pensions and civil servants to continue being paid. Furthermore, the loans are aimed at restoring critical infrastructure which has been destroyed by Russia. The maximum loan term would be 35 years and repayment would start in 2033. Furthermore, the European Commission has suggested that the EU may cover interest charges as an expression of solidarity through additional payments by the EU member states into the EU budget. With regard to the origin of funds, the European Commission intends to access the capital market using a diversified funding strategy. This means that all EU funding instruments could be used over a flexible timeline.

KfW-ifo SME Barometer at all-time low?

Having known only one direction (downwards) in the previous months, the business climate saw a sideways movement for the first time in October 2022, according to the latest findings of the KfW-ifo SME Barometer. Overall, business sentiment was only 0.1 point down and at -23.8 balance points, was almost at the same level as in the previous month. The reason for this stabilisation was that business expectations (+1.7 points to -42.0 balance points) for the coming six months were slightly less pessimistic than in September. The German federal government's fiscal support package and the decreased probability of a gas shortage were the likely causes for this trend. In contrast, assessments of the current business situation deteriorated once again. Having stood at 0.0 balance points in September 2022, the relevant figure fell to -2.4 balance points and below the long-term average. With regard to the various sectors of the economy, business sentiment deteriorated the most in the construction industry (-3.4 points down to -19.1 balance points). In view of the ECB's turnaround in interest rates, this was to be expected in an industry that is highly sensitive to interest rate movements. However, retail companies also kept reporting record lows, given the high rate of inflation and the associated losses in terms of real wages, although at a somewhat slower rate. Compared with the previous month, business sentiment in this sector was down 0.3 points to -37.5 balance points. Although the sharp fall in the SME business climate slowed, sentiment among large companies continued to nosedive with a decrease of 2.9 points to -28.8 balance points.

Primary market

The end of the year is slowly but steadily approaching. Accordingly, the primary market in our SSA segment is calming down. In addition to yesterday's dual tranche from the European Union (ticker: EU), we also spotted a deal by French CADES (ticker is the same) and one by the German federal state of Schleswig-Holstein (ticker: SCHHOL). In line with its usual approach, the French deficit and debt repayment fund issued a large-volume social bond (EUR 5bn) with a term to maturity of five years. The issue was benchmarked against the interpolated FRTR 0% 02/25/27 and FRTR 0.75% 02/25/28. The marketing phase started with guidance in the OAT +58bp area, but then tightened by 2 basis points to OAT +56bp. According to our calculation, this equates to approximately ms +2bp. The order book for this deal amounted to EUR 16.25bn. By contrast, Schleswig-Holstein placed a 6y bond at ms -16bp, which was in line with the guidance. The total amount issued was EUR 500m. No details were disclosed regarding the order book. Yesterday, Tuesday, the EU then placed its dual tranche transaction. A green bond with a maturity of ten years, worth EUR 6bn, was placed under NextGenerationEU (NGEU). The EU also placed a 30y bond worth EUR 2.5bn for its Macro-Financial Assistance (MFA) programme, with a reserved option to reopen the ISIN for other programmes in the future. Marketing started with a guidance in the ms +3bp area (10y) and ms +76bp area (30y) respectively. In the course of the marketing phase, both bonds tightened by two basis points to ms +1bp and ms +74bp respectively. Typically for deals from this issuer, the order books of EUR 41.9bn (10y) and EUR 29.5bn (30y) meant that the bonds were many times oversubscribed. The bid-to-cover ratios were 7.0x and 11.8x respectively. A new mandate was also announced yesterday: Svensk Exportkredit (ticker: SEK) intends to issue a 5y bond.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
EU	SNAT	14.11.	EU000A3K4DW8	10.2y	6.00bn	ms +1bp	AAA / Aaa / AA+	X
EU	SNAT	14.11.	EU000A3K4DY4	30.3y	2.50bn	ms +74bp	AAA / Aaa / AA+	-
SCHHOL	DE	09.11.	DE000SHFM865	6.0y	0.50bn	ms -16bp	AAA / - / -	-
CADES	FR	08.11.	FR001400DZI3	4.5y	5.00bn	ms +2bp	- / Aa2 / AA	X

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

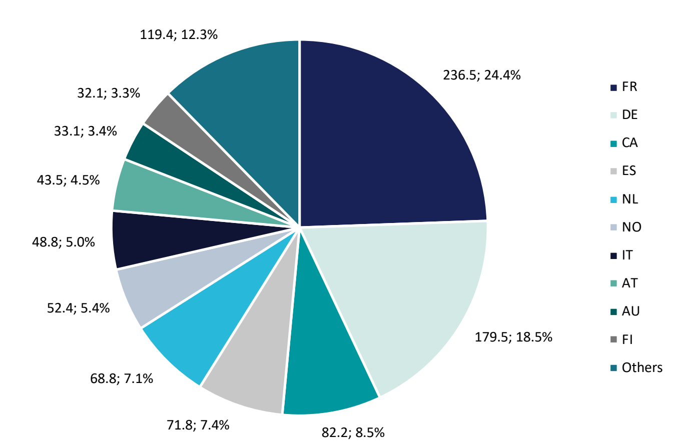
Covered Bonds
Covered bond jurisdictions in the spotlight: a look at Austria

Author: Melanie Kiene, CIIA

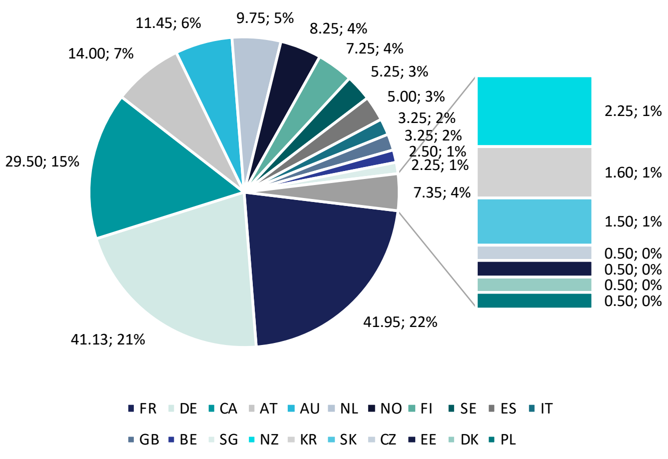
A look at the covered bond market in Austria

Austria has one of the largest mortgage-backed covered bond markets relative to GDP. Although Denmark was in first place in 2021 with outstanding mortgage covered bonds accounting for 128.8% of annual economic output, followed by Sweden with a figure of 45.0% and Norway at 31.9%, Austria is ranked tenth with 17.7% and therefore well ahead of Germany (7.4%) or France (9.1%). To that extent, it comes as no surprise that Austria is among the well-established covered bond jurisdictions measured in terms of volume of outstanding covered bonds. The volume in Austria rose by around 15% against the previous year (2020) and, this year as well, the country has stood out with a high supply of new issues. Based on the latest ECBC annual statistics (to 31 December 2021), Austria was in 12th place with EUR 89.9bn, just behind the UK (EUR 91.7bn) but well ahead of Australia (EUR 57.9bn). There is therefore no question as to the systemic importance of covered bonds in Austria. According to the ECBC's statistics, issues denominated in foreign currencies played a minor role in 2021 at EUR 726m. Based on the same statistics, it is worth noting that, as at year-end 2021, 72% of outstanding covered bonds had been placed in hard bullet format (no maturity extension), with 28% allowing for a potential maturity extension (soft bullet). CPT structures accounted for negligible share of 0.33%. Mortgage-backed Pfandbriefe dominate the domestic market, at 79%, followed by public sector Pfandbriefe (21%). In view of the Austrian Pfandbrief Act, only ship mortgages were possible as other cover assets.

Outstanding EUR benchmark volume by jurisdiction (EURbn)



EUR benchmark volume: primary market ytd by jurisdiction (EURbn)

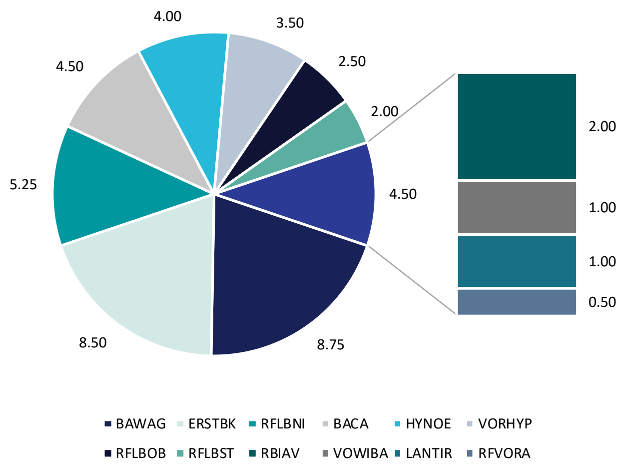


Source: Market data, NORD/LB Markets Strategy & Floor Research

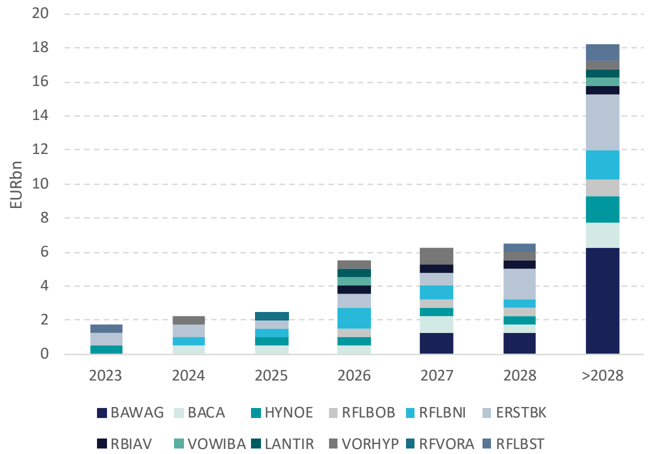
EUR benchmark segment in Austria: 12 active issuers with an outstanding volume of EUR 43.5bn

Austria ranks among the top 10 issuers in the EUR benchmark segment, which is the focus of our coverage. Based on its outstanding volume of EUR 43.5bn, Austria is in eight place here. This volume is currently split between 12 issuers with over 77 bonds outstanding. This puts Austria behind Italy (EUR 48.8 bn) and ahead of Australia (EUR 33.1 bn) among the largest EUR benchmark jurisdictions. However, Austria ranks as high as third place when it comes to the number of outstanding EUR benchmarks, between France (227) and the Netherlands (70). With an outstanding volume of EUR 8.75bn split across 12 benchmarks, Erste Group Bank is the biggest issuer, followed by BAWAG (EUR 8.50bn; 14) and Raiffeisenlandesbank Niederösterreich-Wien (RLB NÖ-Wien; EUR 5.25bn; 9). Moreover, Austria, along with Germany, Belgium and France, is among the few markets in which, in addition to mortgaged-back benchmarks, there are also benchmarks backed by public-sector assets, albeit there are only seven (EUR 3.5bn; 3 issuers) of this type. The issuers in question are BAWAG, Hypo NOE and RLB NÖ-Wien. New Pfandbriefe amounting to EUR 14.0bn have already been issued this year, with eight out of the 12 active benchmark issuers already making an appearance in the market (BAWAG, ERSTBK, HYNOE, VORHYP, RBIAV, RFLBNI, RFLBOB and BACA).

AT: EUR BMK volume outstanding (EUR bn)



AT: EUR BMK maturity profile (EUR bn)



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

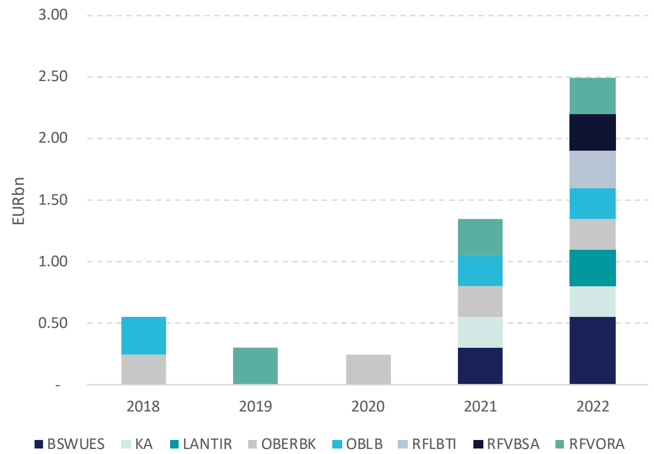
Aside from Germany, Austria is the only country with an established EUR sub-benchmark market

After Germany with an outstanding volume of EUR 10.85bn split across 38 EUR sub-benchmark deals, Austria is the second largest market with an outstanding volume of EUR 5.15bn split between 18 bonds. So far this year, the issuance volume in this sub-market for publicly placed covered bonds of at least EUR 250m but under EUR 500m amounts to EUR 8.0bn (29 bonds), of which Austria accounts for a significant volume of EUR 2.5bn (9 bonds). This figure for the Alpine republic is well up both on the level recorded last year (EUR 1.35bn) and issuances in this sub-market in 2020 (EUR 0.25bn). At EUR 3.15bn in 2022, Germany accounts for the lion's share of new issues in the EUR sub-benchmark market this year, although a total of just EUR 1.35bn was also issued from this jurisdiction last year.

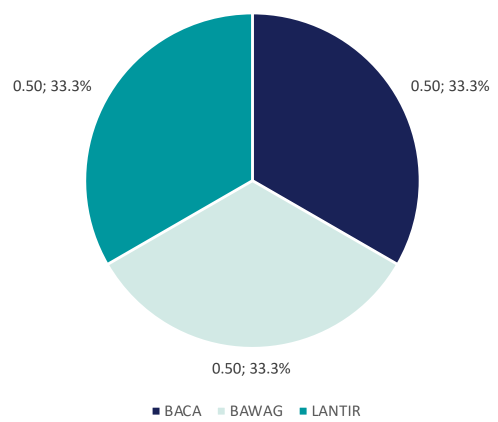
Austrian EUR sub-benchmark segment in 2022

Most recently this year, Bausparkasse Wüstenrot ventured onto the market with a EUR 250m deal (bid-to-cover ratio: 1.8x). This was its second deal this year after it had already placed EUR 300m in January. Further active issuers in the Austrian market for EUR sub-benchmarks include Oberoesterreichische Landesbank, Oberbank, Raiffeisenverband Salzburg, Raiffeisen Landesbank Vorarlberg mit Revisionsverband, Raiffeisen-Landesbank Tirol, Hypo Tirol Bank and Kommunalkredit Austria.

AT: EUR sub-benchmark by issuer (EUR bn)



AT: EUR ESG benchmark volume by issuer (EUR bn)



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

ESG covered bonds from Austria

Last year (2021) was marked by debut issues from Austria for EUR benchmark covered bonds which can be classified as ESG bonds. In August 2021, BAWAG issued Austria's first green EUR benchmark (EUR 500m). In March of the same year, Hypo Tirol Bank issued the first social covered bond (also for EUR 500m) in this sub-segment. In May 2022, UniCredit Bank Austria placed an inaugural mortgage Pfandbrief in this sub-segment; so far this year, it is the only ESG EUR benchmark from Austria. The outstanding volume in this segment amounts to a total of EUR 57.1bn, of which Austria currently accounts for EUR 1.5bn. Germany is the biggest jurisdiction in this sub-segment with a figure EUR 16.5bn, followed by France with EUR 15.0bn. Austria currently accounts for just 2.6% of the total market so there is definitely potential for Austrian issuers to catch up in terms of ESG issues.

Consistently high overcollateralisation ratios for cover assets

Below is a table that lists the 12 EUR benchmark segment issuers and six EUR sub-benchmark issuers from the covered bond segment with extracts of their covered bond reporting. We have taken the data in the table from the NORD/LB Issuer Guide Covered Bonds 2022. Apart from one exception, overcollateralisation ratios were in the double-digit bracket and indeed often more than 20%. This also implies opportunities for some issuers to carry out fresh issues.

