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Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

23 November 2022 ♦ 36/2022

Marketing communication (see disclaimer on the last pages)

Agenda

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Market overview Covered Bonds

Authors: Dr. Frederik Kunze // Melanie Keine // Stefan Rahaus

Primary market: TLTRO III refinancing or pre-funding?

While four covered bond deals from four jurisdictions were placed on the market at the start of last week, things remained quiet on the primary market over the course of the rest of the week. It was only in the new trading week that the momentum was ratcheted up again significantly. For example, on Monday the German UniCredit Bank and Canadian Federation des Caisses Desjardins du Quebec (CCDJ) each approached investors. UniCredit (Ticker: HVB) raised EUR 750m at ms +2bp, with the bank paying a new issue premium of 3-4bp as a result. The initial guidance was in the area of ms +6bp, with the order book for the mortgage Pfandbrief with a term of just over three years eventually coming to a total volume of EUR 1.1bn. CCDJ also tapped the short-end with its 2y covered bond worth EUR 750m. The bond started out the marketing phase with initial guidance in the area of ms +15bp. From our perspective, the mortgage covered bond from CCDJ complies with the transparency requirements of Art. 14 of the Covered Bond Directive and the issuer has opted to make use of the ECBC Covered Bond Label, meaning we would assume that an LCR level of 2A applies here. The order book for the CCDJ deal ultimately came to EUR 1.25bn, with the result that an issuance volume of EUR 750m produced a bid-to-cover ratio of 1.7x. The final spread came in at ms +12bp. Bankinter (ticker: BKTSM; last issuance activity dates back to 2018) become the fourth issuer from Spain to venture onto the market in 2022, raising the issuance volume from this jurisdiction to EUR 5.75bn in the current year. Its soft bullet covered bond with a term to maturity of 5.5 years was eventually issued at ms +40bp (volume: EUR 750m; order book: EUR 900m; guidance: ms +40bp area). With the total volume of covered bonds issued in 2022 now standing at EUR 194.4bn, a new record high has already been achieved. The previous highest value of EUR 152.4bn was recorded in 2011. The adjusted TLTRO III conditions and the additional voluntary repayment dates directly related to this certainly have the potential to provide fresh impetus on the primary market. Nevertheless, at EUR 292bn, the voluntary repayment volume communicated by the Eurosystem for the first of the three deadlines was lower than anticipated (Bloomberg market forecast: EUR 600bn). However, at this point we would not overstate the importance of this "low" figure. After all, there are two further additional dates for voluntary repayments and the largest TLTRO III tender (TLTRO III.4 with a volume of more than EUR 900bn still outstanding after the November repayment) is scheduled to run until June 2023. In addition, some commercial banks might favour holding higher levels of liquidity up to the end of the year. Therefore, not all EMU issuers presently approaching investors are to be regarded as "TLTRO III re-financiers". We also see significant incentives for pre-funding activities on account of the uncertainty surrounding funding costs in 2023 alone, in addition to a potential quantitative tightening course on the part of the ECB.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
Bankinter SA	ES	22.11.	ES0413679525	5.5y	0.75bn	ms +40bp	- / Aa1 / AA+	-
CCDJ	CA	21.11.	XS2560673662	2.0y	0.75bn	ms +12bp	AAA / Aaa / -	-
UniCredit Bank	DE	21.11.	DE000HV2AY79	3.3y	0.75bn	ms +2bp	- / Aaa / -	-

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

Secondary market: new issuances and looming year-end suppressing spreads
The secondary market continues to be influenced by events on the primary market and the approaching year-end. Traders are attempting to reduce their books or keep them at a low level, among other reasons due to the seasonally high issuances volumes at the start of a new year. The willingness to snap up fresh supply or to buy positions via secondary market inquiries is correspondingly low, which is suppressing spreads. New deals are increasingly leading to swap requests involving what would appear to be expensive secondary market securities for primary market bonds with a new issue premium, which often applies not only to the respective issuer but rather to the entire jurisdiction or region in question. As we mentioned last week, we do not expect this trend to end until primary market activities start to slow down.

Deutsche Hypo Real Estate Climate – positive development brings negative spiral to an end?
After having recently recorded double-digit losses, the monthly survey for the Deutsche Hypo Real Estate Climate has shown a positive development again in November. Around 1,200 real estate experts were surveyed for this. Accordingly, the Real Estate Climate increased by 7.1% to 69.4 points in the reporting month of November. It should be noted that both the investment climate (+5.8% to 50.7 points) and the earnings climate (+8.0% to 89.4 points) contributed to this positive development. As a sub-component, the office climate also recorded an improvement in sentiment (+13.0% to 67.4 points), while the retail climate actually registered the sharpest increase of +16.5% to 43.2 points after a significant decline in the previous month. The hotel climate climbed by +6.9% to 71.1 points. The logistics climate is still trending downwards (-1.1%), but remains at the top of the pile with a score of 111.1 points. While the commercial area can therefore boast an overwhelmingly positive trend, this is not the case for residential properties. A sustained loss of trust is in evidence here, resulting in a further decline of 1.1% to 88.6 points for the November survey.

Scope Ratings: Italian banking sector reports solid Q3 figures
The agency Scope Ratings has taken a closer look at the Q3 business figures recently published by the banks it covers in Italy and certified that they have performed solidly. Scope commented on this as part of a press release issued in mid-November. The higher interest margins following the rise in interest rates are clearly noticeable here, while operating and risk costs are under control despite higher energy costs. Moreover, asset quality remains solid and the banks have healthy capital buffers. According to Scope, the average MDA buffer was 590bp at the end of September 2022, meaning that the banks are currently in a comfortable position. The average return on equity of the eight banks in the Scope sample (Intesa Sanpaolo, UniCredit, Banco BPM, Banca Monte dei Paschi di Siena, Mediobanca, BPER Banca, Credito Emiliano and Banca Popolare di Sondrio) was 7.1% in the third quarter. The decisive factors behind this impressive performance were the recovery in net interest income, stringent cost management and low risk provisions. Should the macroeconomic environment deteriorate further and lead to a recession, banks would be hit across multiple levels (credit, fees, commission, risk costs), depressing the financial results in the process. On Monday, the Italian banking sector was once again the focus of Scope's attention, with all eyes on the market for NPLs on this occasion. In August and September, for example, 58% more securitisations took place. According to information from the Italian bank itself, Intesa Sanpaolo has registered around EUR 13bn in funds from the ECB's long-term tender (TLTRO) for repayment. According to a Bloomberg survey, the market expects repayments totalling EUR 296.3bn after the ECB adjusted the conditions. Intesa will then be responsible for around 15% of the total expected repayments.

DBRS comments on Spanish Covered Bond Act

The rating agency DBRS has discussed the implementation of the Covered Bond Directive in Spanish law as part of a recent comment piece. According to the agency, the lower overcollateralisation ratios, a higher share of private mortgage loans with lower loan-to-value ratios and the elimination of the majority of loans in arrears can be ranked among the most important changes for cover pools. Even if the overcollateralisation ratios resulting from the change in the law are lower (previously the entire mortgage book [excluding securitised assets] was credited to the cover pool), the positive changes outweigh the negative ones, DBRS writes. These include, for example, the inclusion of a dynamic liquidity buffer, appointment of an independent adjudicator to monitor the cover pool and increased transparency. Another new feature is that a new cover pool has to be formed for each programme and the criteria for eligible cover assets are stricter than in the past. As a result, the cover pools and overcollateralisation ratios in Spain have changed significantly. In contrast, seasoning and geographical distribution have remained relatively unchanged according to DBRS. This is because the change in the law does not directly impact these aspects. We will analyse the Spanish covered bond market in greater detail as part of an upcoming edition of our weekly publication.

Market overview
SSA/Public Issuers

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

Lower Saxony (ticker: NIESA) preparing supplementary budget

One week after taking office, the federal state government of Niedersachsen has concluded a draft supplementary budget for 2022 and 2023. This lays the budgetary groundwork for a relief package to support citizens, companies, municipalities and social institutions facing cost increases in the energy sector in the wake of Russia's war on Ukraine. As announced ahead of the state elections, the supplementary budget comprises an "immediate" programme worth EUR 970m. It includes a hardship fund with a volume of EUR 55m to prevent citizens who are especially affected by the sharp energy price rises being cut off from electricity or gas. A total of EUR 200m of the immediate package is earmarked for children's nurseries and schools as well as a further EUR 200m for small and medium-sized enterprises (SMEs). Alongside the immediate programme, an additional EUR 707m is being made available for the energy transition. This will help promote independence from Russian gas. In particular, it secures the financing of the LNG terminal in Stade and enables the co-financing of hydrogen projects. Overall, EUR 302m is allotted to provide accommodation and care for refugees. Russia's war of aggression has already led to more than 100,000 people from Ukraine coming to Lower Saxony and further Ukrainians in need of protection are to be expected in the cold winter months ahead. This is exacerbated by the inflow of refugees from other crisis regions of the world. The provided funds are to be used for housing those in need. Municipalities will receive an additional EUR 264m this year and EUR 265m next year as part of the municipal financial equalisation. Overall, the direct relief for municipalities from the supplementary package amounts to around EUR 1.1bn. Niedersachsen's Ministry of Finance estimates the additional indirect relief totals approximately EUR 1bn. Similar to the Bund, which paid an energy lump sum of EUR 300 to pensioners and the federal government's pension recipients, the supplementary budget provides for an equivalent transfer to pension recipients of the federal state and municipalities. Taking into account cyclical adjustment, EUR 394m is earmarked for additional costs such as the increase in housing benefit, the federal state's higher energy costs and interest charges. In total, additional funds from the supplementary budget amount to EUR 2.9bn and reciprocal financing is essentially to be provided through tax revenue in accordance with the last autumn tax estimate. The draft could be adopted as early as 30 November 2022, as the state government will ask the state parliament for immediate committee referral.

KfW climate barometer: one in four companies investing in climate protection

With the KfW climate barometer, KfW Research has created a new company survey that provides a representative database detailing the investment behaviour of all German companies as they work towards achieving climate neutrality. According to the survey, companies spent EUR 55bn on climate protection in 2021. Half of this was accounted for by SMEs (max. annual turnover of EUR 500m) and large companies. "Of the EUR 433bn invested by the German corporate sector overall last year, one in every eight euros went towards energy transition projects", explained Dr Fritzi Köhler-Geib, KfW Chief Economist. However, in order to achieve climate neutrality in Germany by the middle of the century, total investment of EUR 5tn is needed, which equates to average annual investment of around EUR 190bn. For the current year, companies were largely expecting stable climate protection investments in the first half of 2022. In the survey period between February and June 2022, 77% of those who were already active in this respect stated that they were planning to maintain the current level of investment, while 18% had planned to increase their investment. The current energy crisis has generated two opposing effects: on the one hand, the high fossil fuel prices provide a greater incentive for switching to renewable energies and consequently improving energy efficiency. On the other, the high level of uncertainty about the economic consequences of this crisis is contributing to investment projects being postponed. Another finding of the KfW climate barometer is that only 10% of companies are so far aiming for climate neutrality.