Extract from NORD/LB Issuer Guide Covered Bonds 2022:
EUR benchmark and sub-benchmark issuers from Austria

Bank	Type	Cover Pool (EUR m)	Outst. Volume (EUR m)	OC (%)	BMK	LCR level / Risk weight	Maturity Type	Covered Bond rating (Fitch / Moody's / S&P / DBRS)	European Covered Bond[1]	European Covered Bond (Premium)[1]
Bausparkasse Wüstenrot	M	1,633	1,267	28.9	SBMK	2A / 10%	HB	- / - / AAA / -	-	-
BAWAG Group	M	8,992	7,865	14.3	BMK	1 / 10%	HB & SB	- / Aaa / - / -	-	+
	P	1,632	1,504	8.5	BMK	1 / 10%	HB	- / Aaa / - / -	-	-
Erste Group Bank AG	M	25,561	18,103	41.2	BMK	1 / 10%	HB & SB	- / Aaa / - / -	-	+
HYPO NOE Landesbank für NÖ	M	2,966	2,682	10.6	BMK	1 / 10%	SB	- / Aa1 / - / -	-	-
und Wien	P	4,567	3,548	28.7	BMK	1 / 10%	SB	- / Aa1 / - / -	-	+
HYPO Oberösterreich	M	2,728	2,384	14.4	SBMK	2A / 10%	HB	- / - / AA+ / -	-	-
Hypo Tirol Bank	M	2,843	2,507	13.4	BMK	1 / 10%	SB	- / Aa1 / - / -	-	-
Hypo Vorarlberg Bank	M	5,457	4,144	31.7	BMK	1 / 10%	HB	- / Aaa / - / -	-	+
Kommunalkredit Austria	P	1,256	1,124	11.8	SBMK	2A / 20%	HB	- / - / A+ / -	-	-
Oberbank	M	2,911	1,977	47.3	SBMK	2A / 10%	HB & SB	- / - / AAA / -	-	-
Raiffeisen Bank International	M	4,071	3,350	21.5	BMK	1 / 10%	SB	- / Aa1 / - / -	-	+
RLB Niederösterreich-Wien	M	8,660	5,751	50.6	BMK	1 / 10%	HB & SB	- / Aaa / - / -	-	+
	P	2,498	1,852	34.9	BMK	1 / 10%	SB	- / Aaa / - / -	-	-
RLB Oberösterreich	M	5,368	3,040	76.6	BMK	1 / 10%	HB & SB	- / Aaa / - / -	-	+
RLB Steiermark	M	6,084	4,618	31.7	BMK	1 / 10%	HB	- / Aaa / - / -	-	+
RLB Tirol	M	3,037	2,031	49.5	SBMK	2A / 10%	HB	- / Aaa / - / -	-	-
RLB Vorarlberg	M	3,130	2,656	17.9	BMK	1 / 10%	HB	- / Aaa / - / -	-	-
Raiffeisenverband Salzburg	M	1,766	1,371	28.8	SBMK	2A / 10%	HB	- / Aaa / - / -	-	+
UniCredit Bank Austria	M	16,777	8,667	93.6	BMK	1 / 10%	HB	- / Aaa / - / -	-	+
Volksbank Wien	M	5,022	2,663	88.6	BMK	1 / 10%	HB	- / Aaa / - / -	-	-

Source: Banks, rating agencies, FMA, NORD/LB Markets Strategy & Floor Research;
[1] according to list pursuant to Section 32 (1) No. 2 PfandBG of the banks authorised to issue covered bonds in line with Section 30 PfandBG; (as at: 14.11.22)

EU Covered Bond Directive has led to stronger harmonisation in Austria

As was the case in all EEA member states, Austria was also required to implement the EU Covered Bond Directive (EU 2019/2162) into national law by 08 July 2021 and to apply it from 08 July 2022. Austria's National Council met this requirement by the end of 2021, simultaneously creating a harmonised legal framework for covered bonds and replacing the three previously relevant national and in part inconsistent legal frameworks (namely, the Mortgage Banking Act [Hypothekenbankgesetz], the Covered Bond and Related Bonds from Public Credit Institutions Act [Gesetz über die Pfandbriefe und verwandten Schuldverschreibungen öffentlich-rechtlicher Kreditanstalten] and the Secured Bank Bond Act [Gesetz betreffend fundierte Bankschuldverschreibungen]). We looked in detail at the "new" Pfandbrief Act in our Covered Bond & SSA View of 11 May 2022. Issuers entitled to use the protected designation of European Covered Bond or European Covered Bond (Premium) for Pfandbriefe issued after 07 July 2022 are listed on the Austrian Financial Market Authority's website.

Yields on Austrian covered bonds have recently risen sharply

The trend of the following yields has mainly been influenced by ECB monetary policy and the Covid-19 pandemic along with related consequences for EUR swap rates. The war in Ukraine since February 2022 has further accelerated already rising inflation rates, leading to a marked increase in risk-free interest rates. Whereas the ECB's purchase programme and low interest rates have kept spreads and yields low in the past, the rise in the ten-year Bund yield to over 2.1% and the two-year yield also to 2.1% has led to rising yields, and not just for covered bonds.

An overview of legislation: Austria und Germany

Country	Austria	Germany
Name	Pfandbriefe (mortgage Pfandbriefe, public Pfandbriefe, ship Pfandbriefe)	Public sector Pfandbriefe, mortgage, ship & aircraft Pfandbriefe
Abbreviation	-	Öpfe, Hypfe, Schipfe, Flupfe
Special act	Ja	Yes
Cover assets (incl. substitute cover, if applicable)	Mortgage, ship loans, public sector receivables	Mortgage, ship and aircraft loans, public sector receivables
Owner of the assets	Issuer	Issuer
Specialist bank principle	No	No
Geographical restriction – mortgage cover	EWR, CH, UK	EEA, CH, US, CA, JP, AU, NZ, SG, UK[1], Schipfe and Flupfe worldwide
Geographical restriction – public sector cover	EWR, CH, UK	EEA, CH, US, CA, JP, UK[10]
LTV ratio – mortgage cover	Private: 80%, commercial: 60%, ship: 60%	60% of the loan to value ratio
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%	15% Öpfe, 20% Hypfe, SchipfE, Flupfe
Minimum overcollateralisation	2% nominal	Hypfe/Öpfe: 2% Schipfe/Flupfe: 5%
Asset encumbrance	-	-
Deferral of maturity	Ja	Yes
Triggers for deferral of maturity	Issuer insolvency / liquidation	Issuer insolvency / liquidation
CRD met	Yes	Yes (does not apply to aircraft Pfandbriefe)
ECB-eligibility	Yes	Yes

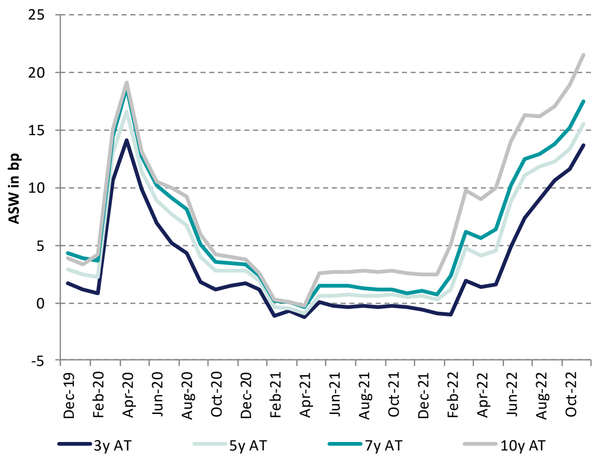
Source: national laws, ECBC, NORD/LB Markets Strategy & Floor Research

[1]Non-EEA assets limited to 10% unless the collateral is guaranteed

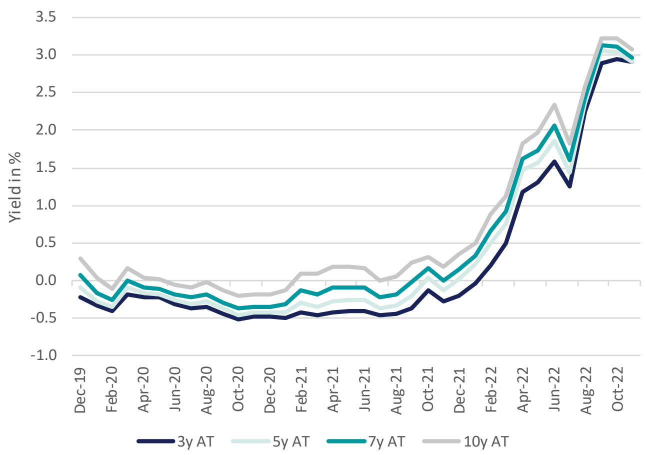
Spread trend and issue forecast for 2022/2023

As regards future supply, we do not expect to see any large-scale EUR benchmark primary market deals before the end of the year from Austria. Taking into account maturities of EUR 1.8bn, we are forecasting a new issue volume of EUR 14.0bn for 2023, which would generate a positive net supply. We expect spreads to be only slightly wider than is presently the case by mid-2023. However, while short maturities of 3y should only widen by a single basis point, we conversely anticipate spread widening of 2bp for 5y and 4bp for 10y bonds.

Austria: spread trend (generic; in bp)



Austria: yield trend (generic; in bp)



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

Hardly any spread differences between maturity segments for a time

Whereas around a year ago there was hardly any difference in the ASW spread of Austrian covered bonds in individual maturity segments, there has been some differentiation this year, so that there is now a difference of around 8bp between 3y and 10y in Austria, whereas it was barely 3bp 12 months ago.

Conclusion

As regards the size of the Austrian covered bond market as a whole, the country's EUR benchmark segment seems well positioned. At the same time, the country is also among established EUR benchmark jurisdictions. We do not expect to see any large-scale primary market deals before the end of the year and anticipate a positive net supply of EUR 12.3bn in 2023. Fundamentally, we see a solid picture for the covered bonds of Austrian issuers. Although the situation in the property market can be seen as challenging, not least as a result of the turnaround in interest rates in tandem with rampant inflation, the situation should remain stable for the moment, at least for covered bond ratings. Moody’s only recently affirmed its stable outlook for the banking market. A very large proportion of covered bonds in the EUR benchmark segment are rated Aaa and offer a pick-up in view of the heightened risk situation, whereby the composition of the cover pools (geographically, regarding LTV and overcollateralisation) is absolutely comparable with covered bonds from Germany and France.

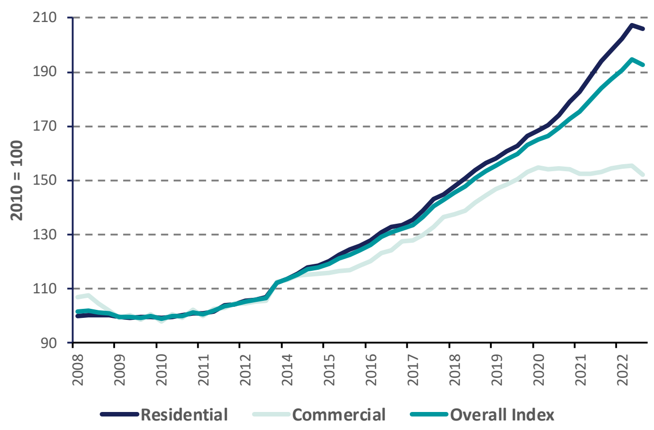
Covered Bonds
Development of the German property market

Author: Dr Frederik Kunze

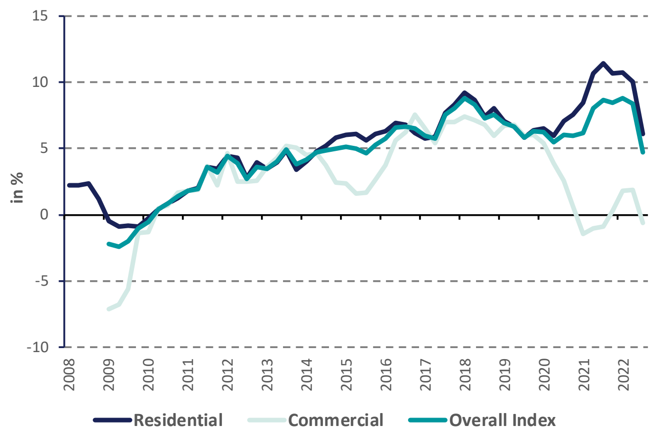
vdp property price index – first decline for eleven years recorded

The Association of German Pfandbrief Banks (vdp) published the latest data for its property price index on 10 November 2022. This is based on an evaluation of the property transaction data of more than 700 financial institutions (cf. vdp press release dated 10 November 2022). In the third quarter of 2022, the overall index was up by 4.7% on the same quarter in the previous year. However, now standing at 192.8 points (base year of 2010 = 100 points), a trend reversal is nevertheless emerging in the current reporting period for the widely recognised vdp index. Compared with the previous quarter, a setback of 1.0% Q/Q was evident. Consequently, the overall index fell for the first time since 2011 and the long-term trend of rising property prices in Germany ended in the third quarter of 2022. Not even a year-on-year comparison of the sub-index for residential property prices, which indicates a relatively substantial increase of 6.1%, can belie this fact. After all, compared with the index level for the review period of the second quarter of 2022, a decrease (-0.7% Q/Q) was also evident. This vdp data basis reflects the first decrease in residential property prices since the beginning of 2021. Decreases of -0.6% year on year and -2.2% quarter on quarter were respectively recorded for the commercial property segment. The latest vdp figures reported undoubtedly reflect the current situation, which is mainly driven by rising interest rates, ongoing high rates of inflation and increased uncertainty as a result of geopolitical tensions. The associated general economic uncertainty and/or declining growth rates tend to have a more direct impact on the price of commercial property. On the basis of our assessment regarding residential property, the general affordability of housing is set to continue to impact on demand for owner-occupied homes in the future. The minor increase in the price of owner-occupied homes (+0.5% Q/Q after +2.6% Q/Q in the second quarter of 2022) should be seen as a relevant indication.

Index level – overall, residential and commercial



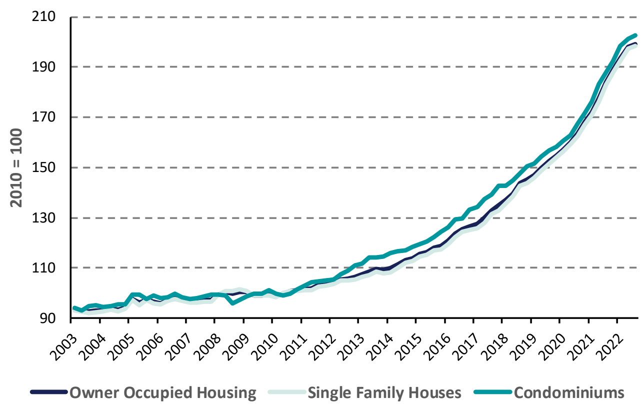
Change Y/Y – overall, residential and commercial



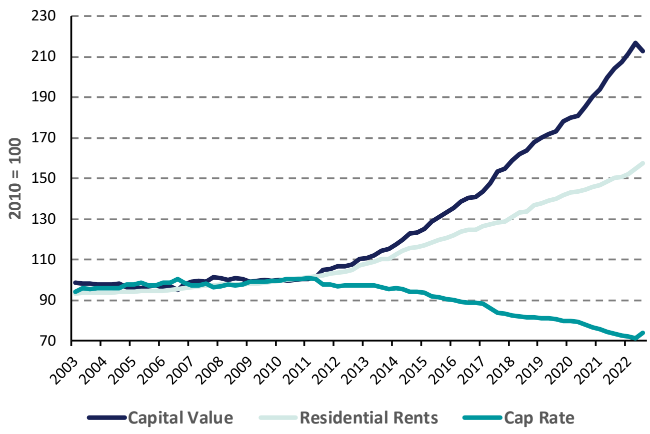
Source: vdp, NORD/LB Markets Strategy & Floor Research

Details on the trend in the price of residential property – a change in momentum
The sub-index for residential property illustrated considerably less dynamic growth in the segment of owner-occupied housing (growth from 198.3 points to 199.3 points). The prices of owner-occupied houses and flats increased to 198.4 points (previous quarter: 197.5) and 202.6 points (previous quarter: 201.2 points) respectively. However, in our view, the change in momentum is most evident in the prices of multi-family dwellings. The index value for the latest period under review was 212.8 points, which, compared with the previous quarter, reflects a decrease of 1.9% Q/Q. At present, it is worth noting the figures for property yields (Liegenschaftszinsen) and rent under new contracts, in our opinion. Compared with the previous quarter, property yields rose by 3.6% (or +0.6% Y/Y). The vdp shares our view that this is to be considered a consequence of the revaluation of investments in multi-family dwellings. Increased uncertainty and the higher interest rate level are met with ongoing high demand for rented property. Rent under new contracts rose by 4.8% quarter on quarter. It should be highlighted that in future, this sub-category is particularly likely to reflect changes in trends in the property markets in Germany. Households which are being squeezed out of the group of potential home owners because of higher interest rates and/or lower purchasing power will possibly still require new living arrangements (e.g. a bigger flat), meaning that the market for rented property is now more relevant and/or likely to become more relevant. In addition, there are "new entrants" in the German property market (including as a result of migration).

Owner-occupied homes



Multi-family dwellings

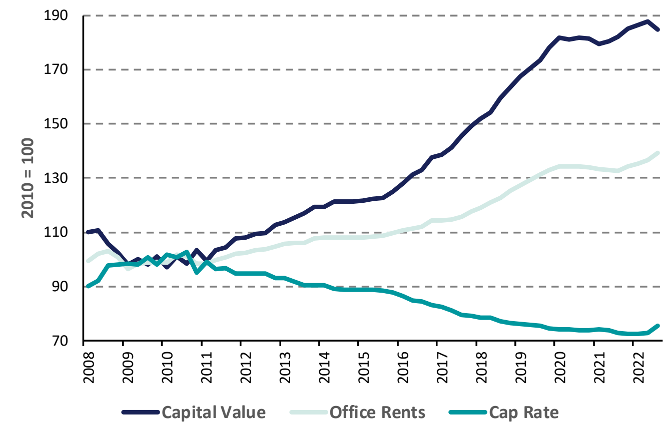


Source: vdp, NORD/LB Markets Strategy & Floor Research

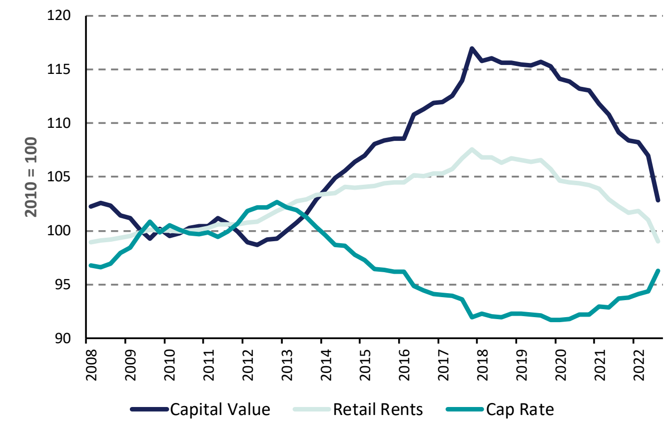
Top 7 in the housing market – weaker growth given the price level
In a downward trend from 266.5 to 264.7 points, the separate index reflecting the trend in the housing markets of the top 7 cities revealed a countermovement to the all-time high achieved in the previous quarter. For the category of owner-occupied homes, the score of 236.5 points in the second quarter of 2022 was followed by "only" 235.6 points. The index levels for both owner-occupied houses and owner-occupied flats were down on the previous quarter's levels. Compared with the second quarter of 2022, current rents under new contracts have increased further. Here too, the "new" ROI required in the form of property yields was reflected in an increase (+2.4% Q/Q).

vdp – commercial property market "under considerably more strain"
In the third quarter of 2022, the price of commercial property was down by 2.2% on the previous quarter (-0.6% Y/Y). This decrease in the quarter-on-quarter comparison was the first since the start of 2021. As mentioned above, we believe that the current general situation has generated marked direct influencing factors on the market for commercial property in Germany. The vdp also includes the after-effects of the pandemic, Russia's war of aggression in Ukraine and supply bottlenecks. In addition, there is general uncertainty, including with regard to the future interest rate trend and linked to this, future yields for investors. A glance at the office property market indicates that rents under new agreements have increased further, partly as a result of the robust employment market. The link to the capital market is also evident from property yields (Liegenschaftszinsen) on office property and therefore the required ROI. In this respect, an increase of 3.4% year on year (or +3.6% Q/Q) was recorded, following the decreases recorded in the previous five quarters. Structural changes in the wake of changed consumer behaviour have represented a challenge for some time in terms of the price trend for retail property. The vdp has also identified additional factors that have adversely impacted the retail segment. In addition to the above-mentioned supply chain difficulties, increasingly subdued consumer sentiment should be mentioned. Directly linked to it are energy prices, which ultimately also impact on the cost side for retailers. The index for retail property stands at 102.8 points (previous quarter: 107.0 points). The negative trend in rents under new contracts also continued, reflecting a decline of 1.9% quarter on quarter. While this negative trend is less marked than the sharp decline in the capital value (-3.9% Q/Q), an increase of 2.0% quarter on quarter was recorded for property yields. In our view, the higher yields are the result of increased uncertainty specific to the sub-market for retail property as well as the overall rise in financing costs. Based on our understanding, here too, there is a direct link to the capital market. The expectation of a far less abundant liquidity supply, which can be observed across all investable asset classes, will ultimately result in higher risk premiums. This includes real assets in general and the property market in particular.

Office property



Retail property



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

Conclusion and outlook

Developments regarding the vdp property price index were no surprise, in principle. Adverse factors such as increased uncertainty, higher interest rates and excessive inflation in terms of consumer prices have already been evident for some time and have also affected the property market in Germany. In combination with structural changes that were already happening and the challenges facing the commercial property market since the pandemic, the latest change in momentum for residential property prices has also been partly responsible for the current decrease in the vdp's overall index. Without a doubt, this begs the question as to whether it "simply" represents a correction in what generally is a robust market. Concerns are coming to the fore about the extent to which a drastic decline in prices may arise. As a matter of fact, we also believe that the price increases observed for residential property in Germany up to a few weeks and months ago are no longer tenable, even if for no other reason than current mortgage interest levels. Yet, we are also observing ongoing demand for housing in Germany. Over time, the interaction of rent, property prices and financing costs will produce a new local equilibrium, with prices likely to be significantly lower than the highs recorded in the past. However, we would not deduce a dramatic fall based on the price determinants observed to date for residential property. With regard to the commercial sub-market in the segment (where multi-family dwellings can also be included), we would attribute greater importance to the interplay between rents under new contracts and property yields (Liegenschaftszinsen). In this respect, corrections will also need to happen. Based on the different challenges present in the various sub-markets alone, a heterogeneous picture is likely to emerge. It should not be ignored in this context that, in some sub-segments, a correction already started a while ago. For the coming reporting periods, the focus in terms of the vdp property price index should be on the current momentum – i.e. the quarter-on-quarter comparison. We expect further setbacks but, at this stage, do not assume that there will be a property price slump.

SSA/Public Issuers
EIB goes Blockchain… again!

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

EIB planning further digital bonds

The European Investment Bank (ticker: EIB) thrust itself into the spotlight in 2021 when it issued its first digital bond on a public blockchain (known as a smart bond). Distributed Ledger Technology (DLT) was used for registration and settlement. We already reported on this in an issue of this publication last year. Last week, it was then announced that the EIB would issue further digital bonds. A specific feature this time round: apart from the second EUR-denominated bond, there are also plans for a GBP debut. This is not the first time that the EIB has assumed something of a pioneering role: in 2007, the multilateral development bank had already laid the foundations of the ESG segment with the issuance of the first Climate Awareness Bond (CAB). In this article, we shall provide a rough overview of smart bonds, before delving deeper into the pros and cons of such deals.

What are smart bonds?

Smart bonds are a specific type of automated bond contract which uses the capabilities of blockchain technology. A blockchain is a decentralised database which shows transactions in chronological order (i.e. as in a chain) in the form of "blocks". If further transactions take place, a new block is created and it is subsequently added to the last block of the chain by a consensus mechanism. The storing of data "block by block" via cryptography ensures that the blockchain cannot be changed subsequently. The blockchain is regarded as irreversible and is therefore immune to manipulation and safe from tampering. A distinction is made in particular between public and private blockchains. A public blockchain network is freely available and accessible to all. In contrast, a private blockchain is generally only viewable by a limited group of people – some supporters of blockchain regard this as going against the original idea behind the technology. Within a blockchain network, users can implement smart contracts, which are added to each network node (i.e. computers) linked to the blockchain. Smart contracts are programmes which are triggered by previously defined conditions (e.g. coupon payments on specific dates). Back to the bonds: In the case of the blockchain-based bond issues, the bond is first digitalised – this is called tokenisation. Thereafter, the banks managing the issue apply the contract terms and conditions previously agreed with the issuer to the blockchain in the form of smart contracts. The bids and orders of potential investors are then recorded in the master book and subsequently added to the bond's blockchain with the customer data. The deal is concluded after signing has taken place once the custodian banks – acting as token keepers – issue instruction to transfer the money or security to the account of the beneficiary. One major advantage is that of speed: Settlement can take place virtually in real time. In addition, coupon payments can be made automatically via smart contract.

April 2021: EIB goes blockchain

The EIB launched its first digital bond in April 2021 (EUR 100m, 2y). In partnership with Banque de France (BDF), payment of the issue monies was represented on the blockchain in the form of central bank digital currency (CBDC). The latter is based on the Ethereum public blockchain. Investors first paid in the usual manner (e.g. in EUR) into an account of the lead manager. The latter transferred the amount to the French central bank which in turn carried out the switch into CBDC and into the lead manager's digital wallet for crypto currencies. At the same time, the EIB instructed the registrar to tokenise the bond which was deposited in the EIB wallet. After allocation of the book, the EIB received the crypto currency and the lead manager received the bonds in token form in return. The tokens were then transferred to the wallets of respective investors. The EIB then received the EUR equivalent of the CBDC from the central bank. This approach – which may seem complicated for a lay person at first glance – offers a number of advantages. Firstly, it made settlement much quicker (T+1 vs. T+3 with the conventional method; even prospect of T+0). In addition, transaction costs were reduced and transparency increased. In other words, an almost purely digital process has reduced the administrative burden and saved on the use of paper.

Second round for digital bonds

Last week, it was announced that the EIB is planning to issue new digital bonds. Little information is available so far about the first GBP digital bond. We only know that the EIB once again plans to use DLT for registration and settlement and that Luxembourg law will apply. There is slightly more transparency regarding the second, EUR-denominated digital bond: in contrast to the 2021 issue, there will be no public blockchain but rather a private blockchain with limited access. Moreover, Banque de France is once again expected to act as lead manager, this time in conjunction with Banque centrale du Luxembourg.

Conclusion

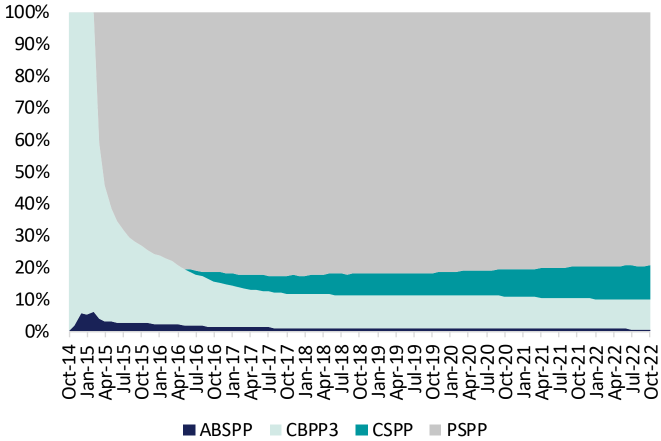
Admittedly, this article is unusually "technical" and some readers may already have given up before they reach this point. Nevertheless, we believe it is important to shed sufficient light on new technologies in the bond market. There is no disputing the fact that blockchain technology offers many advantages. However, issuers and investors equally may lack the know-how to recognise and use its potential. The first digital deal worldwide dates as far back as 2018 and was issued by the World Bank ("Bondi" bond: AUD 110m). As a bank, we have been active digitally in the market in the past with SSD transactions (for enercity, among others). Founded at the initiative of NORD/LB, finpair now operates autonomously. However, we would like to draw attention to one disadvantage: sustainable actions and operations are more important than ever. Public blockchains in particular are not restricted when it comes to the number of networked computers. Researchers at the University of Cambridge have developed the Cambridge Bitcoin Electricity Consumption Index for Bitcoin, which is probably the most famous of all the crypto currencies. The estimated annual electricity consumption stands at around 103 TWh. By comparison, the whole of Germany consumed around 503 TWh in 2021.

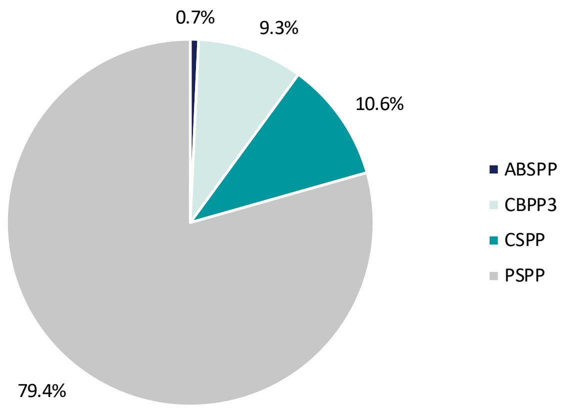
ECB tracker

Asset Purchase Programme (APP)

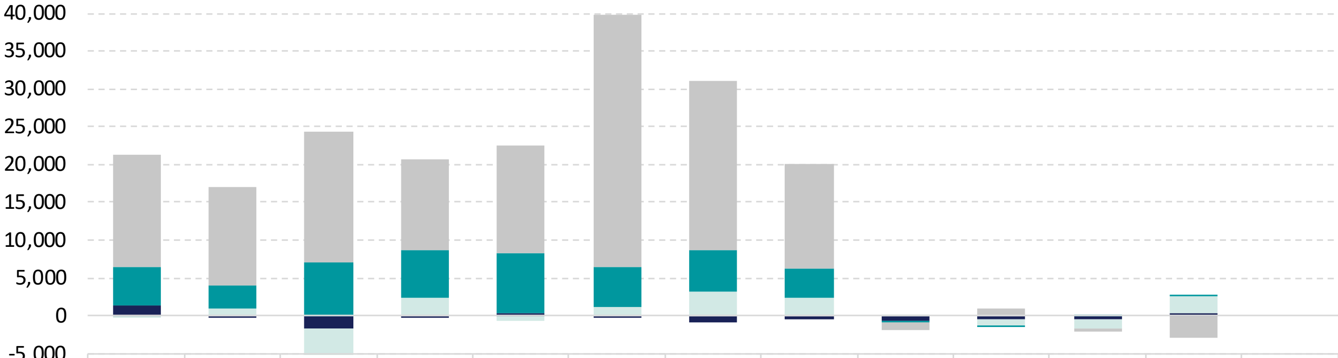
	ABSPP	CBPP3	CSPP	PSPP	APP
Sep-22	23,594	300,157	344,388	2,588,118	3,256,257
Oct-22	23,849	302,385	344,527	2,585,180	3,255,941
Δ	+254	+2,229	+139	-2,938	-316

Portfolio structure





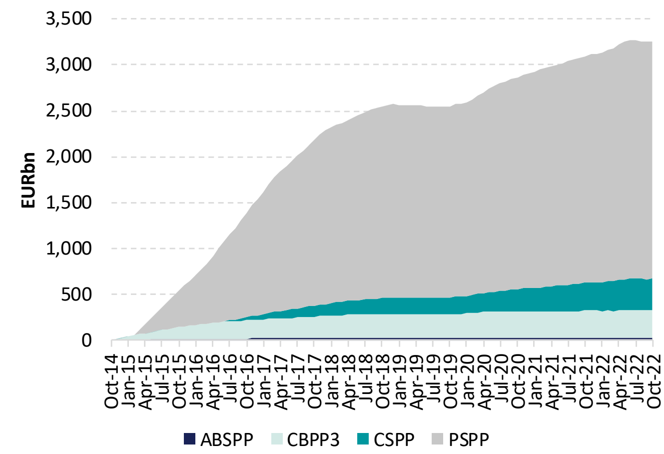
Monthly net purchases (in EURm)



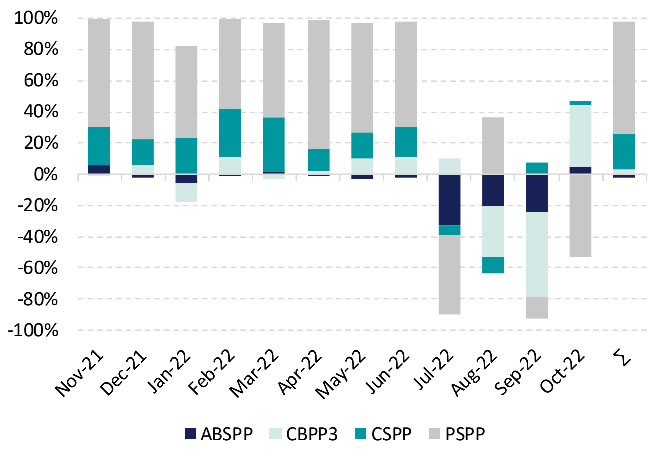
	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	∑
APP	21,200	16,596	18,838	20,698	21,929	39,397	30,232	19,722	-1,759	-656	-1,884	-316	183,997
PSPP	14,815	12,989	17,292	12,095	14,172	33,238	22,443	13,924	-1,114	869	-315	-2,938	137,470
CSPP	5,142	3,007	6,970	6,272	8,042	5,461	5,366	3,858	-141	-253	164	139	44,027
CBPP3	-12	942	-3,761	2,376	-606	1,074	3,247	2,339	217	-787	-1,210	2,229	6,048
ABSPP	1,255	-342	-1,663	-45	321	-376	-824	-399	-721	-485	-523	254	-3,548

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

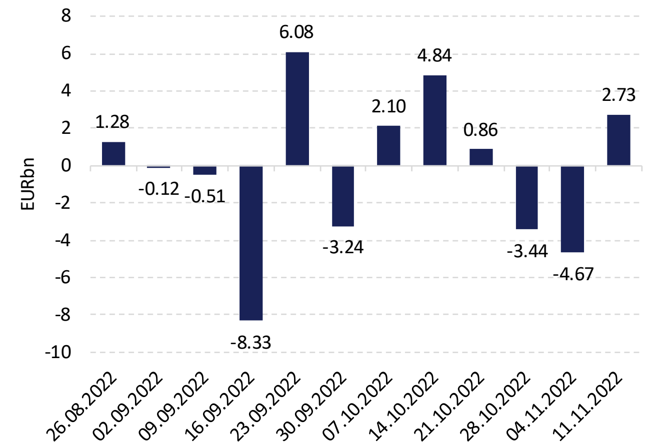
Portfolio development



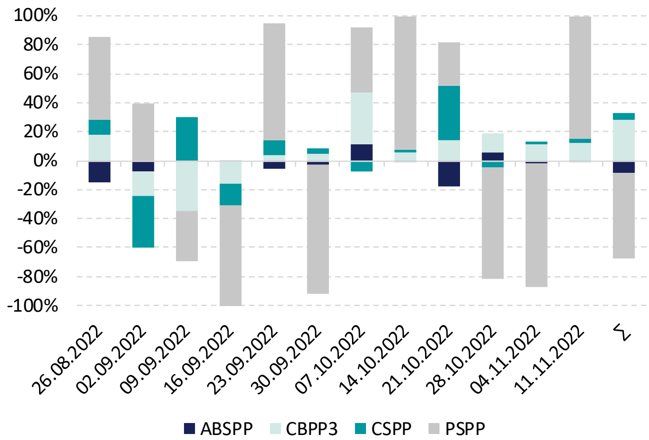
Distribution of monthly purchases



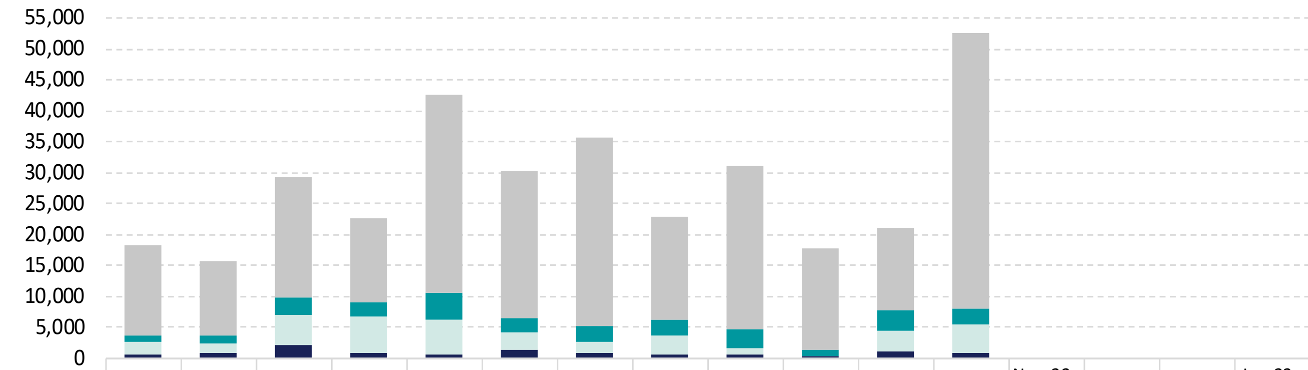
Weekly purchases



Distribution of weekly purchases



Expected monthly redemptions (in EURm)