Primary market

As is usual at this time of the year, new issues are very few and far between. In our last issue, we highlighted the mandate from Svensk Exportkredit (ticker: SEK) and it did not take long for the issuance to appear on our screens: a total of EUR 1bn was raised with a maturity of a little over five years. The guidance started at ms +17bp area but narrowed by 1bp in the marketing phase to ms +16bp. The order book amounted to more than EUR 1.25bn. Next on the market was the federal state of Thuringia (ticker: THRGN). This deal featured a volume of EUR 250m (WNG) – i.e. falling short of benchmark format and so not included in the table below – and a maturity of ten years. Marketing started with a guidance of ms -9bp area, with no narrowing subsequently observed. No details were disclosed regarding the volume of the order book. This was followed by a bond from Norway's Kommunalbanken (ticker: KBN). A total of EUR 1.0bn changed hands at ms +10bp for this five-year deal. Compared to the guidance, the spread narrowed by 1bp. The order book had a volume of EUR 1.2bn, resulting in a bid-to-cover ratio of 1.2x. Finally, we would like to draw your attention to the upcoming EU auction on Monday. According to the EU's funding plan, this will be the last auction of the year.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
KBN	Nordics	21.11.	XS2560994035	5.0y	1.00bn	ms +10bp	- / Aaa / AAA	-
SEK	Nordics	15.11.	XS2559401802	5.3y	1.00bn	ms +16bp	- / - / -	-

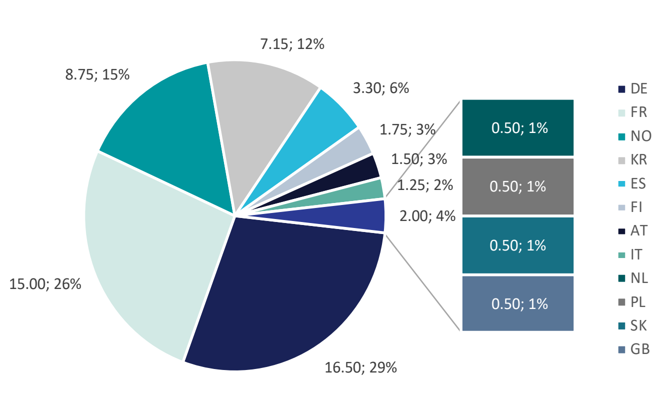
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research (Rating: Fitch / Moody's / S&P)

Covered Bonds
ESG covered bonds – another record year
Author: Melanie Kiene, CIIA

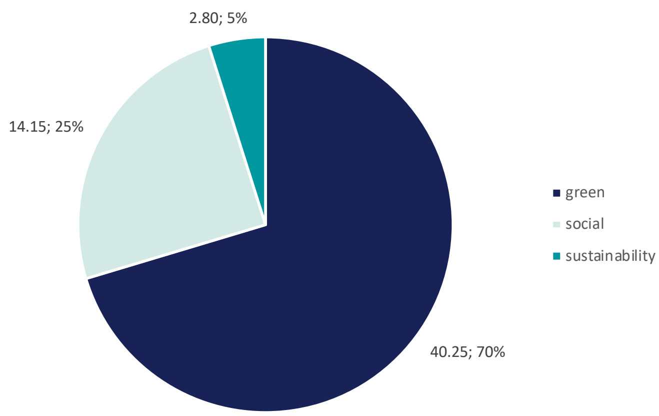
The market for ESG covered bonds

The matter of environmental, social and governance (ESG) has become a key component of the international bond market and is here to stay. Across almost the entire spectrum of active jurisdictions and in the most important currencies, bonds can be placed in green, social or generally sustainable formats. In our NORD/LB Fixed Income Special – ESG update in March this year, we focused on this trend in great detail. Today, we will take a look at the ESG subsegment of EUR benchmark covered bonds. In a global context, green bonds accounted for the bulk of the total sustainable bonds outstanding worldwide at the end of 2021, with a share of 50%. Both the fundamental dynamics of the ESG segment and the preponderance of green bonds can be attributed to the market for sustainable covered bonds. Based on the data in the ECBC Factbook 2022, the volume of ESG covered bonds outstanding (sustainable covered bonds) amounted to EUR 53.4bn as at year-end 2021. In relation to covered bonds with an outstanding volume of EUR ≥250m, around 31% of asset allocation is attributable to social assets and 69% to green assets. Of this 69%, 75% in turn is made up of green mortgages (residential) or buildings, while 17% of assets are attributable to commercial buildings. With regard to the EUR benchmark segment – one we regularly reflect on – we last provided an overview of the whole ESG bond market in March 2022 in our NORD/LB Fixed Income Special – ESG update and the active covered bond issuers in the NORD/LB Covered Bond & SSA View 12/2022. We also focused on the submarket in special editions of The Covered Bond Report and the BondGuide. In today's edition of our weekly publication, we present the market and issuances of EUR benchmarks in an ESG format this year and provide an updated overview of currently active issuers in green, social and sustainability covered bonds.

ESG covered bonds by country (EUR BMK; EUR bn)



ESG covered bonds by type (EUR BMK; EUR bn)

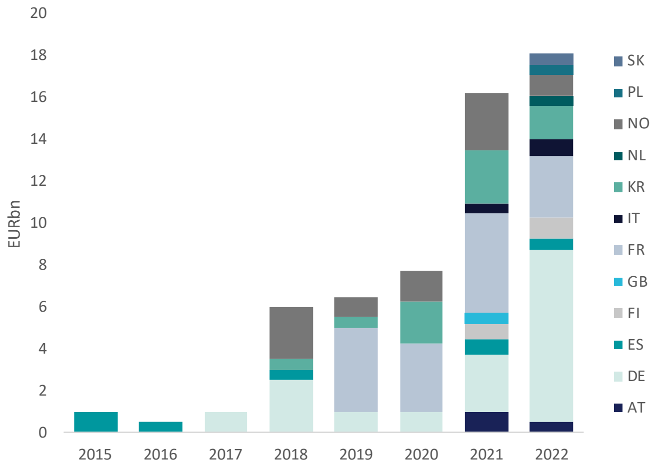


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

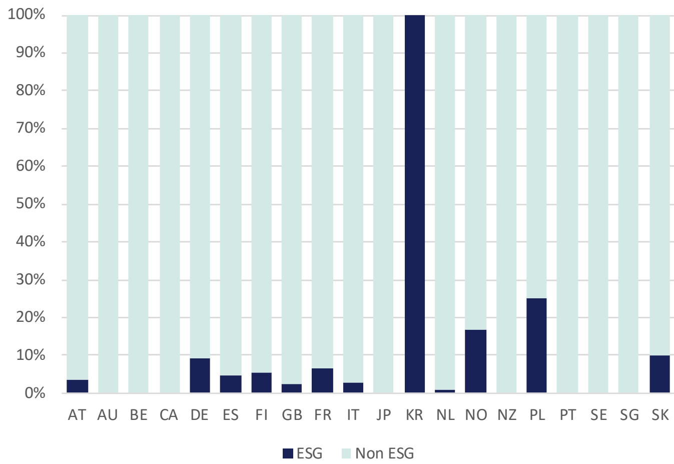
EUR benchmarks in ESG format

The outstanding volume of EUR benchmarks totals around EUR 968.0bn, of which EUR 57.2bn is covered bonds in ESG format. This volume is split between 80 outstanding bonds in total. The largest market shares are accounted for by Germany (EUR 16.5bn; 26 bonds) and France (EUR 15.0bn; 15 bonds). The 12 active jurisdictions now include Norway (EUR 8.8bn; 11 bonds) and South Korea (EUR 7.2bn; 12 bonds). A special feature worth noting in relation to South Korean issuers is that this market has an extremely high preponderance of ESG bonds, mainly due to the public mandate of the Korea Housing Finance Corporation (KHFC). Currently, the EUR benchmark segment in South Korea consists of ESG covered bonds alone. In terms of ESG type, bonds in a green format dominate (EUR 40.3bn; 54 bonds). Social covered bonds account for EUR 14.2bn (21 bonds), while the sustainability category makes up EUR 2.8bn (5 bonds).

ESG covered bond issuances (EUR BMK)



ESG covered bonds: market share (EUR BMK)



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

Market developments over the last few months

Looking back on the past few years, it can unequivocally be said that the current year, 2022, is set to be a record year in terms of new issue volume. A noteworthy volume of EUR 18.1bn has already been placed in 2022 (green: EUR 14.8bn; social: EUR 2.9bn; sustainability: 0.5bn). This means the previous record of EUR 16.3bn set in 2021 has already been exceeded. In 2022, there have also been seven newcomers to the market, with one issuer making an inaugural appearance twice. The first from BayernLB (DE) was its inaugural railway green bond, later followed by its first green mortgage bond placement. Also from Germany, Berlin Hyp appeared on the market for the first time with its inaugural social covered bond and DZ HYP with its green covered bond. Furthermore, we saw inaugural green covered bonds from Banco BMP (IT), Caja Rural de Navarra (ES), UniCredit Bank Austria (AT) and PKO Bank Hipoteczny (PL; PKO). The aforementioned PKO bond was also the first green bond from Poland. This has not only broadened the circle of issuers in itself, but also that of jurisdictions represented in the ESG market.

ESG covered bonds in benchmark format: 36 active issuers

The EUR benchmark segment therefore has 36 active ESG issuers, with 80 bonds outstanding overall. Some issuers are active in more than one subsegment: Berlin Hyp (green and social), Caja Rural de Navarra (sustainability and green), CAFFIL (social and green), Credit Agricole Home Loan SFH (social and green) and Kookmin Bank (sustainability and green). As previously highlighted in our commentary in March 2022, the ICMA Principles are currently the main framework for the ESG market and covered bonds.