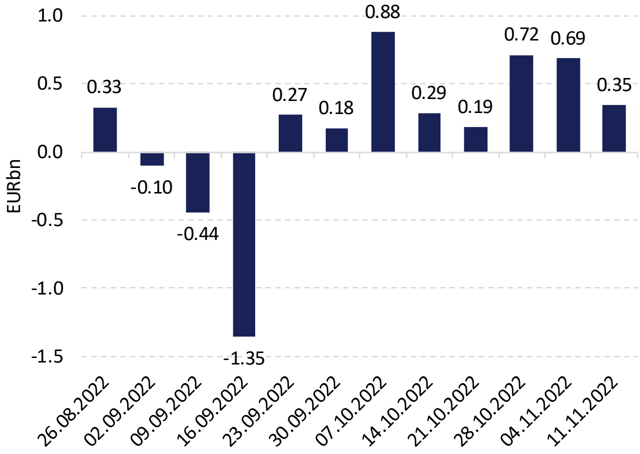
	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-22 - Oct-23	2021	2022	Jan-23 - Oct-23
APP	18,356	15,631	29,172	22,562	42,480	30,257	35,805	22,837	31,021	17,823	21,078	52,693	339,715	247,069	299,119	305,728
PSPP	14,669	12,016	19,469	13,624	31,965	23,712	30,554	16,619	26,317	16,445	13,272	44,745	263,407	188,494	228,585	236,722
CSPP	1,031	1,243	2,784	2,182	4,219	2,388	2,579	2,557	3,033	986	3,358	2,606	28,966	17,134	17,670	26,692
CBPP3	2,167	1,487	4,786	6,050	5,631	2,937	1,874	3,112	1,170	0	3,346	4,465	37,025	30,143	41,244	33,371
ABSPP	489	885	2,133	706	665	1,220	798	549	501	392	1,102	877	10,317	11,298	11,620	8,943

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

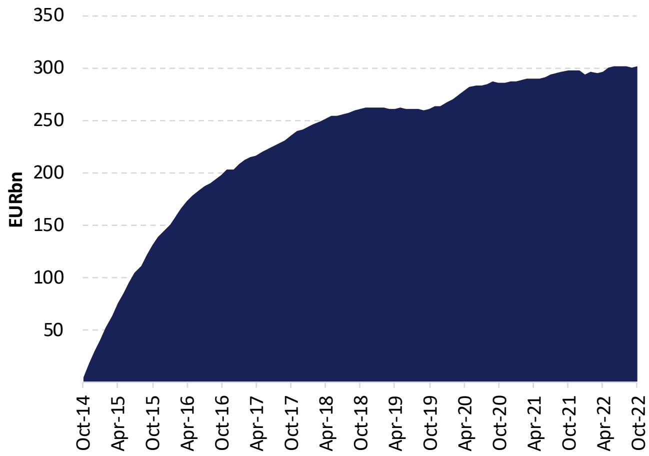
NORD/LB

Covered Bond Purchase Programme 3 (CBPP3)

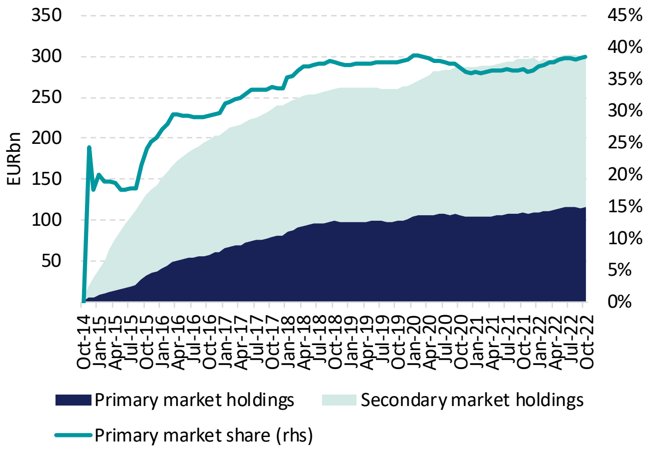
Weekly purchases



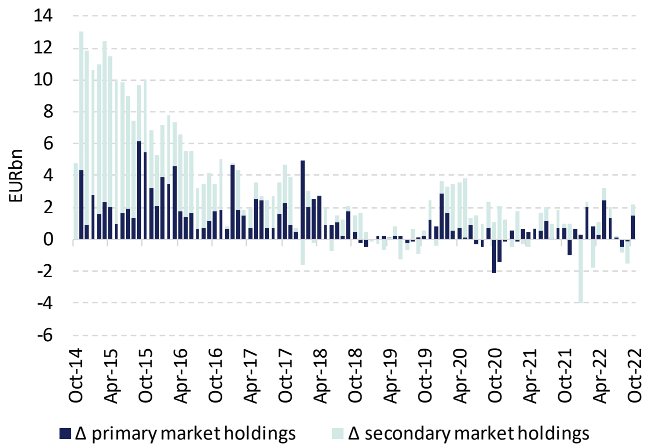
Development of CBPP3 volume



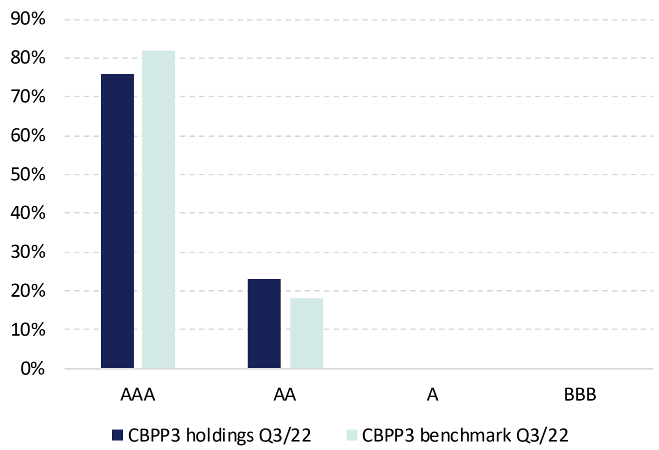
Primary and secondary market holdings



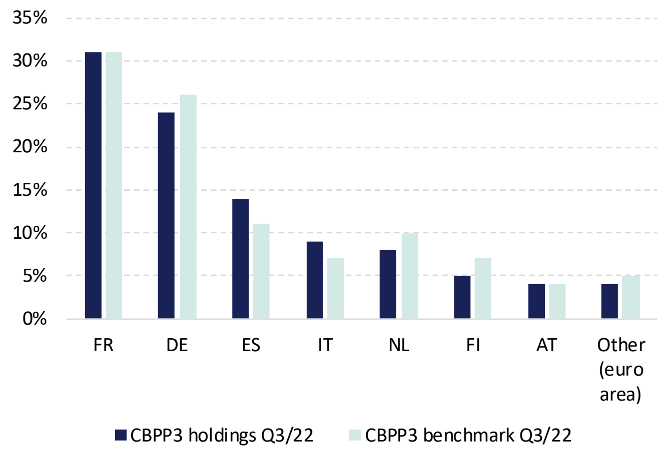
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating



Distribution of CBPP3 by country of risk

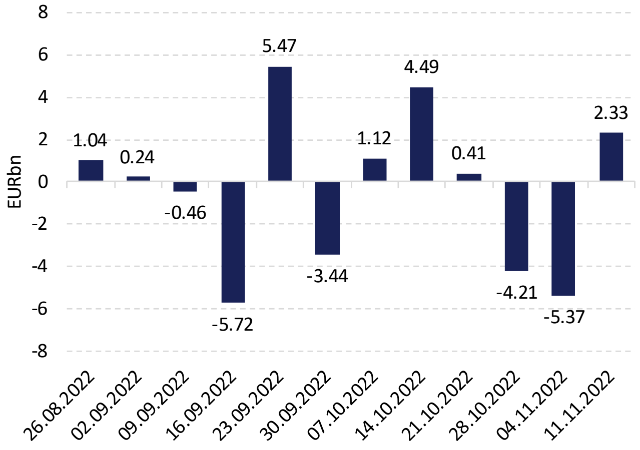


Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

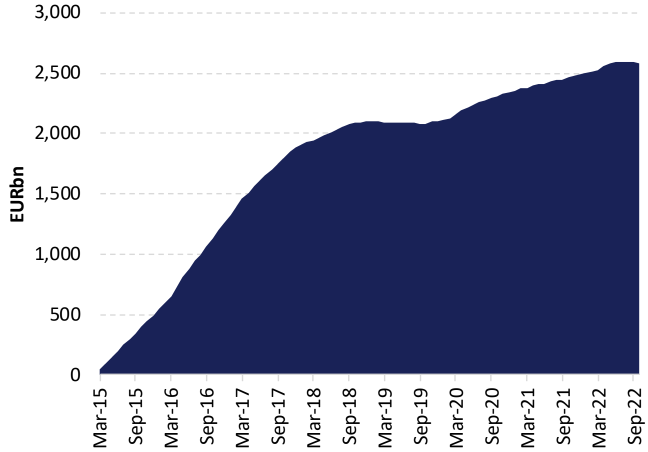
NORD/LB

Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



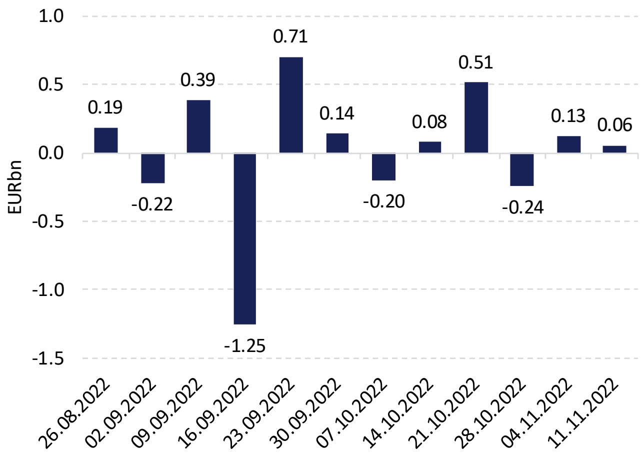
Overall distribution of PSPP buying at month-end

Jurisdiction	Adjusted distribution key[1]	Holdings (EURm)	Expected holdings (EURm)[2]	Difference (EURm)	Current WAM of portfolio[3] (in years)	WAM of eligible universe[4] (in years)	Difference (in years)
AT	2.7%	77,742	74,029	3,713	7.3	8.2	-0.9
BE	3.4%	93,770	92,147	1,623	7.5	10.3	-2.8
CY	0.2%	4,452	5,442	-990	8.6	9.1	-0.5
DE	24.3%	665,502	666,749	-1,247	6.7	8.0	-1.3
EE	0.3%	488	7,125	-6,637	7.7	7.7	0.0
ES	11.0%	315,038	301,604	13,434	7.7	8.2	-0.5
FI	1.7%	43,825	46,459	-2,634	8.2	8.9	-0.7
FR	18.8%	531,880	516,583	15,297	6.7	8.6	-1.9
GR	0.0%	0	0	0	0.0	0.0	0.0
IE	1.6%	42,476	42,830	-354	8.2	10.5	-2.4
IT	15.7%	448,664	429,683	18,981	7.2	7.9	-0.7
LT	0.5%	5,964	14,638	-8,674	10.4	10.2	0.2
LU	0.3%	3,913	8,331	-4,418	5.8	7.8	-2.0
LV	0.4%	3,878	9,855	-5,977	8.9	9.0	-0.1
MT	0.1%	1,423	2,653	-1,230	11.2	9.6	1.6
NL	5.4%	132,873	148,225	-15,352	7.8	9.6	-1.8
PT	2.2%	53,609	59,197	-5,588	7.2	7.5	-0.3
SI	0.4%	11,125	12,178	-1,053	9.4	9.5	-0.1
SK	1.1%	18,494	28,966	-10,472	7.9	8.4	-0.5
SNAT	10.0%	285,655	274,077	11,578	8.1	9.4	-1.4
Total / Avg.	**100.0%**	**2,740,773**	**2,740,773**	**0**	**7.2**	**8.5**	**-1.2**

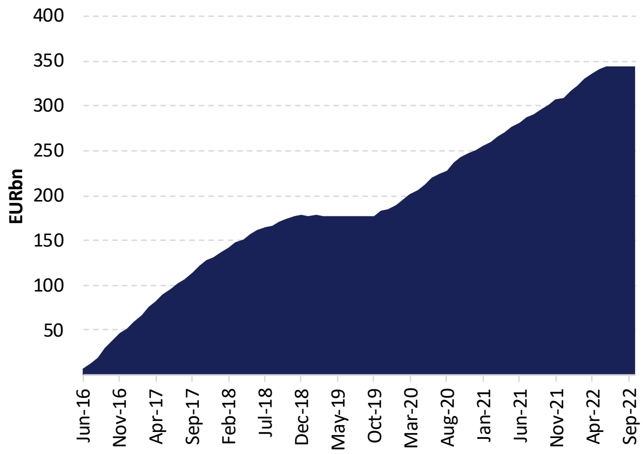
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of PSPP portfolio holdings
[4] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP
Source: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

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

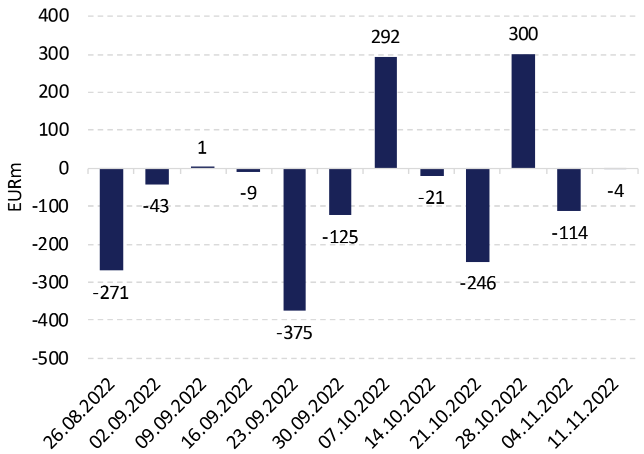


Development of CSPP volume

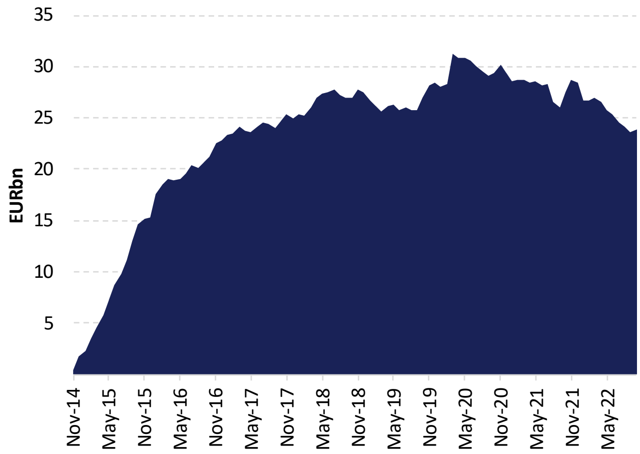


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



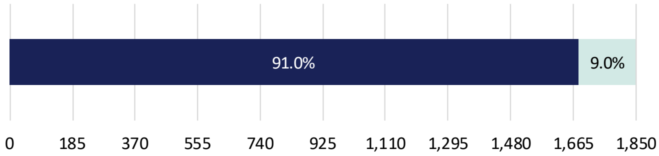
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

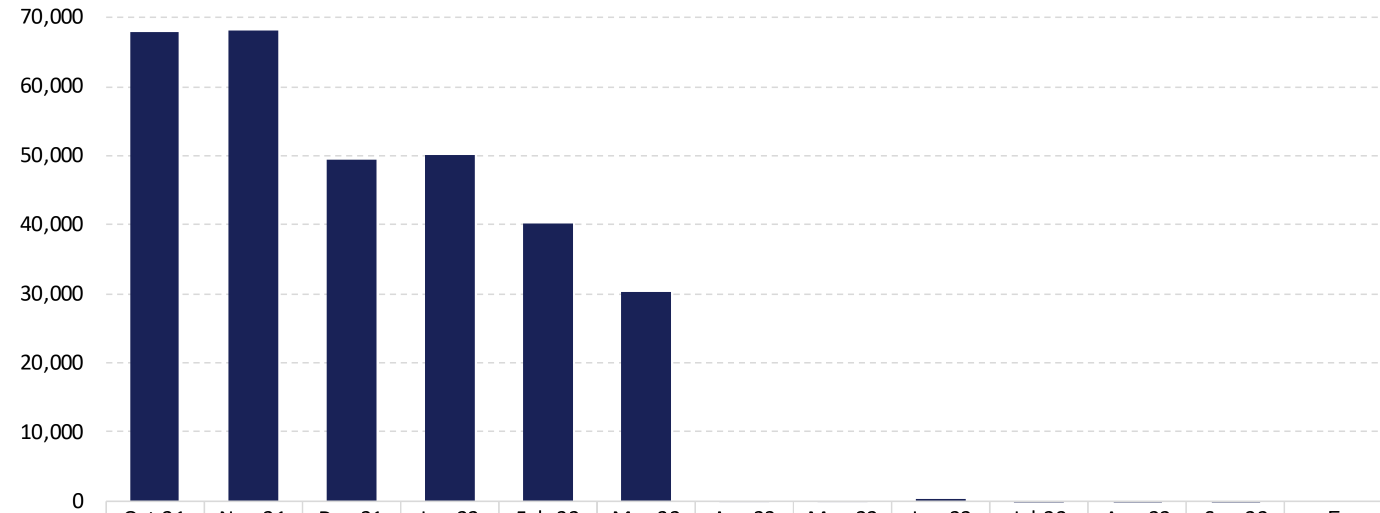
Holdings (in EURm)

	PEPP
Aug-22	1,714,539
Sep-22	1,713,035
Δ (net purchases)	-1,505

Invested share of PEPP envelope (in EURbn)

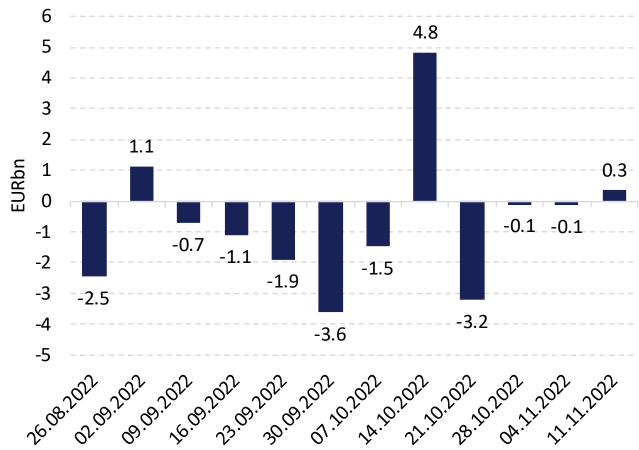


Monthly net purchases (in EURm)

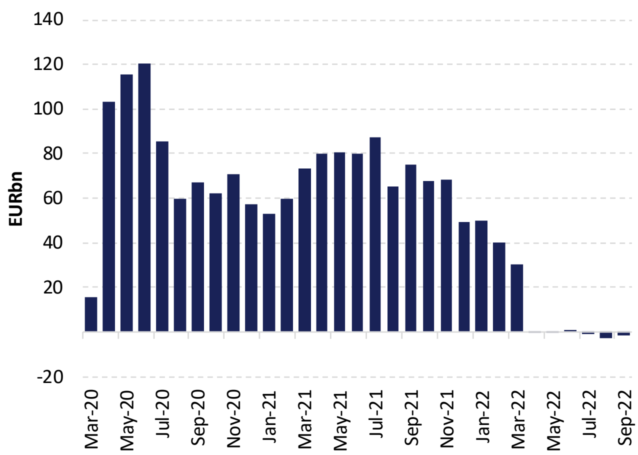


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	∑
PEPP	67,855	68,045	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	300,744

Weekly purchases



Development of PEPP volume

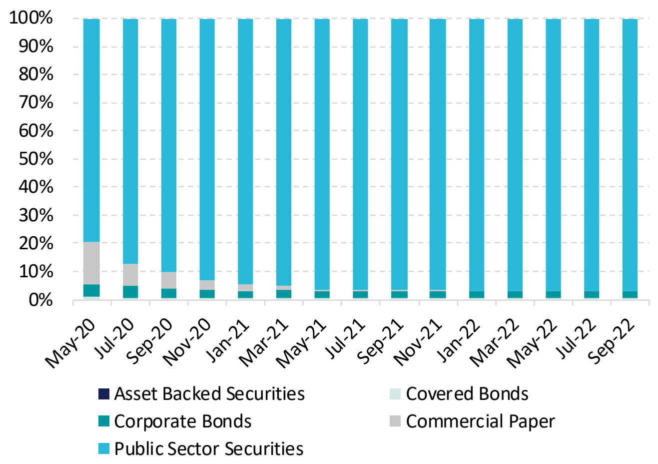


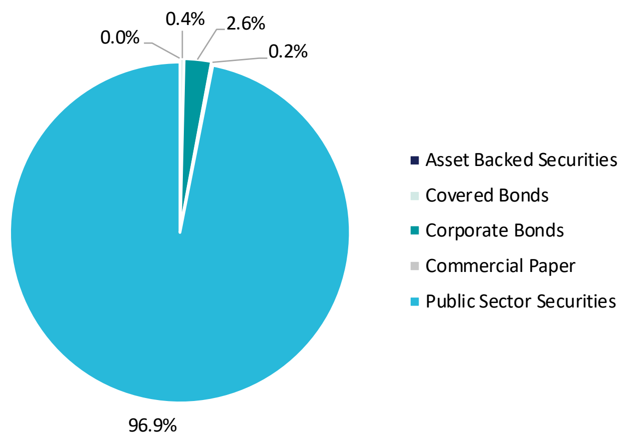
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Holdings under the PEPP (in EURm)

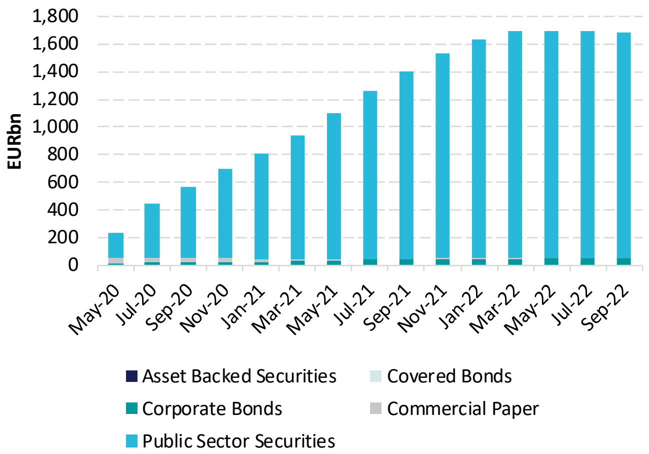
	Asset-backed Securities	Covered Bonds	Corporate Bonds	Commercial Paper	Public Sector Securities	PEPP
Jul-22	0	6,062	42,814	3,322	1,639,774	1,691,971
Sep-22	0	6,056	43,233	2,871	1,631,176	1,683,336
Δ (net purchases)	0	0	+453	-450	-4,320	-4,317

Portfolio structure

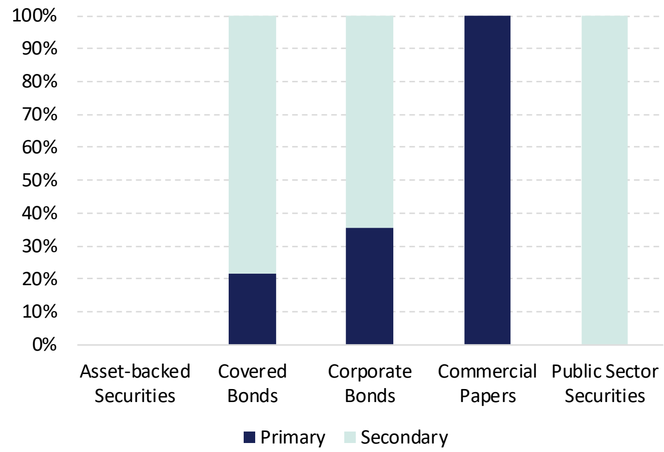




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

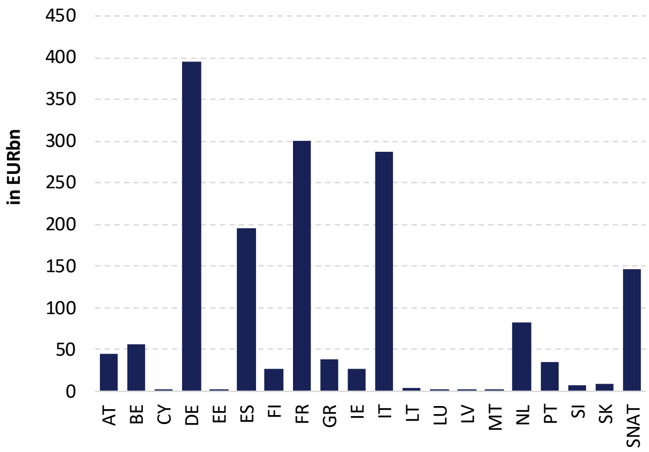
Sep-22	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,298	4,758	15,407	27,826	2,873	0
Share	0.0%	0.0%	21.4%	78.6%	35.6%	64.4%	100.0%	0.0%

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

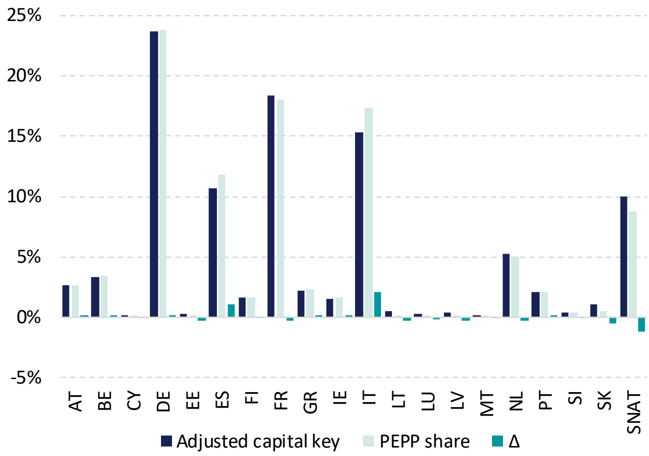
Breakdown of public sector securities under the PEPP

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	44,120	2.6%	2.7%	0.0%	7.6	7.4	0.3
BE	56,872	3.3%	3.4%	0.1%	6.4	9.5	-3.2
CY	2,483	0.2%	0.1%	0.0%	8.6	8.0	0.6
DE	395,153	23.7%	23.8%	0.1%	6.8	6.9	-0.1
EE	256	0.3%	0.0%	-0.2%	7.7	6.3	1.4
ES	196,176	10.7%	11.8%	1.1%	7.4	7.4	0.0
FI	26,381	1.7%	1.6%	-0.1%	7.5	7.9	-0.4
FR	299,737	18.4%	18.0%	-0.3%	7.8	7.8	0.0
GR	38,877	2.2%	2.3%	0.1%	8.5	9.3	-0.8
IE	26,328	1.5%	1.6%	0.1%	8.6	10.0	-1.3
IT	287,821	15.3%	17.3%	2.0%	7.2	7.0	0.3
LT	3,208	0.5%	0.2%	-0.3%	9.9	9.3	0.6
LU	1,879	0.3%	0.1%	-0.2%	6.1	6.9	-0.7
LV	1,890	0.4%	0.1%	-0.2%	8.2	8.1	0.1
MT	605	0.1%	0.0%	-0.1%	10.8	8.8	2.0
NL	82,869	5.3%	5.0%	-0.3%	7.9	8.6	-0.7
PT	35,492	2.1%	2.1%	0.0%	6.5	7.2	-0.7
SI	6,567	0.4%	0.4%	0.0%	8.8	9.1	-0.3
SK	7,966	1.0%	0.5%	-0.6%	8.4	8.0	0.5
SNAT	145,914	10.0%	8.8%	-1.2%	10.5	8.7	1.8
Total / Avg.	**1,660,594**	**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



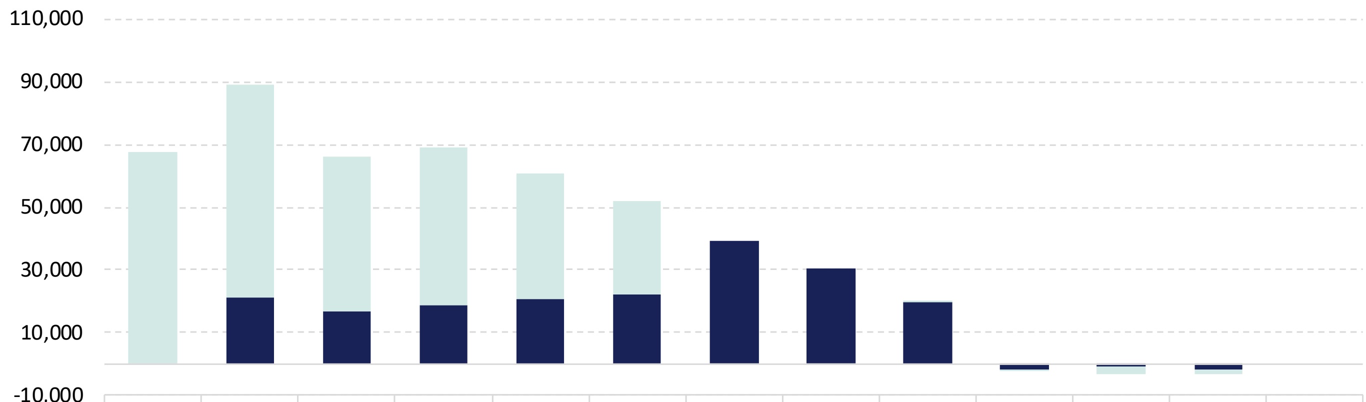
[1] Based on the ECB capital key, adjusted to include supras [2] Based on the adjusted distribution key
[3] Current WAM of public sector securities holdings under the PEPP [4] WAM of eligible universe of public sector securities holdings under the PEPP
Source: ECB, Bloomberg, NORD/LB Markets Strategy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

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

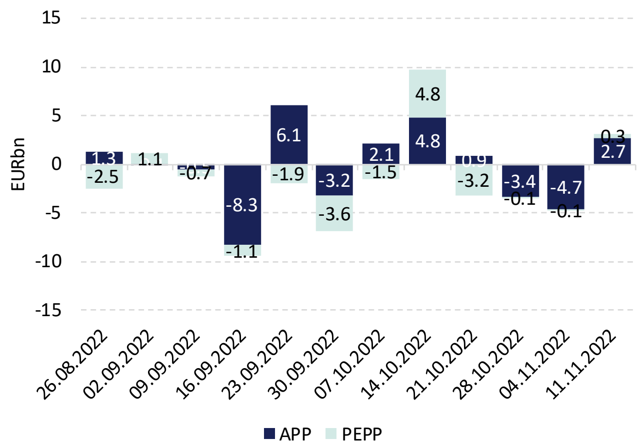
	APP	PEPP	APP & PEPP
Aug-22	3,256,257	1,714,539	4,970,796
Sep-22	3,255,941	1,713,035	4,968,976
Δ	-316	-1,505	-1,821

Monthly net purchases (in EURm)

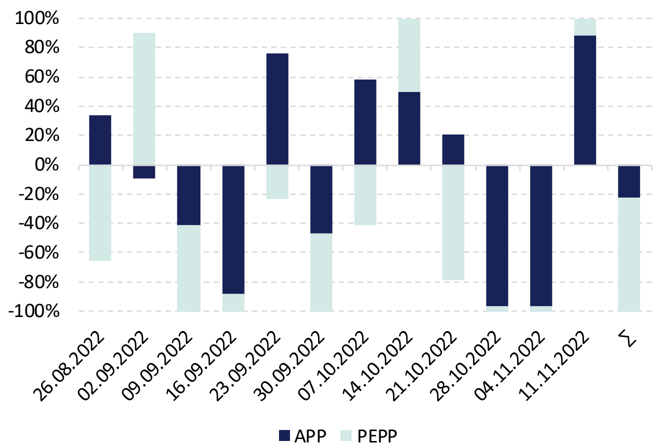


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	∑
∑	67,855	89,245	65,971	68,951	60,882	52,143	39,393	30,222	19,734	-2,481	-3,469	-3,389	485,057
PEPP	67,855	68,045	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	300,744
APP	0	21,200	16,596	18,838	20,698	21,929	39,397	30,232	19,722	-1,759	-656	-1,884	184,313