Emittenten von EUR-Benchmarks im ESG-Format

Issuer	Country	ESG Type	Volume (in EURbn)	No. of ESG BMKs	Framework based on ICMA principles
BAWAG PSK	AT	green	0.50	1	YES (Link)
Hypo Tirol Bank	AT	social	0.50	1	YES (Link)
UniCredit Bank Austria	AT	green	0.50	1	YES (Link)
BayernLB	DE	green	1.00	2	YES (Link)
Berlin Hyp AG	DE	green	4.00	7	YES (Link)
		social	0.75	1	
Deutsche Kreditbank	DE	social	1.50	3	YES (Link)
DZ HYP	DE	green	1.00	1	YES (Link)
ING-DiBa AG	DE	green	2.25	2	YES (Link)
LBBW	DE	green	1.50	2	YES (Link)
Münchener Hyp	DE	green	1.50	2	YES (Link)
NORD/LB	DE	green	2.00	4	YES (Link)
UniCredit Bank	DE	green	1.00	2	YES (Link)
Caja Rural de Navarra	ES	green	0.50	1	YES (Link)
		sustainable	1.10	2	
Eurocaja Rural	ES	sustainable	0.70	1	YES (Link)
Kutxabank	ES	social	1.00	1	YES (Link)
OP Mortgage Bank	FI	green	1.75	2	YES (Link)
Yorkshire Building Society	GB	social	0.50	1	YES (Link)
BPCE SFH	FR	green	3.75	3	YES (Link)
CAFFIL	FR	green	1.50	2	YES (Link)
		social	3.25	4	
Credit Agricole Home Loan SFH	FR	green	1.25	1	YES (Link)
		social	1.00	1	
La Banque Postale Home Loan SFH	FR	green	0.75	1	YES (Link)
Societe Generale SFH	FR	green	3.50	3	YES (Link)
Banco BPM SpA	IT	green	0.75	1	YES (Link)
Credit Agricole Italia SpA	IT	green	0.50	1	YES (Link)
Hana Bank	KR	social	0.50	1	YES (Link)
Kookmin Bank	KR	green	0.50	1	YES (Link)
		sustainable	1.00	2	
Korea Housing Finance Corp	KR	social	5.15	8	YES (Link)
NN Bank	NL	green	0.50	1	YES (Link)
DNB Boligkreditt	NO	green	3.00	2	YES (Link)
Eika Boligkreditt	NO	green	1.00	2	YES (Link)
SpareBank 1 Boligkreditt	NO	green	2.00	2	YES (Link)
Sparebanken Soer Boligkreditt	NO	green	1.00	2	YES (Link)
Sparebanken Vest Boligkreditt	NO	green	1.25	2	YES (Link)
SR-Boligkreditt	NO	green	0.50	1	YES (Link)
PKO Bank Hipoteczny	PL	green	0.50	1	YES (Link)
Slovenska Sporitelna	SK	green	0.50	1	YES (Link)

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

Further update to the ICMA Green Bond Principles

The Green Bond Principles (GBP), which are a collection of voluntary frameworks that seek to support issuers in structuring bonds and possible assets, continue to apply unchanged from the June 2021 version (cf. aforementioned Fixed Income Special). Updates this year only related to the appendix. These essentially clarified the distinction between "Standard Green Use of Proceeds Bonds" (unsecured bonds) and "Secured Green Bonds", in addition to providing further guidance on green Pfandbriefe, securitisations, asset-backed commercial paper, collateralised debt obligations and other secured structures. The GBP are available in English, German and 25 other languages.

Conclusion

The global goal of reducing greenhouse gases which damage the climate and the energy crisis triggered by the war in Ukraine are just some of the drivers helping to maintain global momentum in the ESG market and also in the covered bond sub-market. Here, too, the preponderance of green bonds is in evidence, although issuers are also making use of the other two sub-markets. Although there have been seven newcomers to this market so far this year (with BayernLB approaching investors with both a green and a railway covered bond), the number of inaugural placements in 2022 is actually down by four versus 2021. We have already welcomed a number of inaugural placements in recent years and still see notable potential for this momentum to continue. Depending on general market conditions, we therefore expect new issuers to appear next year as well. In our view, the ESG market for covered bonds will continue to grow and develop, in terms of jurisdiction, issuers and ESG type. While the green curve of issuers such as Berlin Hyp is already substantial, some issuers have only appeared on the market once or twice in an ESG format. It is therefore not unlikely that the "social" ESG type will also gain some momentum. In addition, enormous issuing potential can be ascertained just looking at the shares of ESG issues in the total EUR benchmark volume at jurisdiction level. However, in order for this to be fully exploited, issuers must also further develop their own frameworks and conditions. The requirements in the course of the EU taxonomy are certainly to be regarded as setting the course for the market and should not be ignored for covered bonds in ESG format.

SSA/Public Issuers
Current LCR classifications for our SSA coverage

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

Objective of the LCR: reduction in liquidity risks for credit institutions

The objective of the LCR is to control the liquidity risk of a credit institution in such a way that sufficient High-Quality Liquid Assets (HQLA) are available at all times in order to survive a significant stress scenario lasting 30 days. It comprises the minimum liquidity buffer, which is required in order to bridge liquidity mismatches of one month in crisis situations. Specifically, the LCR is calculated from the ratio of HQLA to the net payment outflows in the 30-day stress scenario, whereby this ratio must be at least 100%.

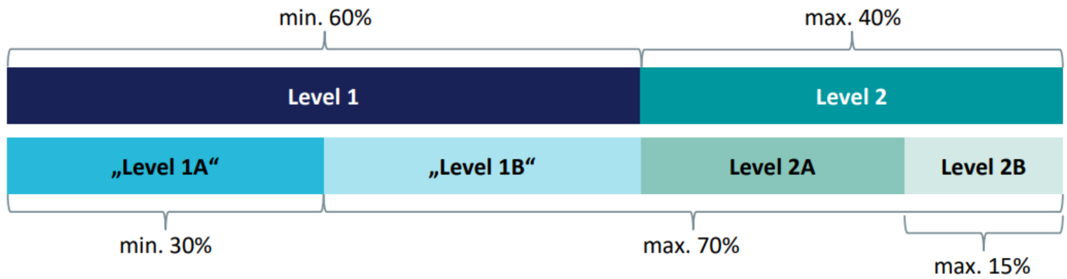
10 October 2014: European Commission publishes LCR Regulation

After there had been a lack of clarity for a long time about the precise definition of HQLA, as well as the EBA recommendation published at the end of 2013 only leading to further uncertainty, the Liquidity Coverage Requirement Delegated Act was finally published on 10 October 2014. This LCR legal act specified in particular which assets are to be treated as HQLA in future. A revised version of the LCR Regulation first published in July 2018 took effect from 30 April 2020. This governs the regulation concerning assets from third countries, repo transactions, CIU shares and stocks. An update was also issued on 8 July 2022, which resolved clashes between the specific liquidity requirements for covered bonds and the existing general liquidity requirements of the CRR.

Categorisation in different liquidity levels

Under the HQLA definition, the legislation, as proposed by the BCBS, divides HQLA into different liquidity levels. Depending on the assigned level, this results in upper and lower limits for certain levels and the application of possible haircuts. On the following two pages we provide a brief overview of asset classification and allocation, before analysing the implications for SSAs. Please note, however, that in market practice, however, a distinction is occasionally made within Level 1 between Level 1A and Level 1B assets (Level 1 covered bonds due to obligatory haircut), even if such a linguistic distinction appears neither in the CRR nor the LCR Regulation.

Structure of the LCR portfolio (Art. 17 LCR Regulation)



Source: LCR Regulation, NORD/LB Markets Strategy & Floor Research

Classification overview

	Level 1 assets (Art. 10 LCR Regulation)		Minimum haircut (for shares or units in CIUs)
(a)	Coins and bank notes		- (-)
(b)	Following exposures to central banks:		- (-)
	(i)	Assets representing claims on or guaranteed by the ECB or an EEA member state's central bank	
	(ii)	Assets representing claims on or guaranteed by central banks of third countries (CQS 1)	
	(iii)	Reserves held by the credit institution in a central bank referred to in (i) and (ii) provided that the credit institution is permitted to withdraw such reserves at any time during stress periods and the conditions for such withdrawal have been specified in an agreement between the relevant competent authority and the ECB or the central bank	
(c)	Assets representing claims on or guaranteed by the following central or regional governments, local authorities or public sector entities:		- (5%)
	(i)	Central governments of an EEA member state	
	(ii)	Central government of a third country (CQS 1)	
	(iii)	Regional governments or local authorities and PSEs in an EEA member state, provided that they are treated as exposures to the central government of the respective EEA member state (i.e., risk weighting of 0%)	
	(iv)	Regional governments or local authorities in a third country of the type referred to in (ii), provided that they are treated as exposures to the central government of the third country (i.e., same risk weighting as central government [0%])	
	(v)	PSEs provided that they are treated as exposures to the central government of an EEA member state or to one of the regional governments or local authorities referred to in (iii) (i.e., same risk weighting of 0%).	
(d)	Following assets:		- (5%)
	(i)	Assets representing claims on or guaranteed by the central government or the central bank of a third country that has not been assigned a CQS 1 (rating below AA-)	
	(ii)	Reserves held by the credit institution in a central bank referred to in i) which meet certain conditions	
(e)	Assets issued by credit institutions which meet at least one of the following requirements:		- (5%)
	(i)	Incorporated in, or established by the central government of, an EEA member state or the regional government or local authority in an EEA member state, the government or local authority is under the legal obligation to protect the economic basis of the credit institution and maintain its financial viability throughout its lifetime and any exposure to that regional government or local authority, if applicable, is treated as an exposure to the central government (i.e., risk weighting of 0%);	
	(ii)	The credit institution extends promotional loans as defined in Article 10 (1) (e) (ii)	
(f)	Qualifying EEA covered bonds which meet all the requirements of Art. 10 (f), including issue size at least EUR 500m or equivalent in domestic currency, rating: min. CQS 1 or if no rating a risk weighting of 10% according to Art. 129 (5) CRR.		7% (12%)
(g)	Assets representing claims on or guaranteed by multilateral development banks and international organisations (Art. 117 (2) and Art. 118 CRR, respectively)		- (5%)

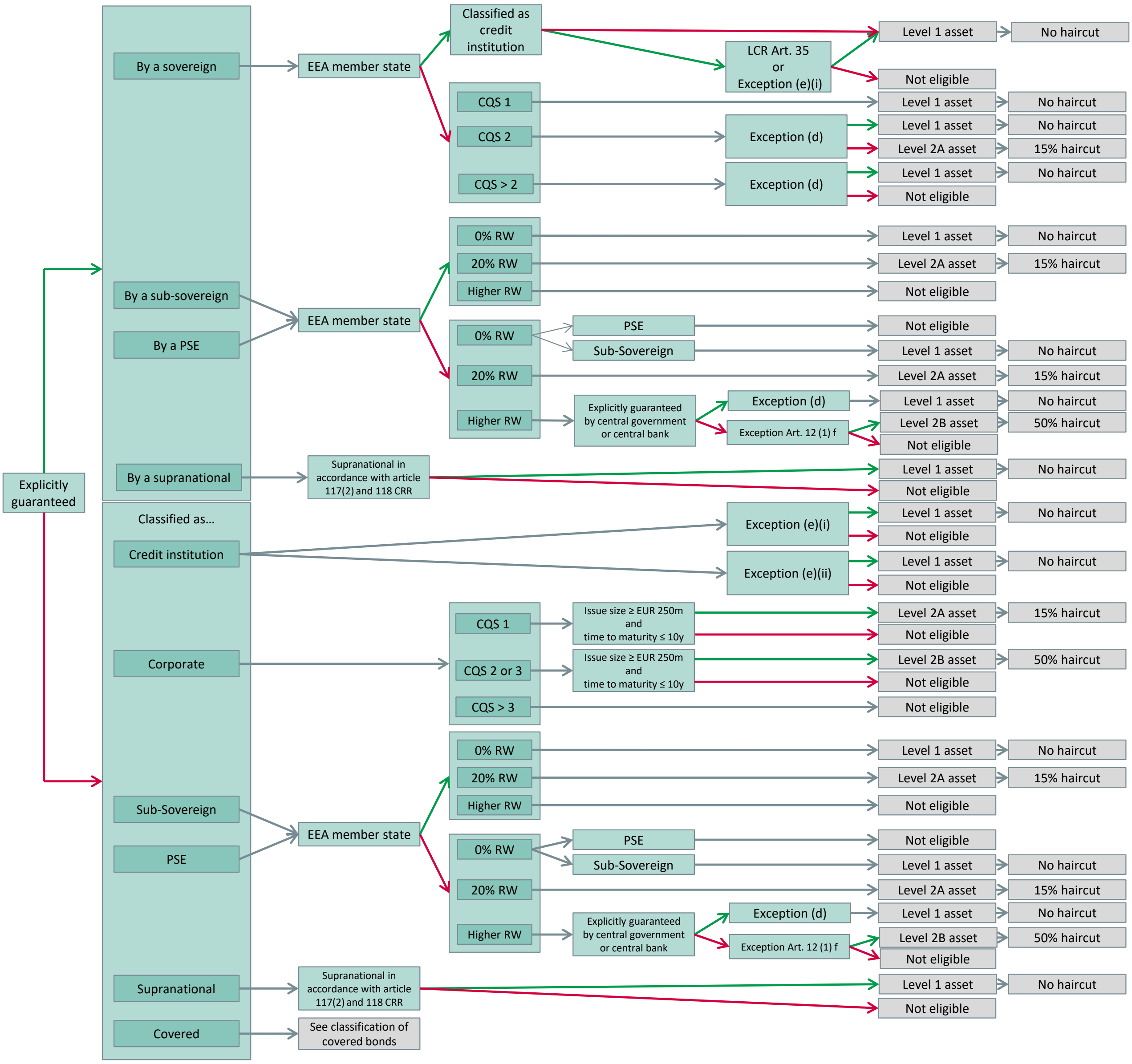
NB: CQS = Credit Quality Step (rating class) as defined in CSA
Source: LCR Regulation, NORD/LB Markets Strategy & Floor Research

Classification overview (continued)

	Level 2A assets (Art. 11 LCR Regulation)	Minimum haircut (for shares or units in CIUs)
(a)	Assets representing claims on or guaranteed by regional governments, local authorities or PSEs in an EEA member state, which are assigned a risk weighting of 20% according to Art. 115 (1) (5) and Art. 116 (1) (2) (3) CRR, respectively	15% (20%)
(b)	Assets representing claims on or guaranteed by the central government or the central bank of a third country or by the regional government, local authority or PSE in a third country, which are assigned a risk weighting of 20% according to Art. 114 (2) or Art. 115, respectively or Art. 116	15% (20%)
(c)	Qualifying EEA covered bonds which meet all the requirements of Art. 11 (c), including issue size at least EUR 250m or equivalent in domestic currency, rating: min. CQS 2 or if no rating a risk weighting of 20% according to Art. 129 (5) CRR.	15% (20%)
(d)	Qualifying covered bonds from third countries which meet all the requirements of Art. 11 (d), including being issued by a credit institution or a 100% subsidiary of a credit institution guaranteeing the issue; issue size at least EUR 500m or equivalent in domestic currency, rating: min. CQS 1 or if no rating a risk weighting of 10% according to Art. 129 (5) CRR.	15% (20%)
(e)	Corporate debt securities which meet all of the following requirements: (i) CQS 1 (minimum rating AA- or equivalent in the case of a short-term credit assessment) (ii) Issue size of at least EUR 250m or equivalent in domestic currency (iii) Maximum time to maturity of the securities at the time of issuance is 10 years	15% (20%)
	Level 2B assets (Art. 12 LCR Regulation)	**Minimum haircut (for shares or units in CIUs)**
(a)	Exposures in the form of ABS under certain conditions (Art. 13 LCR Regulation)	25-35% (30-40%)
(b)	Corporate debt securities which meet all of the following requirements: (i) CQS ≤ 3 (ii) Issue size of at least EUR 250m or equivalent in domestic currency (iii) Maximum time to maturity of the securities at the time of issuance is 10 years	50% (55%)
(c)	Shares or units, provided that they meet certain conditions (Art. 12(1)(c) LCR Regulation)	50% (55%)
(d)	Restricted-use committed liquidity facilities provided by the ECB, the central bank of an EEA member state or a third country, under certain conditions (Art. 14 LCR Regulation)	- (-)
(e)	Qualifying EEA covered bonds which meet the requirements of Art. 12 (1) (e) LCR Regulation	30% (35%)
(f)	Only for religiously observant credit institutions: certain non-interest bearing assets	50% (55%)

NB: CQS = Credit Quality Step (rating class) as defined in CSA
Source: LCR Regulation, NORD/LB Markets Strategy & Floor Research

LCR classification of assets (Articles 10 – 12 LCR Regulation)



NB: stated haircuts do not apply to shares or units in CIUs; PSE = Public Sector Entity; CQS = Credit Quality Step (rating class) as defined in CSA; green = condition met; red = condition not met; grey = tbc
Source: LCR Regulation, NORD/LB Markets Strategy & Floor Research;

Classification of sovereigns

Bonds from EEA states or bonds from issuers that are explicitly secured by EEA states are classified as Level 1 assets for the purposes of LCR, unless they are classified as a credit institution. For EEA issuers classified as credit institutions, classification as Level 1 assets is possible provided Article 35 of LCR Regulation or Article 10 (1) e of LCR Regulation is applicable. Further restrictions apply to non-EEA states. Bonds issued by non-EEA sovereigns have to be rated at least AA-/Aa3 to be eligible as Level 1 assets. Government bonds qualify for a Level 2A classification if a risk weighting of 20% according to the CRR standardised approach can be applied, i.e., if they have a rating of at least A-/A3.

Exemption Art. 10 (1) (d) LCR Regulation
However, an exemption is provided for ratings lower than AA-/Aa3 through point (d). Consequently, bonds of corresponding non-EEA states can be declared a Level 1 asset by a credit institution to cover liquidity outflows incurred in the same currency in which the bond is denominated. However, the eligibility as a Level 1 asset is limited to the extent of the calculated net liquidity outflows in periods of stress. If the currency of the bond in question does not correspond to the domestic currency of the relevant country, credit institutions can only classify the bond as a Level 1 asset to a certain extent, namely up to the amount of the credit institution's stressed net liquidity outflows in that foreign currency corresponding to its operations in the jurisdiction where the liquidity risk is being taken. Exemption (d) also applies to bonds that are guaranteed by countries with ratings lower than AA-/Aa3.

Exemption Article 10 (1) (e) LCR Regulation
Article 10 (1) (e) of the LCR Regulation makes it possible to classify bonds issued by credit institutions as Level 1 assets. Bank securities are otherwise not regarded as liquid assets, apart from certain covered bonds. This is subject to the condition that exposures to the respective regional governments or local authorities (RGLAs; referred to below as sub-sovereigns) can be treated as exposures to the relevant central government. This condition stipulates that a risk weighting of 0% can be applied under the CRR standardised approach.

(i)
This exemption relates to credit institutions established by the central government or a sub-sovereign of an EEA member state, or which have their registered office in an EEA state, and for which a corresponding guarantee also exists. If the central government or the sub-sovereign(s) is/are consequently legally obliged to protect the economic basis and to maintain its financial viability throughout its lifetime, bonds of these financial institutions can be classified as Level 1 assets.

(ii)
This exemption relates to financial institutions that are promotional lenders. These fulfil three criteria:

- Purpose is to advance public policy objectives of the EU, an EEA central government or an EEA sub-sovereign
- Provision of promotional loans on a non-competitive, not-for-profit basis
- At least 90% of loans granted are directly or indirectly guaranteed by the central government or (a) sub-sovereign(s)

Explicitly guaranteed bank bonds

Under Article 35 of the LCR, bonds from credit institutions with a guarantee from an EEA central government also qualify as Level 1 assets. At a glance, the conditions are as follows:

1. Guarantee through an EEA member state, assuming the guarantee was awarded prior to 30 June 2014 for a maximum amount, and the guarantee is direct, explicit, irrevocable and unconditional, and covers payments of interest and principal.
2. If the guarantor is a sub-sovereign of an EEA member state, a 0% risk weighting shall apply and guarantee conditions as per 1. must be met.
3. As long as there is a guarantee, a Level 1 classification is possible. If the guarantee amount is increased after 30 June 2014, the respective bonds are eligible for inclusion only up to the maximum guarantee amount in place prior to 30 June 2014.
4. Bank bonds with an explicit guarantee are treated just like any other state-guaranteed assets in the context of the LCR.
5. If there is a guarantee mechanism in place for a credit institution or its bonds, the mechanism as a whole shall apply for the purposes of this article.

SSAs: classification depends on several factors

The classification for SSAs has turned out to be relatively complex, as it depends on several steps. If a guarantee is given for an SSA or its bonds, the liquidity category is based on the classification of the guarantor. For agencies with an explicit guarantee from an EEA member state, this means, for example, that they are assigned to Level 1. If no guarantee is given, classification is more complex in that different classifications apply depending on whether the SSA is in regulatory terms a sub-sovereign, public sector entity (PSE), supranational or corporate. The exemptions described above apply.

Classification of supranationals

The classification of supranationals is the simplest of all the SSAs in that claims on or guaranteed by supranationals listed in Articles 117 (2) and 118 CRR are assigned to Level 1. Through Article 118 (f) they also include financial institutions that were established by at least two EEA member states and whose purpose it is to mobilise funding and provide financial assistance to the benefit of its members that are experiencing or threatened by severe financial problems. If a supranational does not meet this criterion and/or is not mentioned in the two CRR articles, bonds of these institutions may not be classified as either Level 1 or Level 2 assets. We think that this will directly affect EUROFIMA and the South American CAF, for example, as their bonds cannot therefore be classified as liquid assets.