Weekly purchases



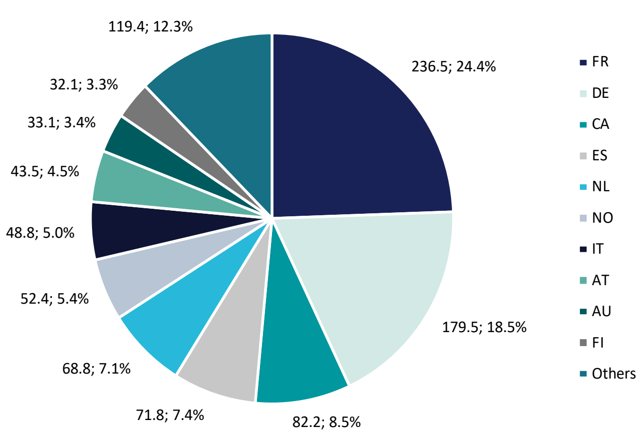
Distribution of weekly purchases



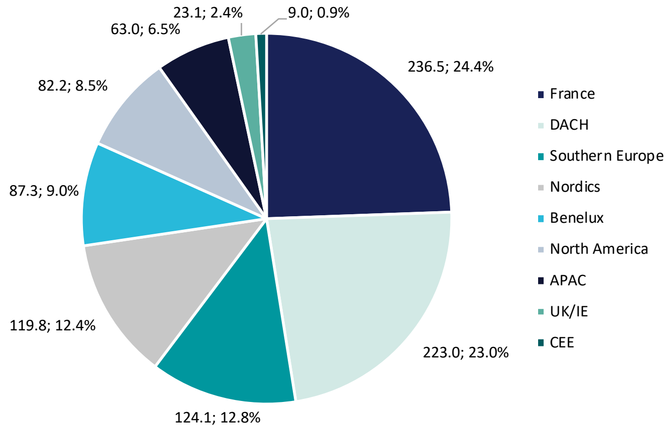
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



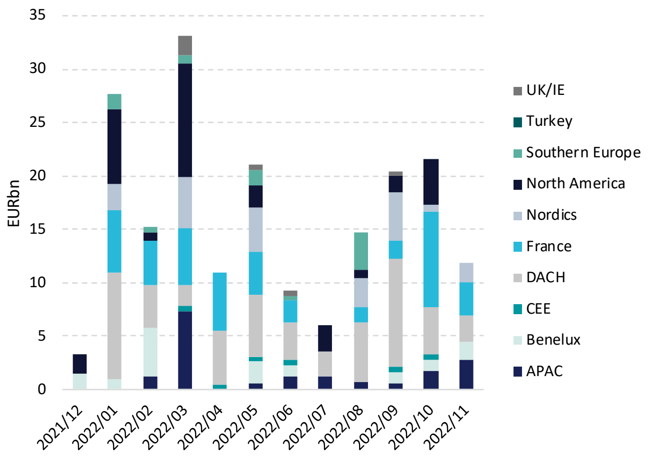
EUR benchmark volume by region (in EURbn)



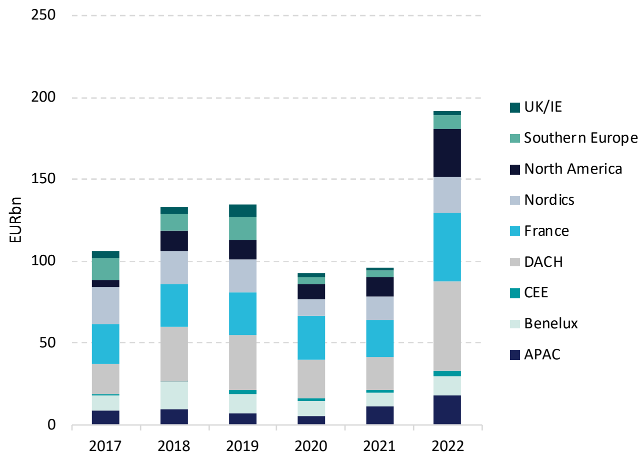
Top-10 jurisdictions

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	236.5	227	15	0.95	9.8	5.3	0.96
2	DE	179.5	256	26	0.64	8.3	4.5	0.66
3	CA	82.2	63	0	1.27	5.6	3.0	0.49
4	ES	71.8	57	5	1.15	11.7	3.6	1.74
5	NL	68.8	70	1	0.92	11.3	7.1	0.81
6	NO	52.4	62	11	0.84	7.3	3.7	0.55
7	IT	48.8	59	2	0.79	9.2	3.8	1.28
8	AT	43.5	77	3	0.56	9.1	5.7	0.83
9	AU	33.1	33	0	1.00	7.7	3.9	1.12
10	FI	32.1	34	2	0.94	7.4	3.8	0.69

EUR benchmark issue volume by month

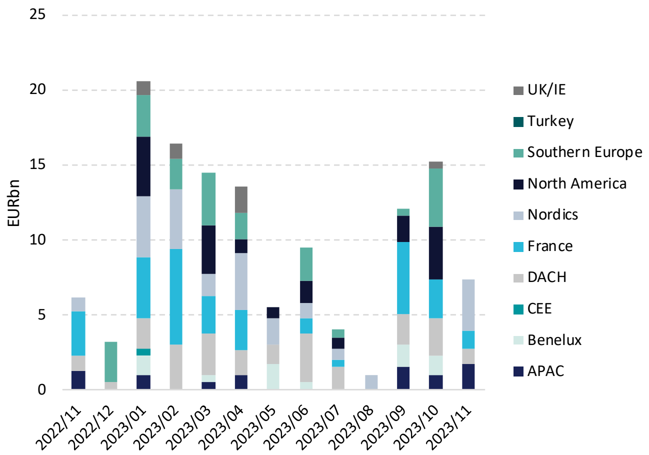


EUR benchmark issue volume by year

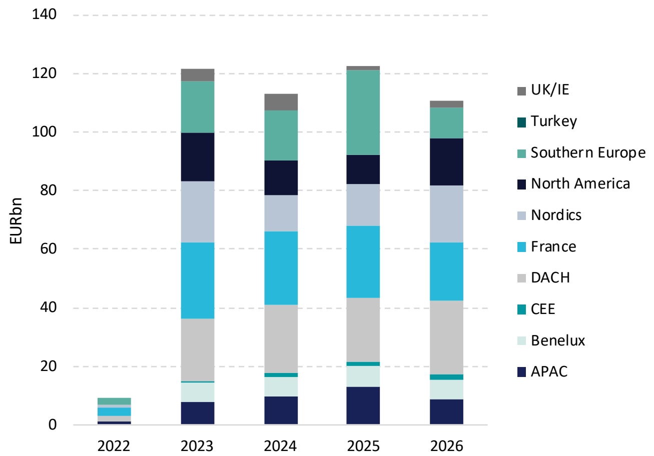


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

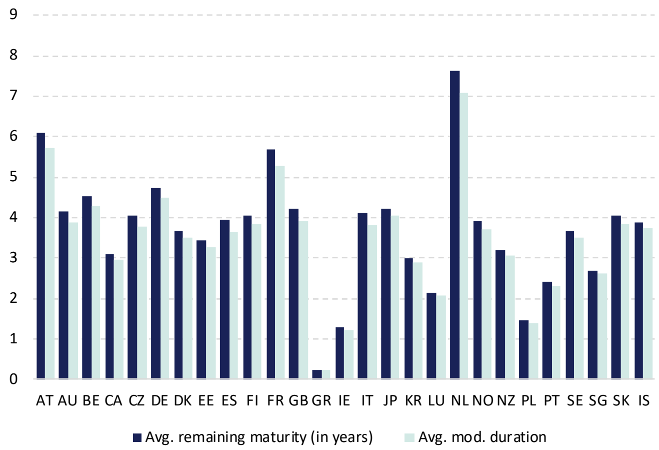
EUR benchmark maturities by month



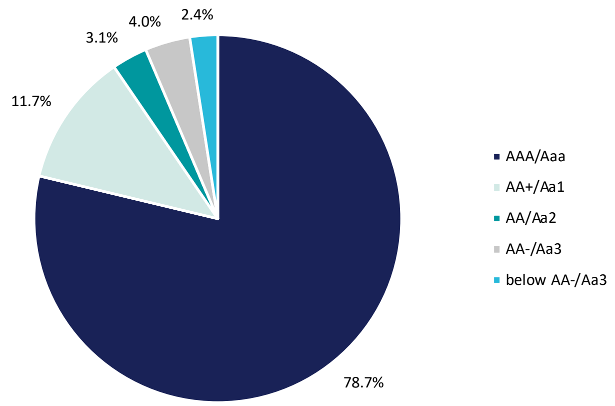
EUR benchmark maturities by year



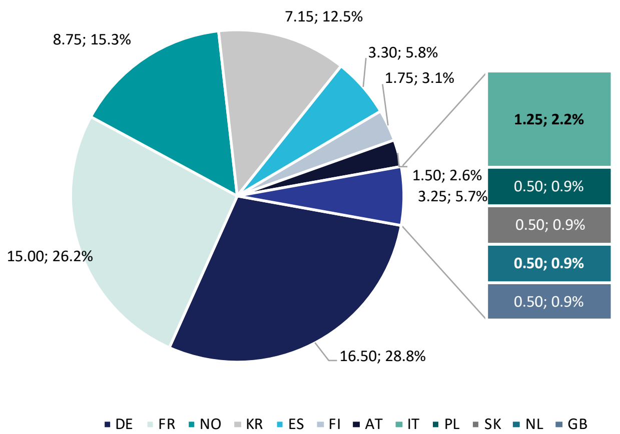
Modified duration and time to maturity by country



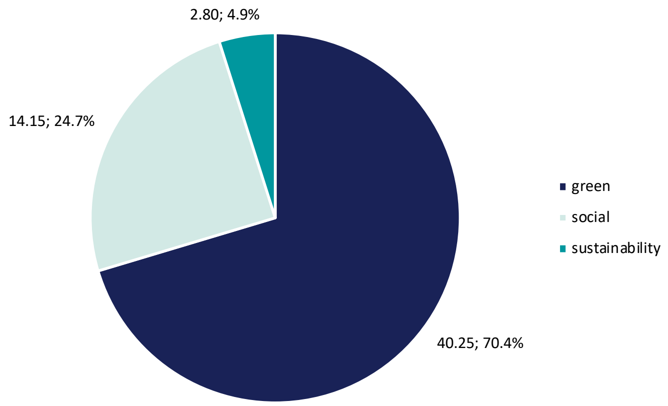
Rating distribution (volume weighted)



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

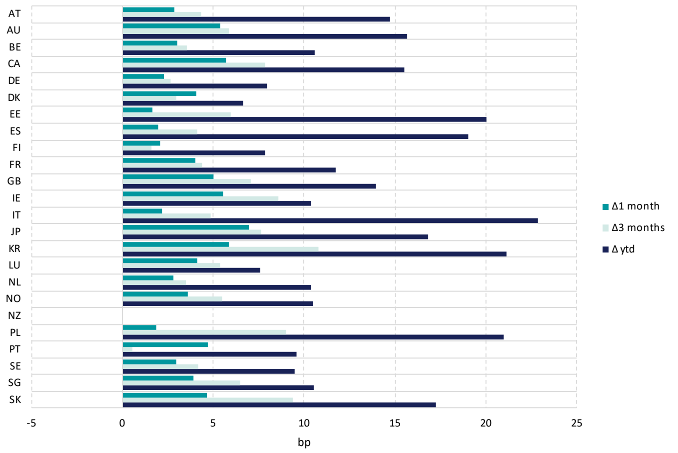


EUR benchmark volume (ESG) by type (in EURbn)

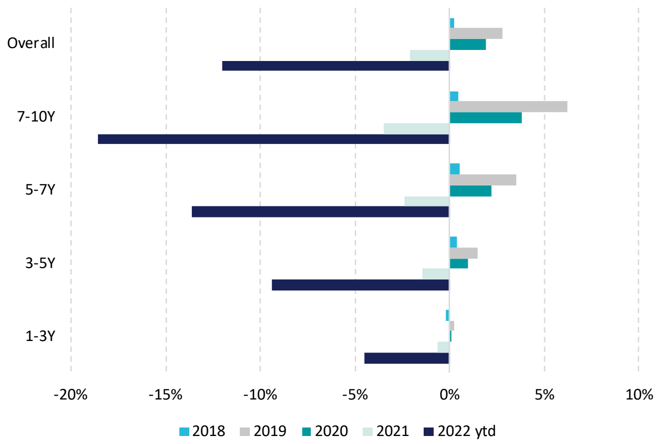


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

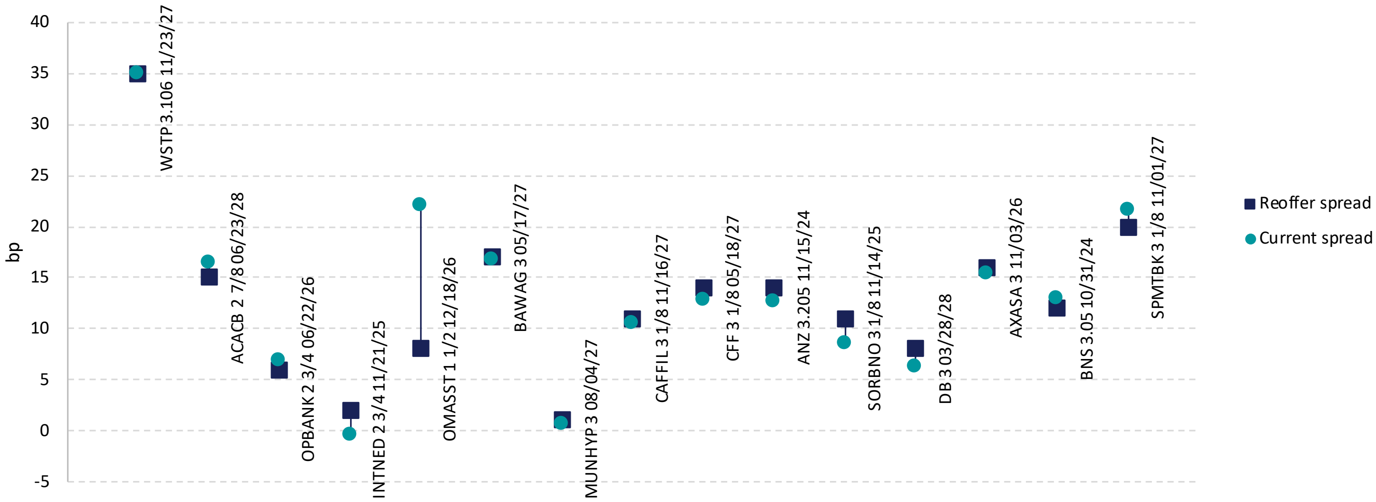
Spread development by country



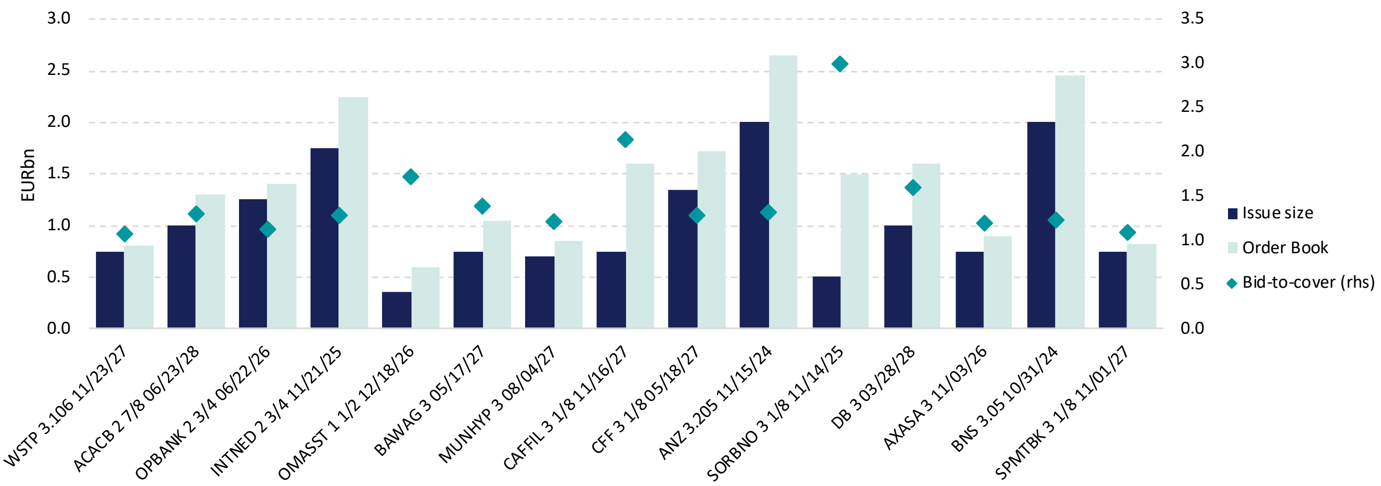
Covered bond performance (Total return)



Spread development (last 15 issues)



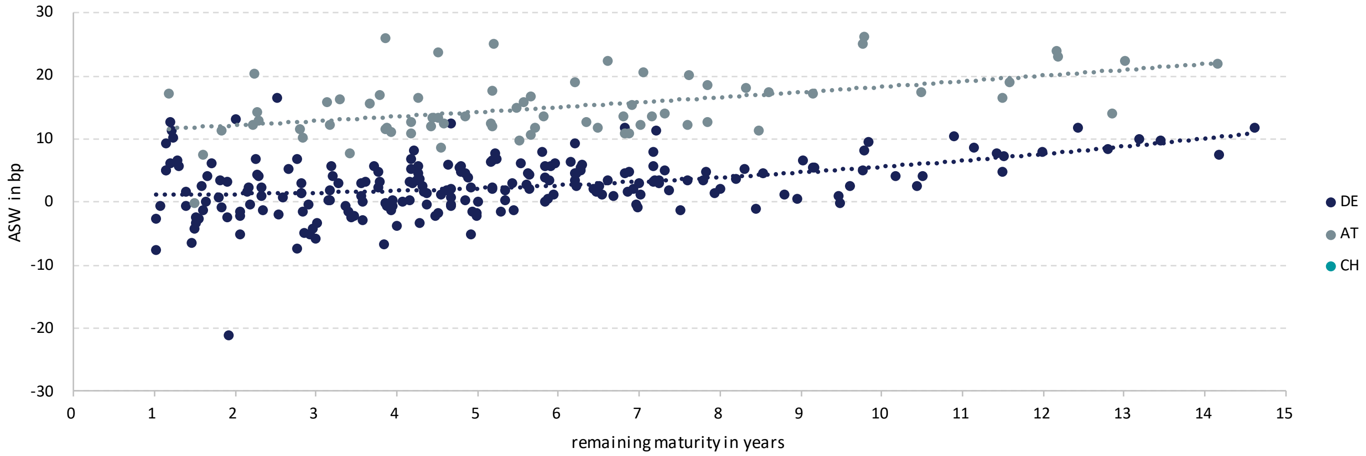
Order books (last 15 issues)