LCR classification of assets representing claims on or guaranteed by supranationals: Level 1 issuers

Issuer (Bloomberg ticker)	CRR-Article
International Bank for Reconstruction and Development (IBRD)	Art. 117(2)a
International Finance Corporation (IFC)	Art. 117(2)b
Inter-American Development Bank (IADB)	Art. 117(2)c
Asian Development Bank (ASIA)	Art. 117(2)d
African Development Bank (AFDB)	Art. 117(2)e
Council of Europe Development Bank (COE)	Art. 117(2)f
Nordic Investment Bank (NIB)	Art. 117(2)g
Caribbean Development Bank (CARDEV)	Art. 117(2)h
European Bank for Reconstruction and Development (EBRD)	Art. 117(2)i
European Investment Bank (EIB)	Art. 117(2)j
European Investment Fund	Art. 117(2)k
Multilateral Investment Guarantee Agency (MULIGA)	Art. 117(2)l
International Finance Facility for Immunisation (IFFIM)	Art. 117(2)m
Islamic Development Bank (ISDB)	Art. 117(2)n
International Development Association	Art. 117(2)o
Asian Infrastructure Investment Bank (AIIB)	Art. 117(2)p
European Union (EU); European Atomic Energy Community (EURAT)	Art. 118 a)
International Monetary Fund	Art. 118 b)
Bank for International Settlements (BIS)	Art. 118 c)
European Financial Stability Facility (EFSF)	Art. 118 d)
European Stability Mechanism (ESM)	Art. 118 e)

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

Classification of PSEs and sub-sovereigns

The classification of PSEs and sub-sovereigns (regional governments and local authorities; RGLA for short) is almost identical. If an explicit guarantee is given for a bond or an issuer by a central government, classification is the same as for sovereign bonds (see previous pages). If no explicit guarantee is given, classification is carried out primarily on the basis of the issuer's risk weighting. If, in regulatory terms, PSE and sub-sovereign bonds may be treated as exposures to the respective central government and a risk weighting of 0% can be applied, these issuers can accordingly be classified as Level 1. Theoretically, exceptions to this are issuers from outside the EEA where a risk weighting of 0% can be applied but there is no explicit guarantee in place. If it involves a PSE, classification is not possible. Sub-sovereigns can be classified as a Level 1 asset. Institutions where a risk weighting of 20% can be applied are classified as Level 2A issuers. Institutions with higher risk weightings that are based outside the EAA and have an explicit guarantee from a central bank or government can be classified as Level 1 issuers using the conditions of Exemption (d) (see classification of sovereigns). If an explicit guarantee is not specified, a Level 2B classification as defined in Art. 12 (1) (f) LCR Regulation remains an option. This refers to institutions which, due to their religious beliefs, are not permitted to hold interest-bearing assets. Bonds of other PSEs and sub-sovereigns for which the risk weighting is higher than 20% under the standardised credit risk approach cannot be classified as liquid assets.

Interim conclusion for sub-sovereigns and PSEs

The CRR, as the relevant European legislative text, frequently makes a distinction in the treatment of risk positions for sub-sovereigns and PSEs issued within the EU and those issued outside the union. The grounds for this classification are that the supervisory regimes differ greatly in some cases, and less so in others, from the international Basel III regulations or the European requirements. In order to avoid risks due to inadequate supervisory systems, a higher risk weighting is applied to assets issued outside the EU than to comparable positions of EU member state origin. Those states that are regarded as having equal or more stringent supervisory systems are included on a list produced by the European Commission. Now, the country of origin, e.g. New Zealand, will also have to apply risk weighting of 0% to its sub-sovereigns, in order for local investors to also be assigned a risk weighting of 0%. The New Zealand regulator (RBNZ), for instance, does not do this, but instead assigns its sub-sovereigns a risk weighting of 20% (e.g. for Auckland County Council, the country's largest sub-sovereign (ticker: AUCKCN)).

PSE definition is gaining in importance

As a result of this classification, the PSE definition, in particular, is gaining in importance within the CRR. The CRR stipulates the basic differentiation, but national supervisory bodies or national laws can define exactly which issuers have to be classified as PSE in the home country. A PSE (public sector entity) is defined in Article 4 (1) (8) of the CRR as:

- "A non-commercial administrative body responsible to central governments or regional or local authorities, or to authorities that exercise the same responsibilities as those regional and local authorities, or a non-commercial undertaking that is owned or set up and sponsored by central governments, or regional or local authorities, and that has explicit guarantee arrangements, and may include self-administered bodies governed by law that are under public supervision."

PSE list provides (some) clarity

In our opinion, the existing definition is too vague. However, the EBA publishes a list of public sector entities whose exposure in relation to Art. 116 CRR is defined as identical to RGLAs. PSEs not on this list must nonetheless continue to be examined individually on the basis of the PSE definition.

Level 2 classification possible for non-PSEs

Agencies which are not classified as PSEs and are therefore excluded from this classification path may qualify for Level 2 classification in that if an agency is not a bank, it can be categorised as a Level 2A or Level 2B issuer within the scope of the classification of corporates.

Classification of corporates

If agencies are classified as corporates in regulatory terms, there are essentially three different restrictions: ratings, issuance volume and term to maturity.

Classification of individual issuers

To determine the effects on individual issuers, we implement the LCR classification as detailed on the following pages.

LCR classification of assets representing claims on or guaranteed by regions*

Issuer	Current LCR level*
Belgian regions	Level 1
German Bundeslaender	Level 1
French regions	Level 2A
Italian regions	Level 2A
Canadian regions	Level 1
Austrian Bundeslaender	Level 1
Portuguese regions	Level 2A**
Swedish regions	Level 1
Spanish regions	Level 1

*NB: in the absence of an explicit guarantee from the respective nation state, the current LCR level is dependent on the relevant rating (see CQS classification and LCR classification of assets).
**Exemption: guaranteed bonds from Madeira are classified as Level 1.
Source: NORD/LB Markets Strategy & Floor Research

LCR classification of assets representing claims on or guaranteed by supranationals

Issuer	Bloomberg ticker	Current LCR level
Council of Europe Development Bank	COE	Level 1
European Bank for Reconstruction and Development	EBRD	Level 1
European Financial Stability Facility	EFSF	Level 1
European Investment Bank	EIB	Level 1
European Stability Mechanism	ESM	Level 1
European Union	EU	Level 1
EUROFIMA	EUROF	Not eligible
Nordic Investment Bank	NIB	Level 1
African Development Bank	AFDB	Level 1
Asian Development Bank	ASIA	Level 1
Corporación Andina de Fomento	CAF	Not eligible
International Bank for Reconstruction and Development	IBRD	Level 1
Inter-American Development Bank	IADB	Level 1
International Finance Corporation	IFC	Level 1
Islamic Development Bank	ISDB	Level 1

Source: NORD/LB Markets Strategy & Floor Research

Clarity on supranationals, but ambiguity regarding non-explicit guarantees

While there is clarity with regard to the classification of supranationals, this is largely lacking for agencies that do not have an explicit guarantee from a central government or a sub-sovereign. Consequently, the overview on the next page lists our expectations for liquidity level classification.

LCR classification of assets representing claims on or guaranteed by agencies

Issuer	Country	Ticker	Haircut	Rationale	Current LCR level
KfW	DE	KFW	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
Rentenbank	DE	RENTEN	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
FMS-WM	DE	FMSWER	-	Art. 10(1)(c)(v): FMS-WM classified as PSE	Level 1
EAA	DE	ERSTAA	-	Art. 10(1)(c)(v): EAA classified as PSE	Level 1
NRW.BANK	DE	NRWBK	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
L-Bank	DE	LBANK	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
IBB	DE	IBB	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
LfA	DE	BAYLAN	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
BayernLabo	DE	BYLABO	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
WIBank	DE	WIBANK	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
IB.SH	DE	IBBSH	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
IFBHH	DE	IFBHH	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
SAB	DE	SABFOE	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
ILBB	DE	ILBB	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1
ISBRLP	DE	ISBRLP	-	Art. 10(1)(c)(iii): Explicit guarantee from regional government	Level 1

* According to classification of Banque de France.
** Applicability of Article 10 (1) (e) (i) confirmed by De Nederlandsche Bank.
*** Issue volume > EUR 250m; time to maturity < 10 Y
Source: NORD/LB Markets Strategy & Floor Research

LCR classification of assets representing claims on or guaranteed by agencies (continued)

Issuer	Country	Ticker	Haircut	Rationale	Current LCR level
CADES	FR	CADES	-	Art. 10(1)(c)(i): PSE with risk weighting of 0%*	Level 1
AFD	FR	AGFRNC	-	-	Not eligible
Unédic	FR	UNEDIC	-	Art. 10(1)(c)(i): PSE with risk weighting of 0%*	Level 1
CDC	FR	CDCEPS	-	Art. 10(1)(c)(v): PSE with risk weighting of 0%*	Level 1
Bpifrance	FR	OSEOFI	-	Level 1 classification in line with Art. 10(1)(e)(i)	Level 1
SAGESS	FR	SAGESS	-	Art. 10(1)(c)(i): PSE allocation as ODAC	Level 1
AFL	FR	AFLBNK	15%	Art. 11(1)(b): Explicit guarantee from RGLA with risk weighting of 20%	Level 2A
SFIL	FR	SFILFR	-	Level 1 classification in line with Art. 10(1)(e)(i)	Level 1
SGP	FR	SOGRPR	15%	Art. 11(1)(a): PSE with risk weighting of 20%	Level 2A
3CIF	FR	CCCI	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
BNG	NL	BNG	-	Art. 10(1)(e)(ii): Promotional credit institution **	Level 1
NWB	NL	NEDWBK	-	Art. 10(1)(e)(ii): Promotional credit institution **	Level 1
FMO	NL	NEDFIN	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
OeKB	AT	OKB	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
ÖBB-Infrastruktur	AT	OBND	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
ASFiNAG	AT	ASFING	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1

* According to classification of Banque de France.
** Applicability of Article 10 (1) (e) (i) confirmed by De Nederlandsche Bank.
*** Issue volume > EUR 250m; time to maturity < 10 Y
Source: NORD/LB Markets Strategy & Floor Research

LCR classification of assets representing claims on or guaranteed by agencies (continued)

Issuer	Country	Ticker	Haircut	Rationale	Current LCR level
KBN	NO	KBN	15%	Art. 11(1)(a): PSE with RW of 20%	Level 2A
SEK	SE	SEK	15%	Level 2A classification in line with Art. 11(1)(a)	Level 2A
Kommun-invest	SE	KOMINS	-	Level 1 classification in line with Art. 10(1)(e)(i)	Level 1
MuniFin	FI	KUNTA	-	Art. 10(1)(c)(v): Explicit guarantee via PSE	Level 1
Kommune-Kredit	DK	KOMMUN	-	Art. 10(c)(iv): Explicit guarantee via RGLA with risk weighting of 0%	Level 1
Finnvera	FI	FINNVE	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
ICO	ES	ICO	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
FADE	ES	FADE	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
ADIFAL	ES	CORES	-	Art. 11(1)(a): PSE with RW of 50%	Not eligible
ADIF-AV	ES	CORES	-	Art. 10(1)(c)(v): PSE with risk weighting of 0%	Level 1
CDP	IT	CDEP	-	Not a corporate as RW too high to apply Art. 11(1)(a)	Not eligible
REFER	PT	REFER	-	Art. 10(1)(c)(i): Explicit state guarantee (only guaranteed bonds)	Level 1 (guaranteed bonds)
BGK	PL	BGOSK	-	Art. 10(1)(c)(i): Explicit state guarantee	Level 1
DCL	BE	DEXGRP	-	Art. 10(1)(c)(i): Explicit state guarantee (only guaranteed bonds)	Level 1 (guaranteed bonds)
JFM	JP	JFM	15%	Art. 11(1)(b): Explicit state guarantee (only guaranteed bonds)	Level 2A (guaranteed bonds)
KDB	KR	KDB	15%	Level 2A classification in line with Art. 11(1)(b)	Level 2A
KEXIM	KR	EIBKOR	15%	Level 2A classification in line with Art. 11(1)(b)	Level 2A
DBJ	JP	DBJJP	15%	Art. 11(1)(b) Explicit state guarantee (only guaranteed bonds)	Level 2A (guaranteed bonds)
IBK	KR	INDKOR	15%	Level 2A classification in line with Art. 11(1)(b)	Level 2A
EDC	CA	EDC	-	Art. 11(1)(b) Explicit state guarantee	Level 1
CDB	CN	SDBC	-	Not a corporate as RW too high to apply Art. 11(1)(a)	Not eligible