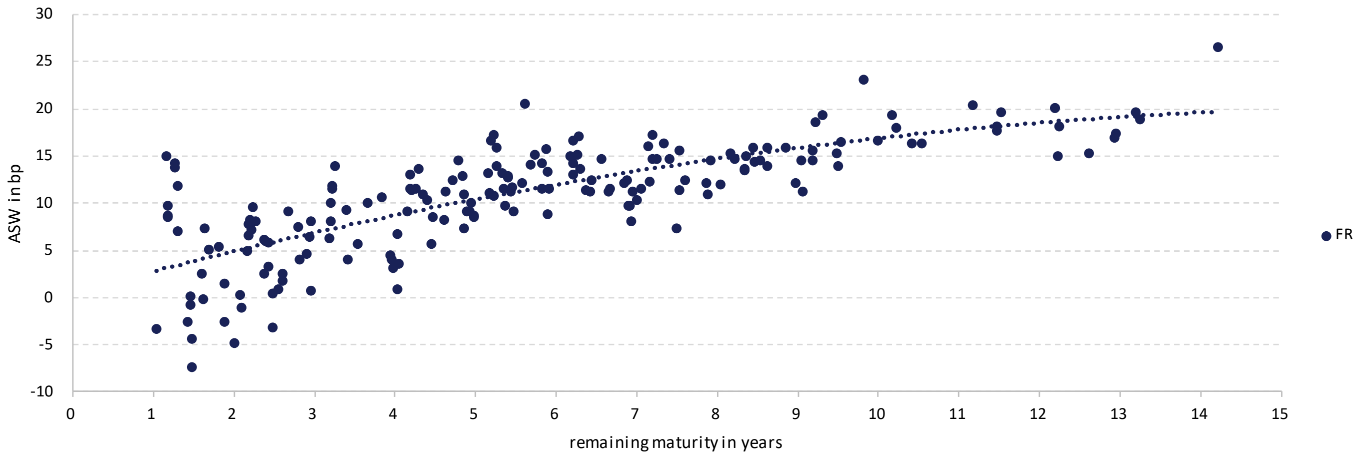
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread overview[1]

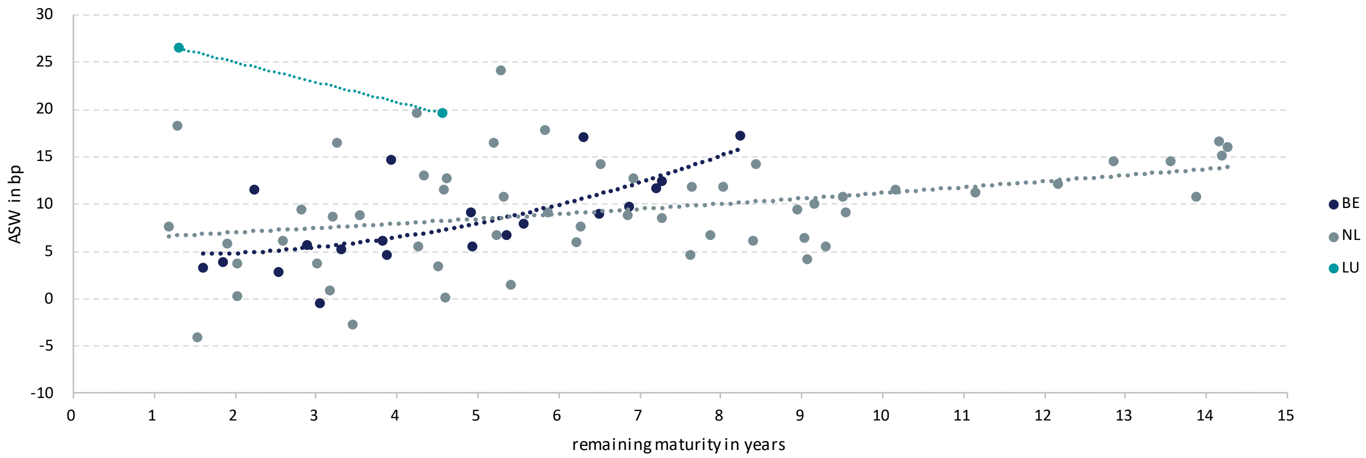
DACH



France

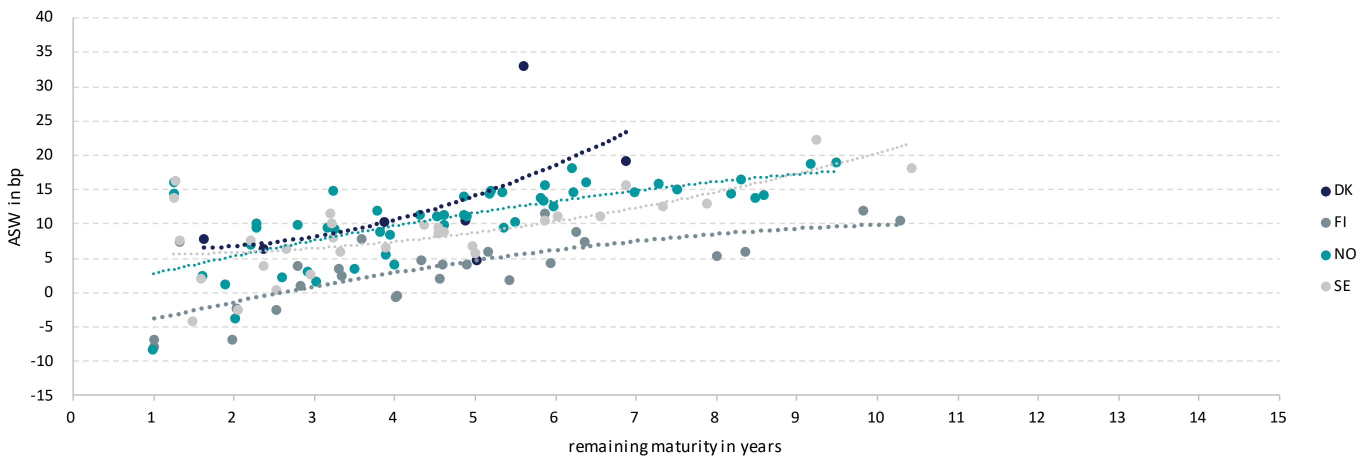


Benelux

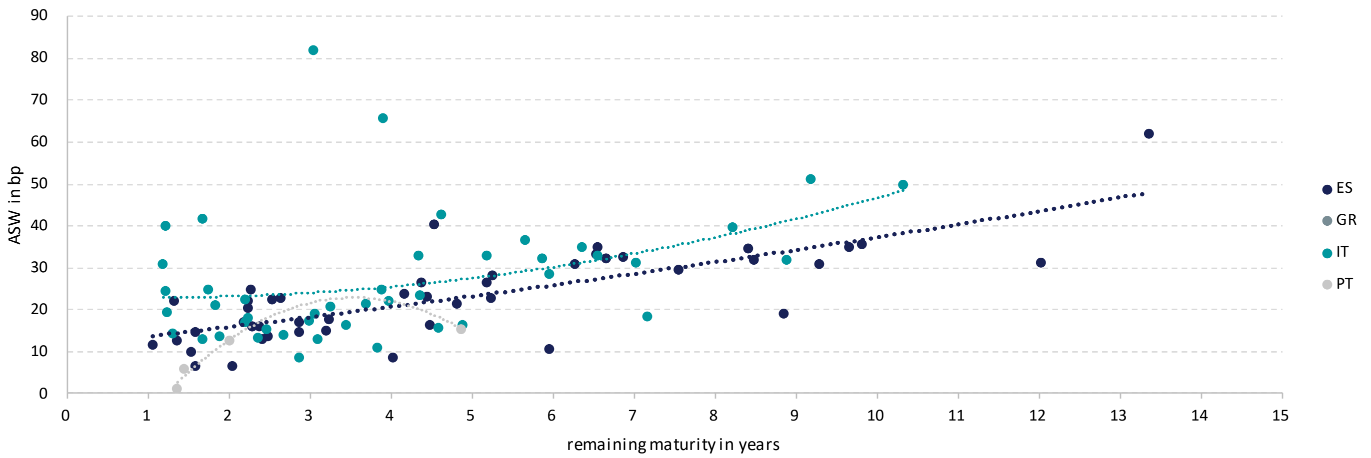


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

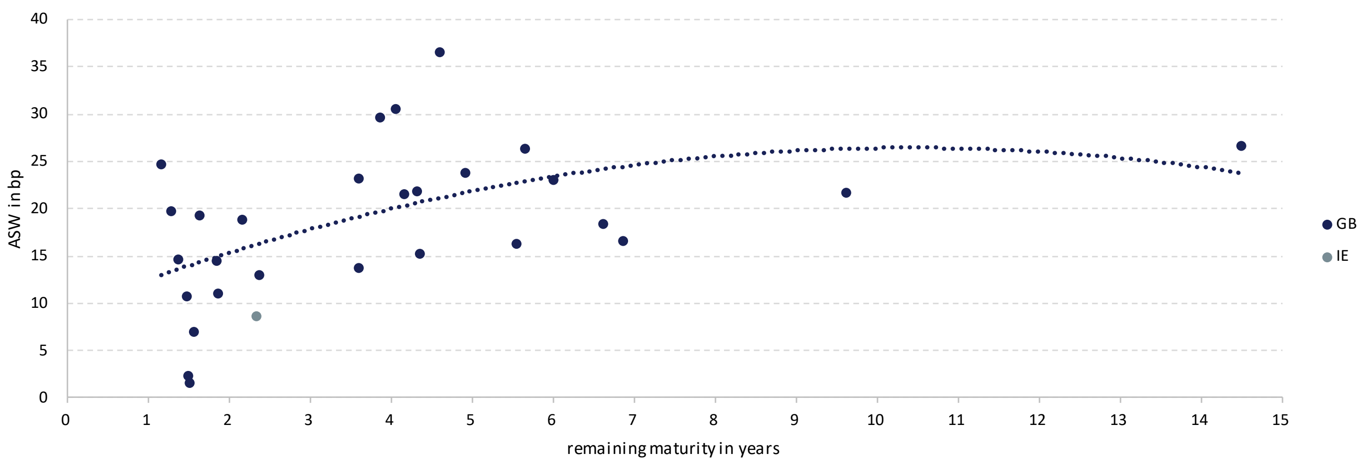
Nordics



Southern Europe

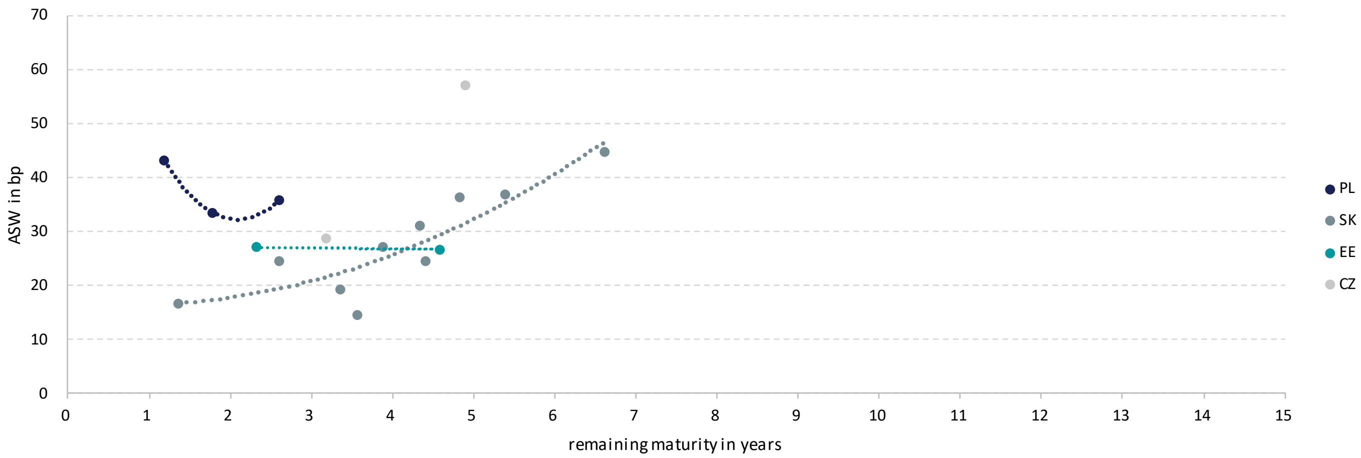


UK/IE

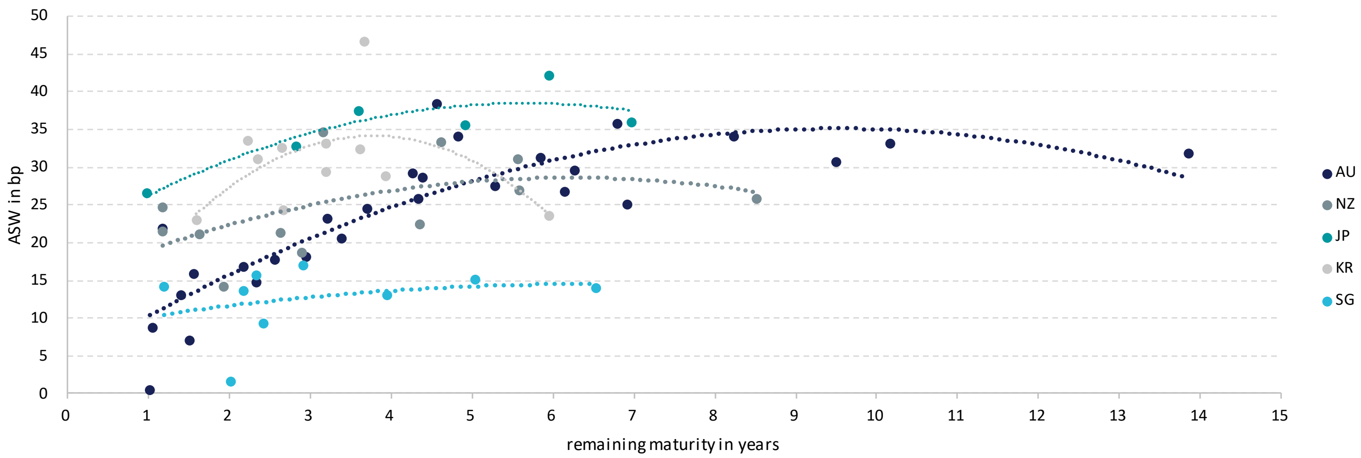


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

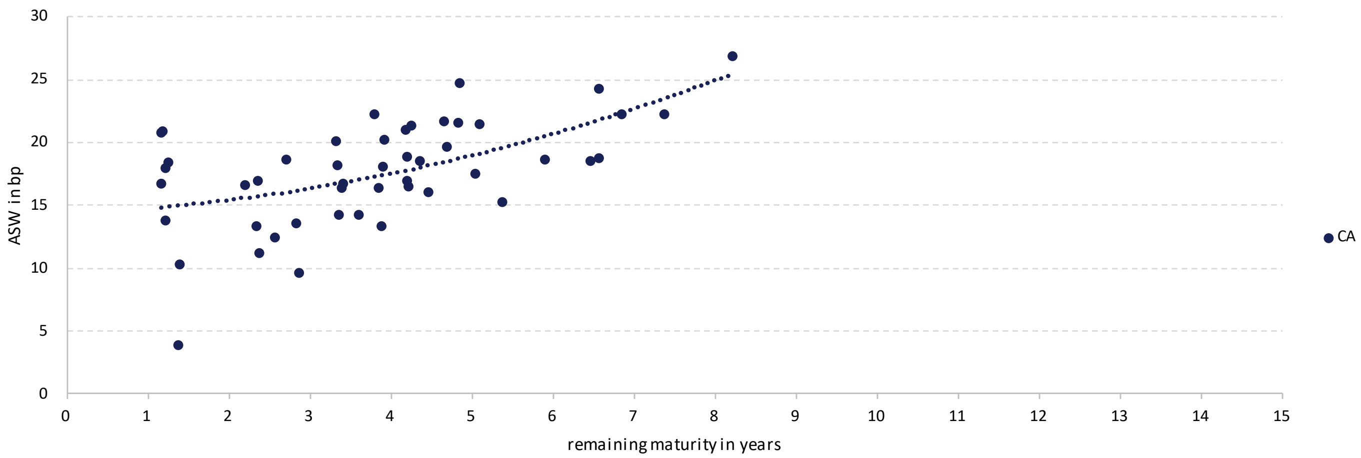
CEE



APAC



North America

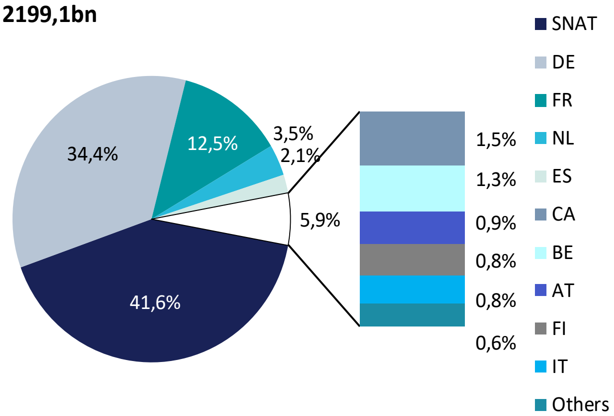


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
SSA/Public Issuers

Outstanding volume (bmk)