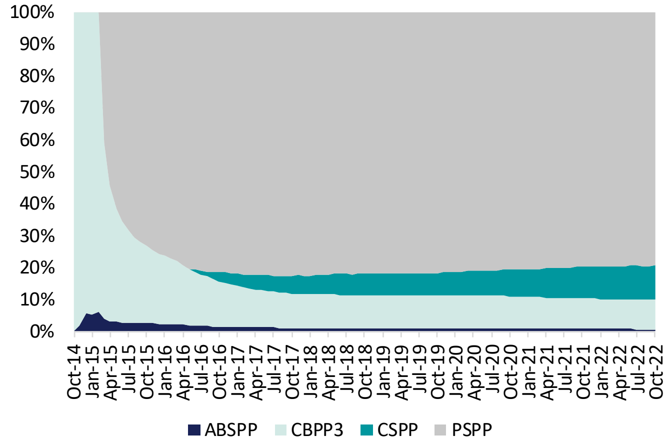
* According to classification of Banque de France.
** Applicability of Article 10 (1) (e) (i) confirmed by De Nederlandsche Bank.
*** Issue volume > EUR 250m; time to maturity < 10 Y
Source: NORD/LB Markets Strategy & Floor Research

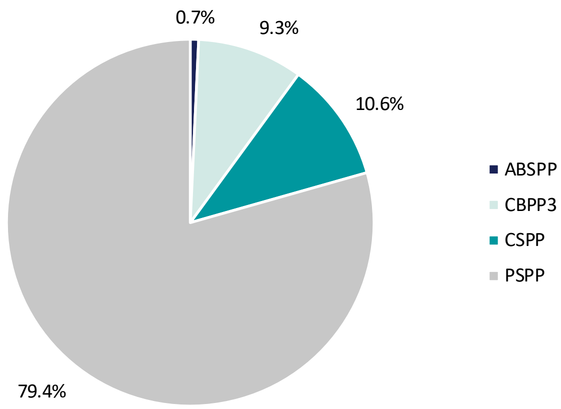
ECB tracker

Asset Purchase Programme (APP)

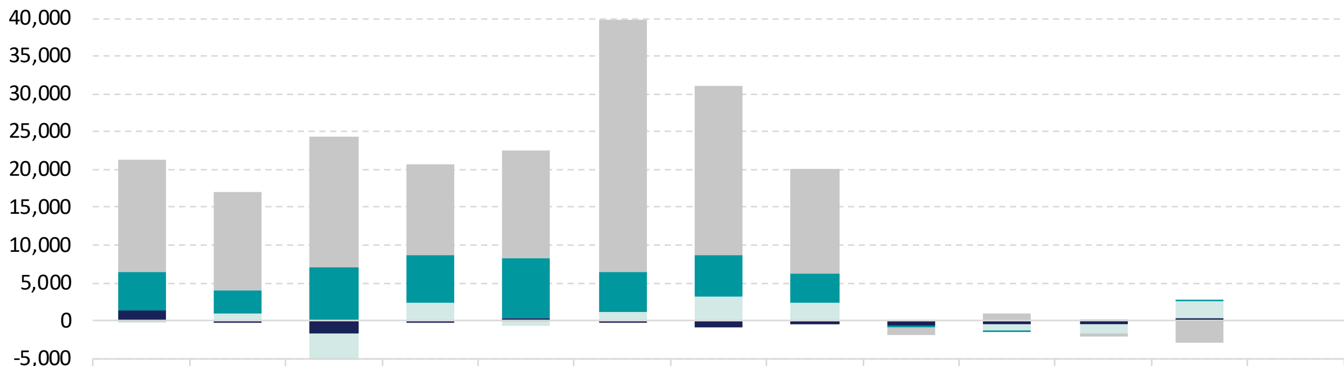
	ABSPP	CBPP3	CSPP	PSPP	APP
Sep-22	23,594	300,157	344,388	2,588,118	3,256,257
Oct-22	23,849	302,385	344,527	2,585,180	3,255,941
Δ	+254	+2,229	+139	-2,938	-316

Portfolio structure





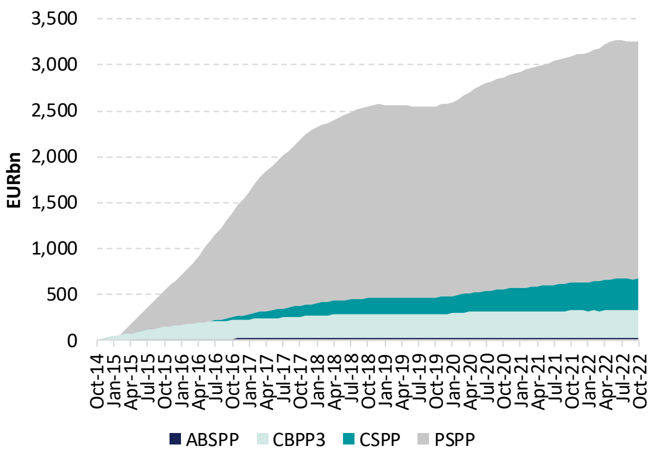
Monthly net purchases (in EURm)



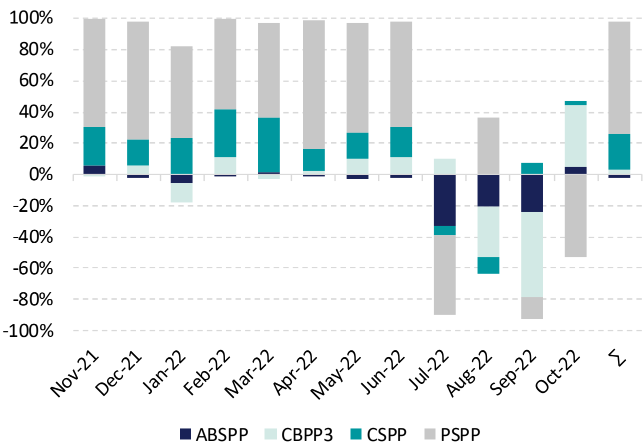
	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	∑
APP	21,200	16,596	18,838	20,698	21,929	39,397	30,232	19,722	-1,759	-656	-1,884	-316	183,997
PSPP	14,815	12,989	17,292	12,095	14,172	33,238	22,443	13,924	-1,114	869	-315	-2,938	137,470
CSPP	5,142	3,007	6,970	6,272	8,042	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

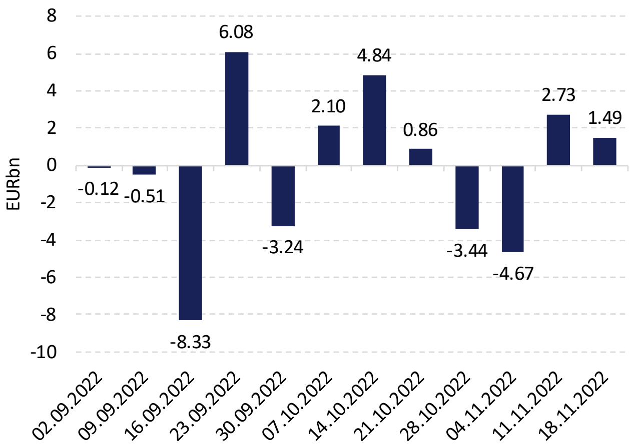
Portfolio development



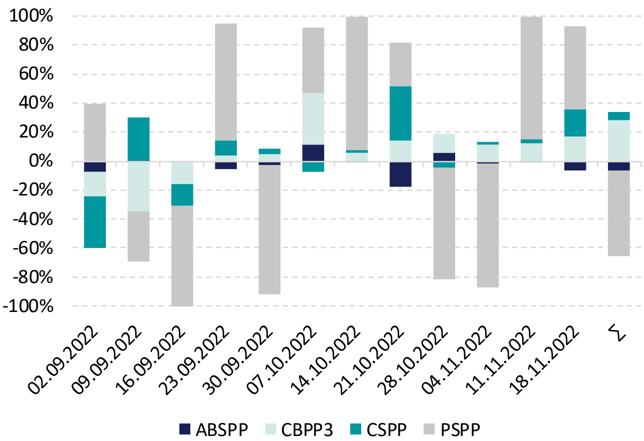
Distribution of monthly purchases



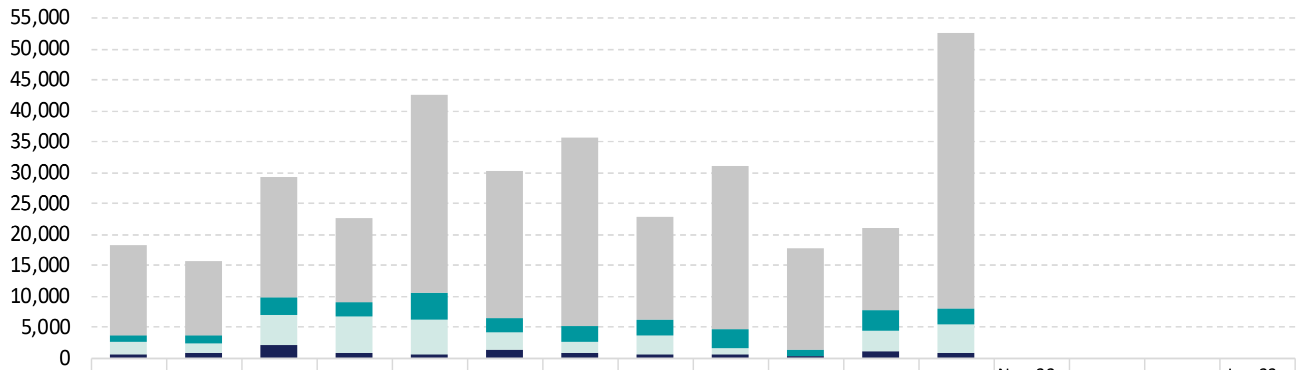
Weekly purchases



Distribution of weekly purchases



Expected monthly redemptions (in EURm)

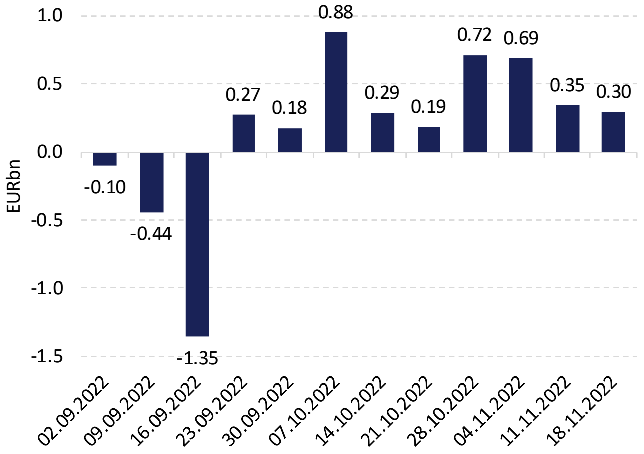


	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-22 - Oct-23	2021	2022	Jan-23 - Oct-23
APP	18,356	15,631	29,172	22,562	42,480	30,257	35,805	22,837	31,021	17,823	21,078	52,693	339,715	247,069	299,119	305,728
PSPP	14,669	12,016	19,469	13,624	31,965	23,712	30,554	16,619	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

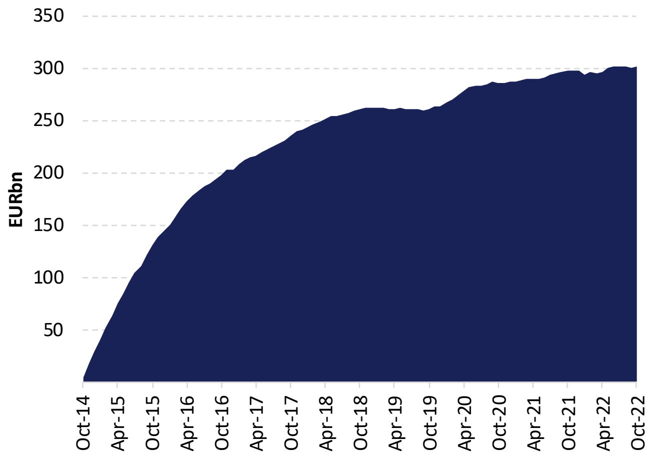
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

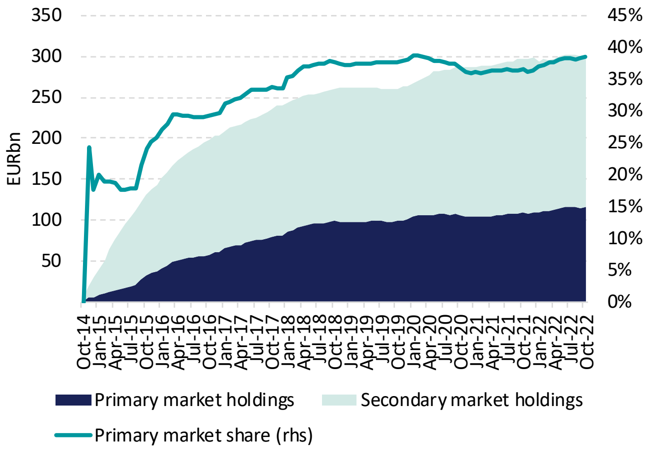
Weekly purchases



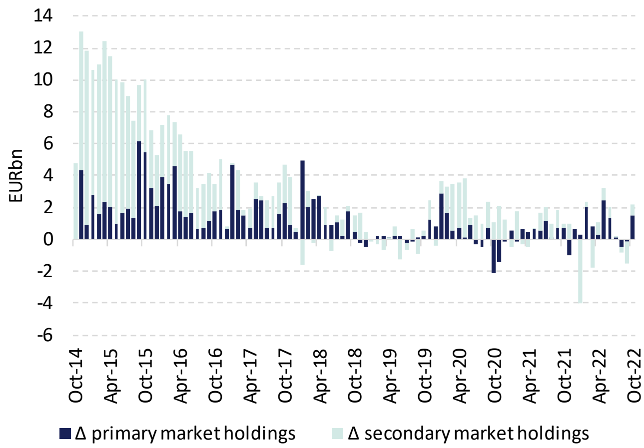
Development of CBPP3 volume



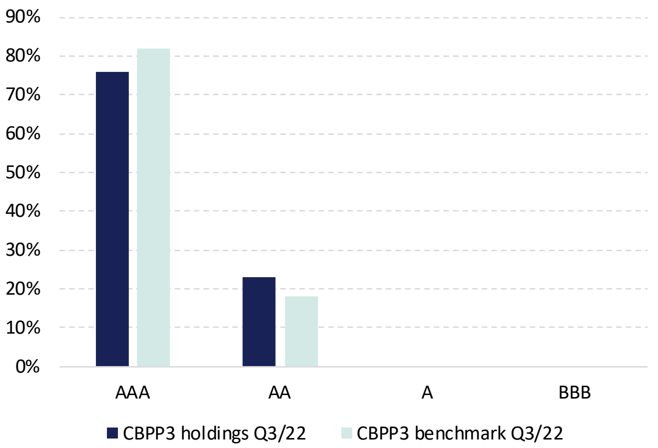
Primary and secondary market holdings



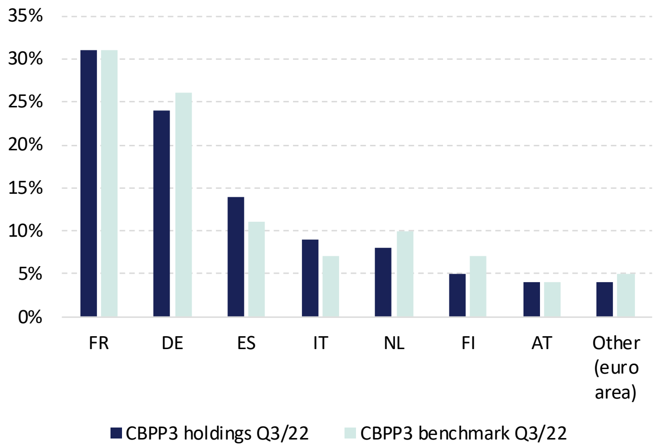
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating



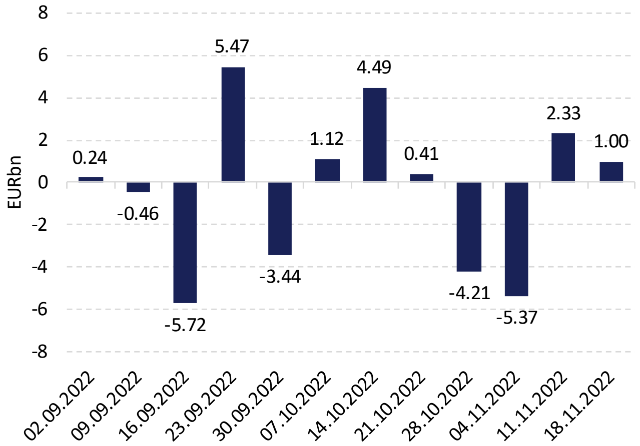
Distribution of CBPP3 by country of risk



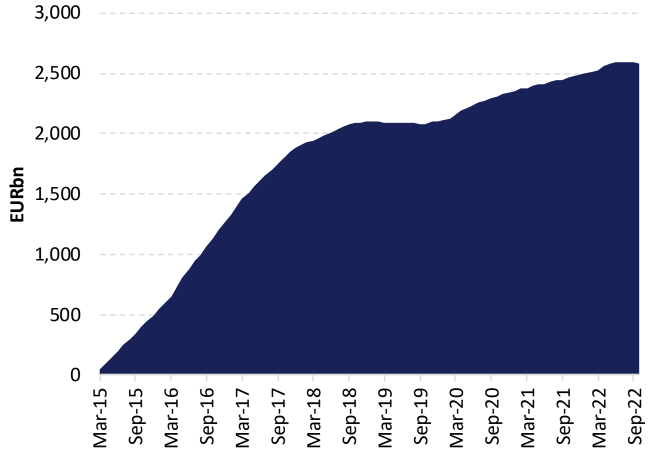
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



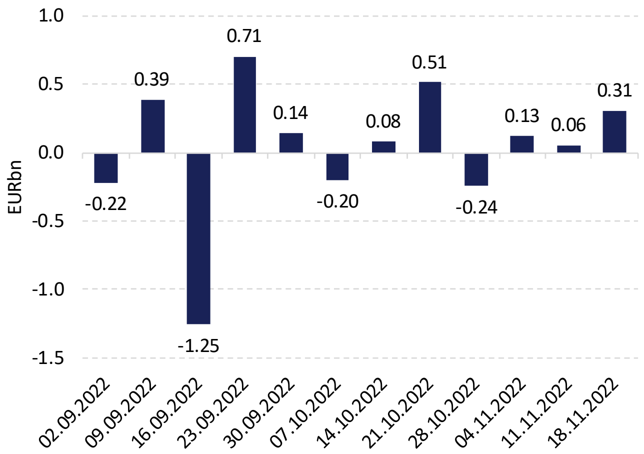
Overall distribution of PSPP buying at month-end

Jurisdiction	Adjusted distribution key[1]	Holdings (EURm)	Expected holdings (EURm)[2]	Difference (EURm)	Current WAM of portfolio[3] (in years)	WAM of eligible universe[4] (in years)	Difference (in years)
AT	2.7%	77,742	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**

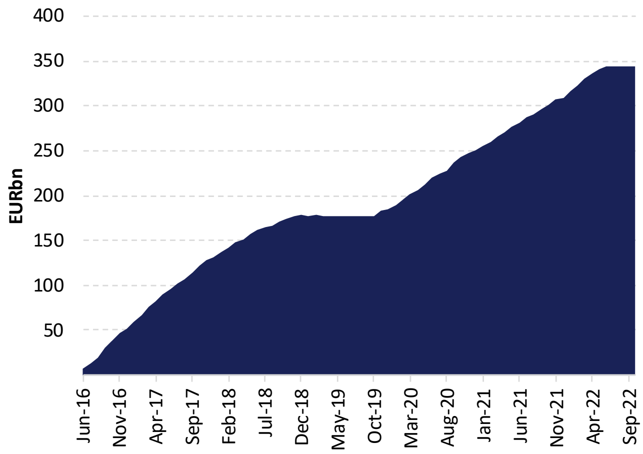
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of PSPP portfolio holdings
[4] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP
Source: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