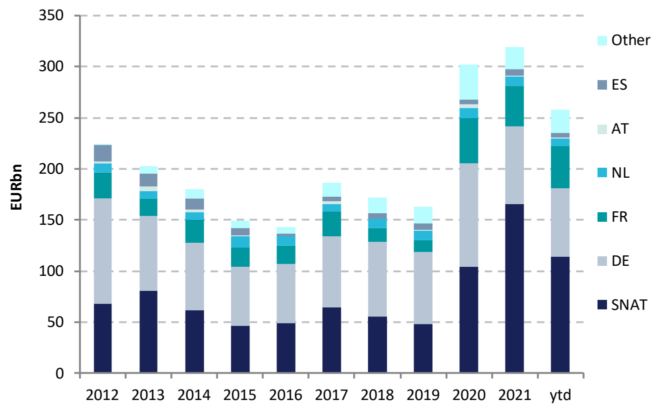
EUR 2199,1bn



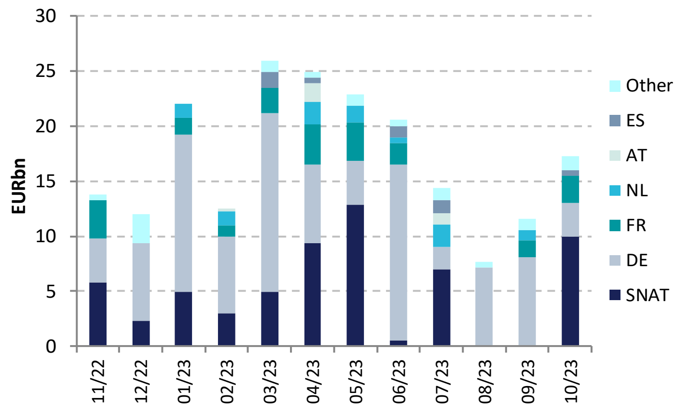
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	914,5	219	4,2	8,3
DE	757,6	564	1,3	6,3
FR	274,7	182	1,5	6,3
NL	77,2	69	1,1	6,6
ES	45,6	60	0,8	4,8
CA	32,6	23	1,4	4,7
BE	27,5	31	0,9	12,0
AT	19,8	23	0,9	4,6
FI	18,5	22	0,8	5,6
IT	17,3	21	0,8	4,9

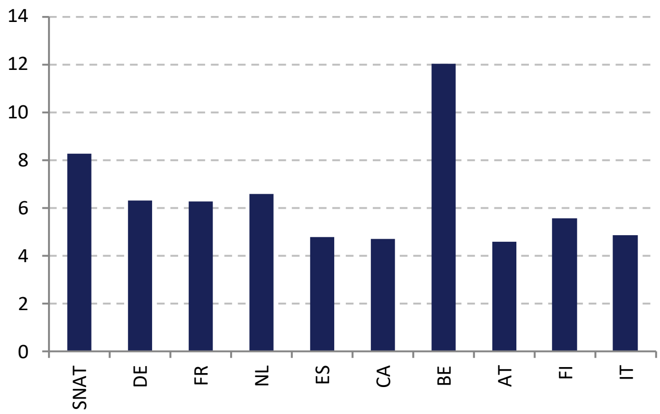
Issue volume by year (bmk)



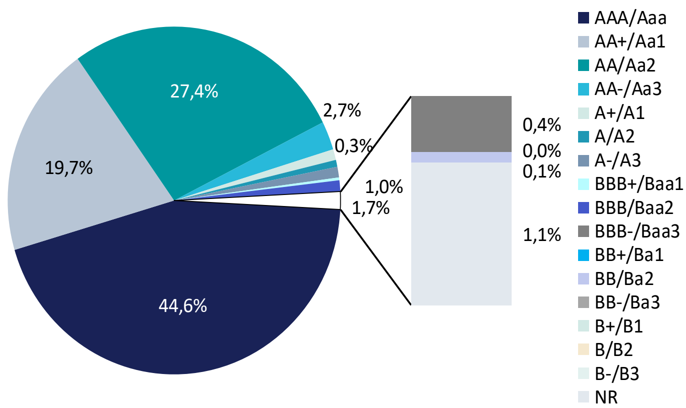
Maturities next 12 months (bmk)



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

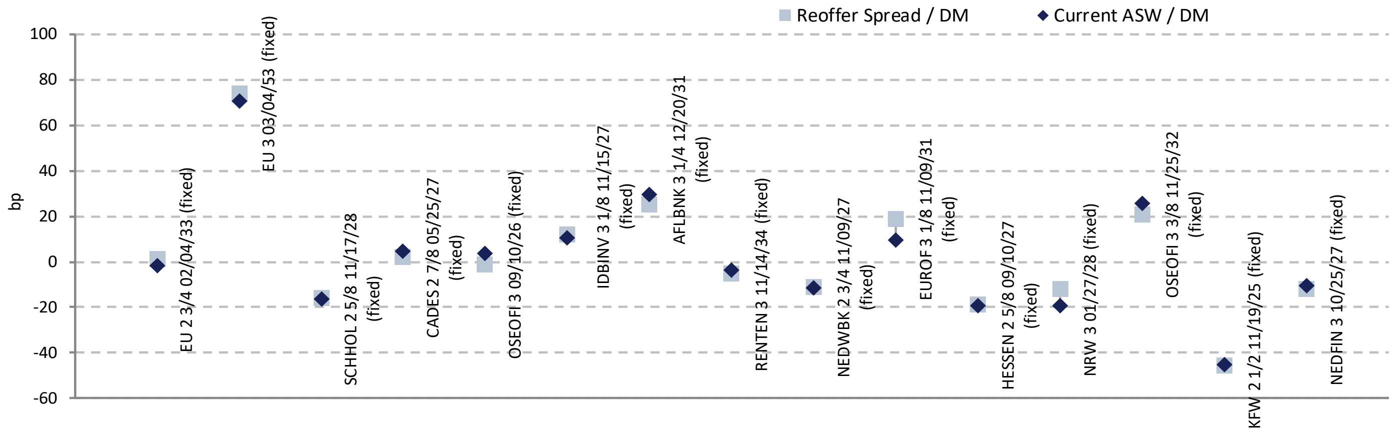


Rating distribution (vol. weighted)

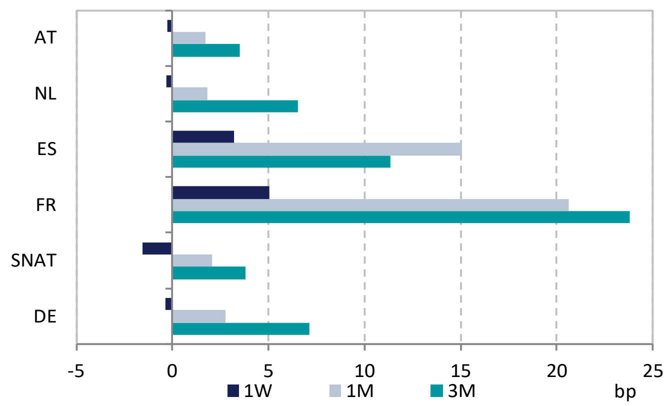


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

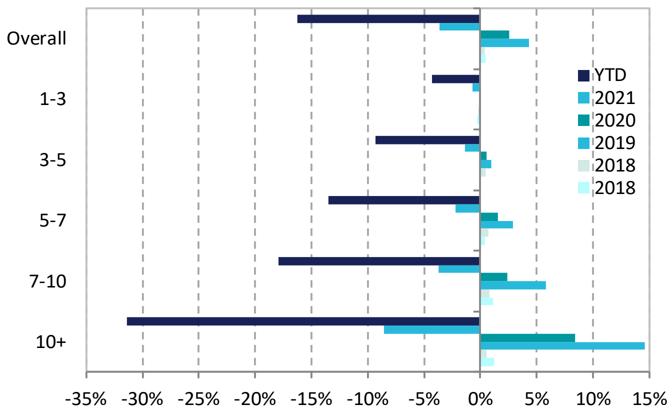
Spread development (last 15 issues)



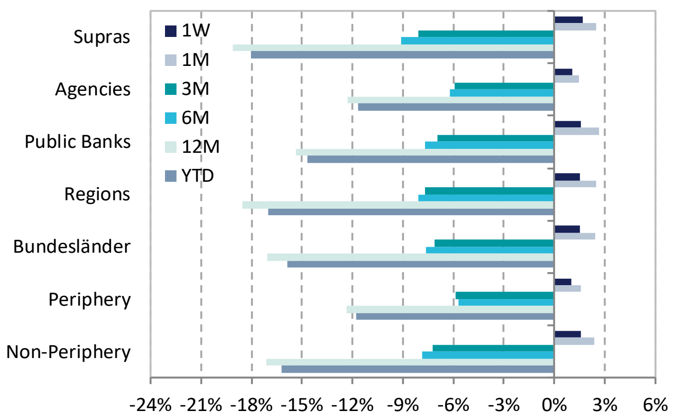
Spread development by country



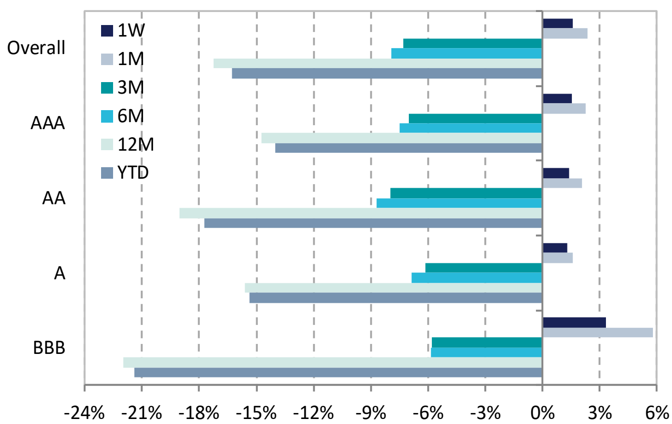
Performance (total return)



Performance (total return) by segments

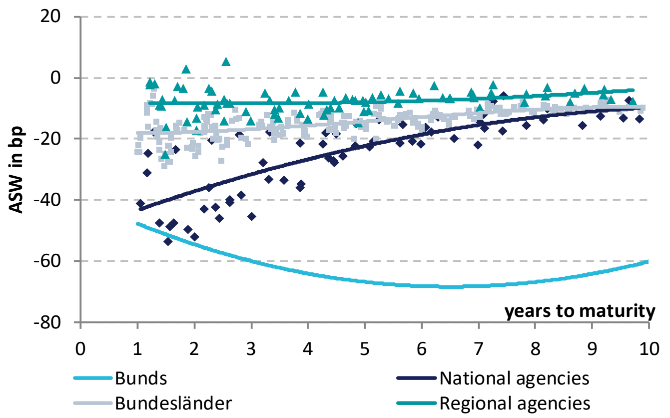


Performance (total return) by rating

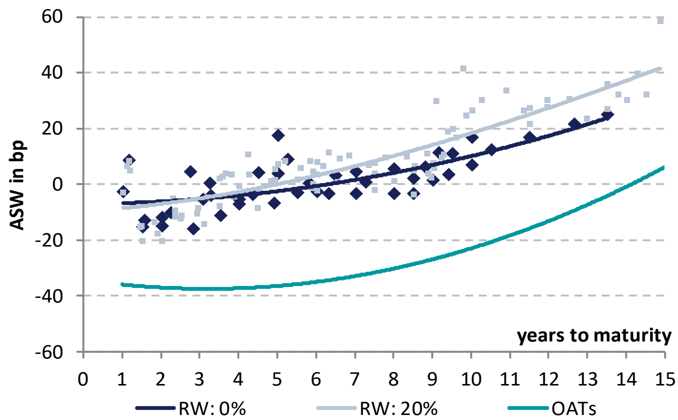


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

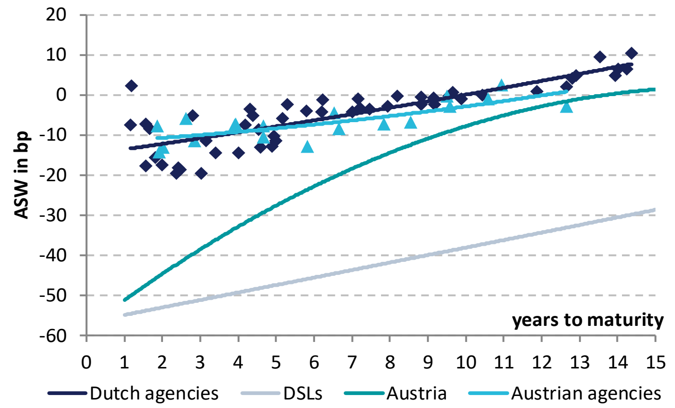
Germany (by segments)



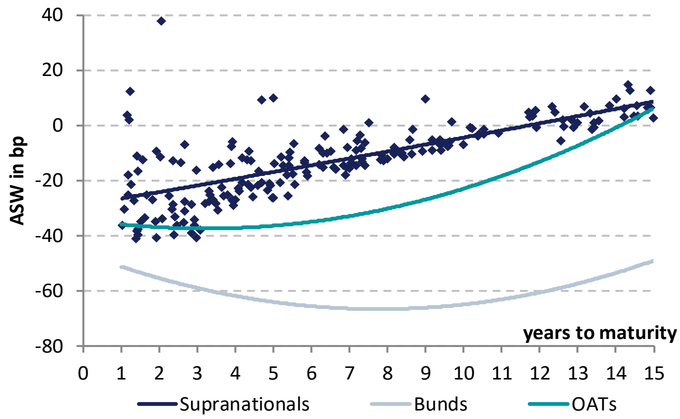
France (by risk weight)



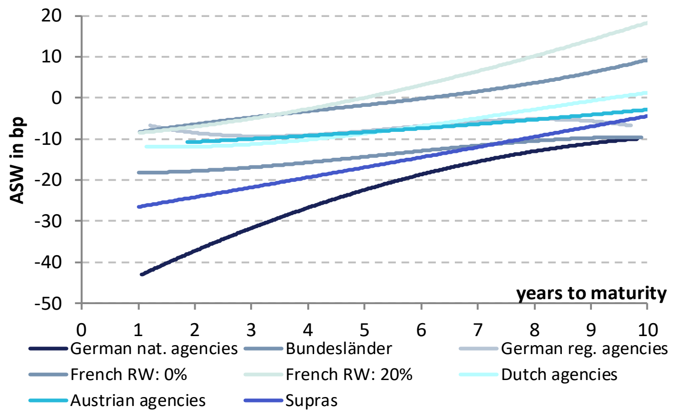
Netherlands & Austria



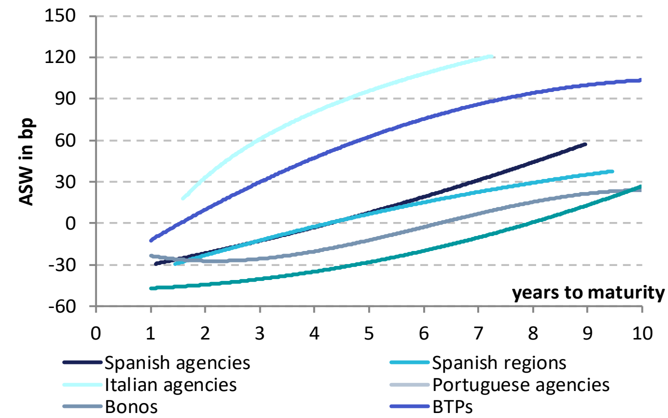
Supranationals



Core



Periphery



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

Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
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
24/2022 ♦ 20 July	▪ A brief spotlight on the EUR sub-benchmark segment ▪ Deutsche Hypo real estate climate: index falls again
23/2022 ♦ 13 July	▪ ECB preview: might the ECB go slightly further? ▪ EBA Report on Asset Encumbrance: levels increasing
22/2022 ♦ 06 July	▪ H1 review and outlook for H2 2022 ▪ Half time in the 2022 SSA year – taking stock
21/2022 ♦ 22 June	▪ Focus on ESG covered bonds: BayernLB's "green rail" public sector Pfandbrief ▪ Stability Council convenes for 25th meeting
20/2022 ♦ 15 June	▪ Covered bond jurisdictions in focus: a look at Australia and New Zealand ▪ NGEU: Green Bond Dashboard
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

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 (quarterly update)

Covered bonds as eligible collateral for central banks

SSA/Public Issuers:

Issuer Guide – German Laender 2021

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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Financials	+49 511 9818-9490
Governments	+49 511 9818-9660
Länder/Regionen	+49 511 9818-9550
Frequent Issuers	+49 511 9818-9640

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Origination Corporates	+49 511 361-2911

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Asset Finance	+49 511 361-8150

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

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