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

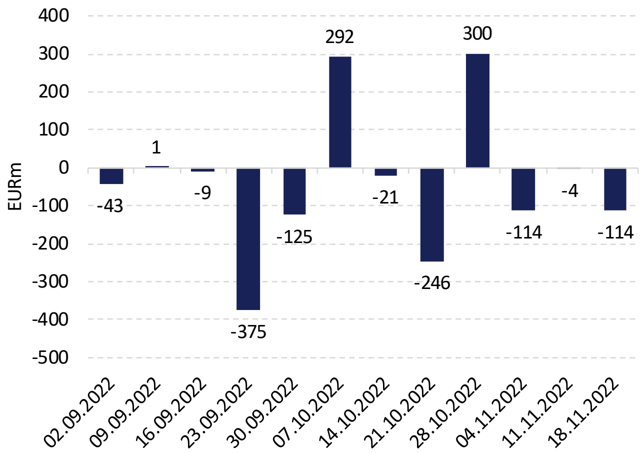


Development of CSPP volume

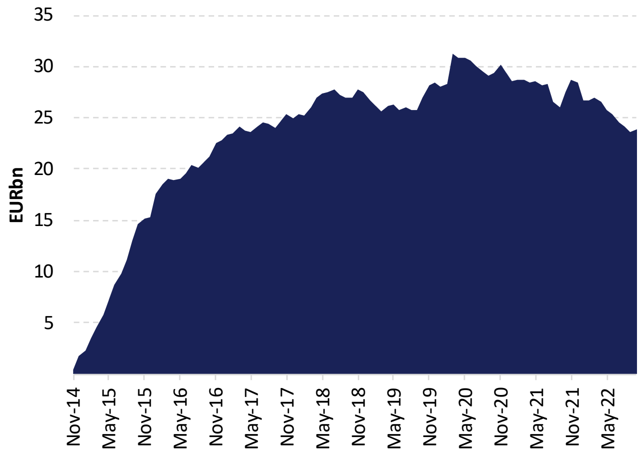


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



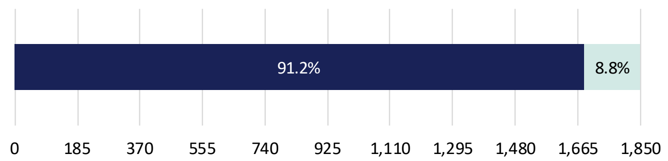
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

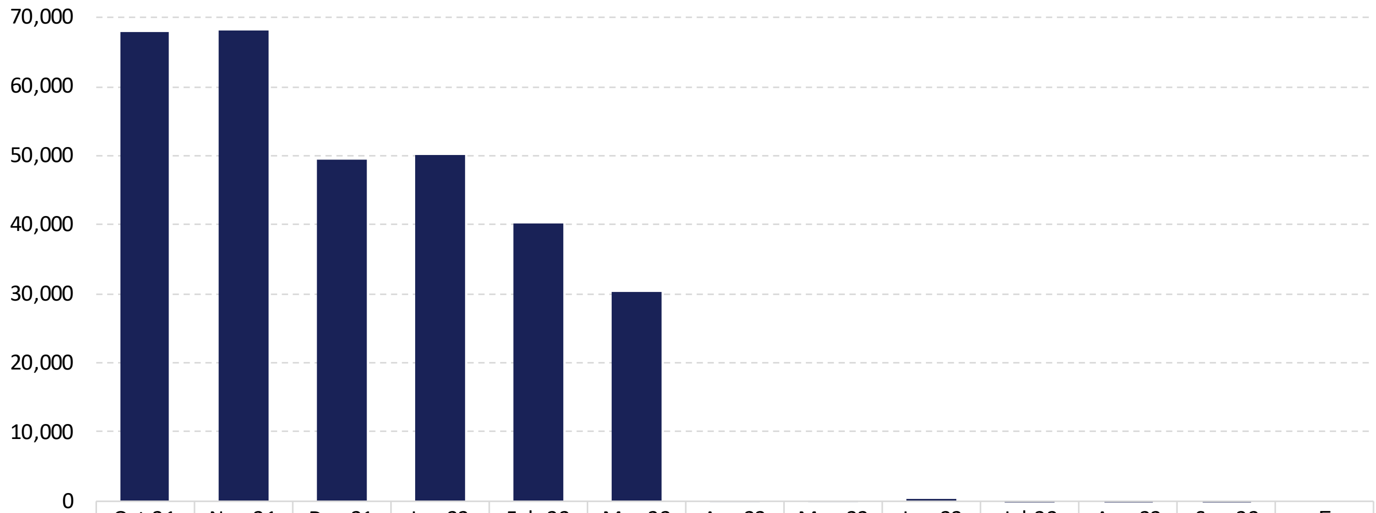
Holdings (in EURm)

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

Invested share of PEPP envelope (in EURbn)

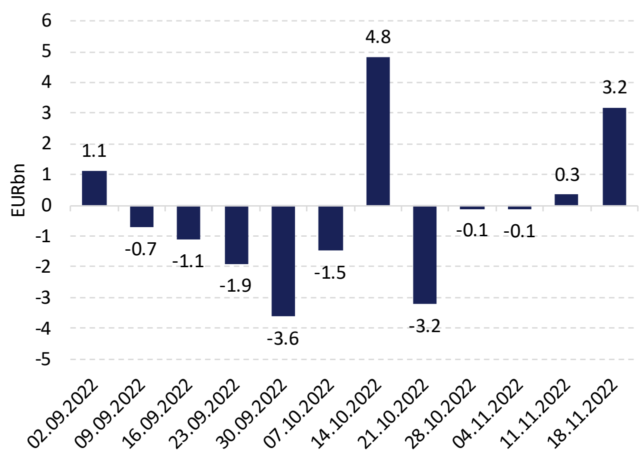


Monthly net purchases (in EURm)

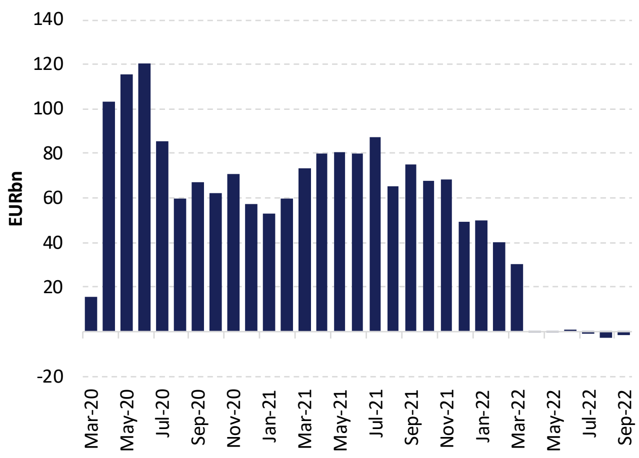


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	∑
PEPP	67,855	68,045	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	300,744

Weekly purchases



Development of PEPP volume

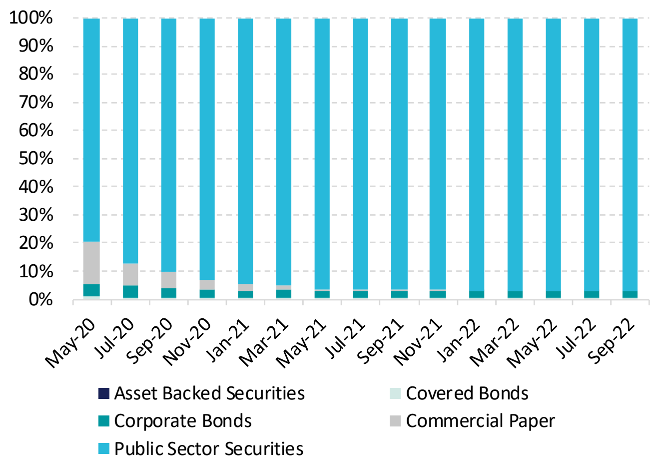


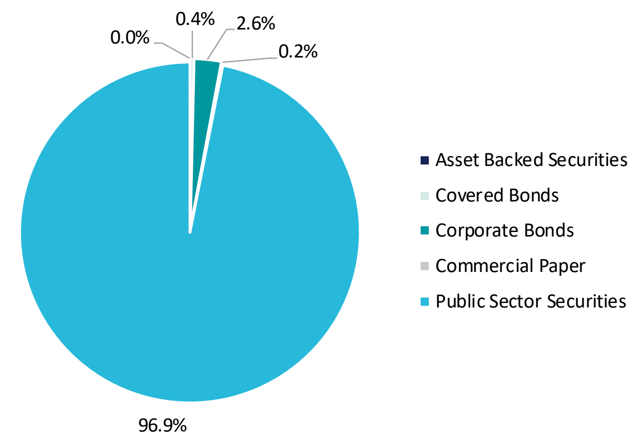
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Holdings under the PEPP (in EURm)

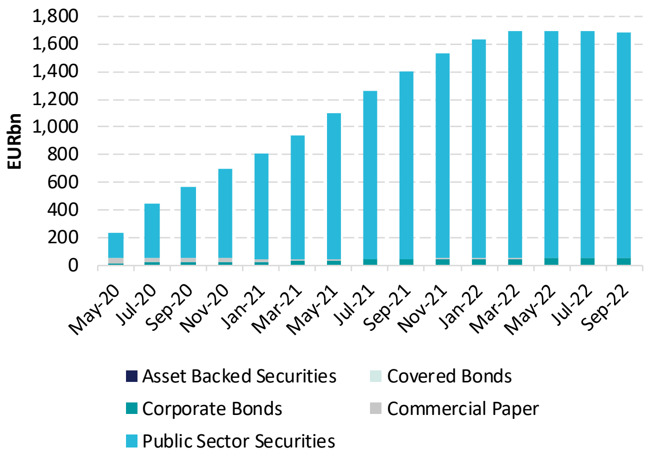
	Asset-backed Securities	Covered Bonds	Corporate Bonds	Commercial Paper	Public Sector Securities	PEPP
Jul-22	0	6,062	42,814	3,322	1,639,774	1,691,971
Sep-22	0	6,056	43,233	2,871	1,631,176	1,683,336
Δ (net purchases)	0	0	+453	-450	-4,320	-4,317

Portfolio structure

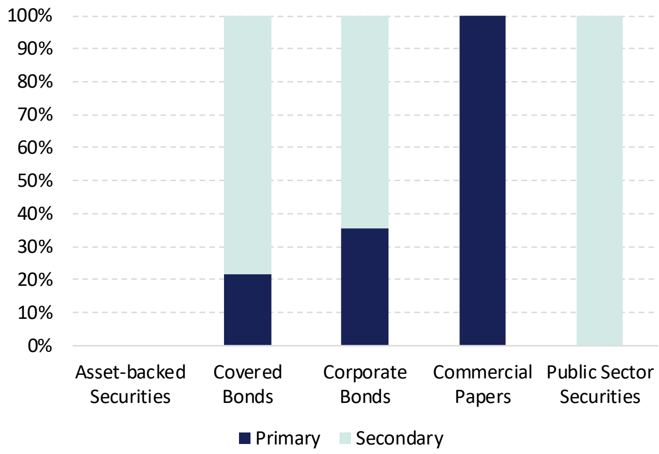




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

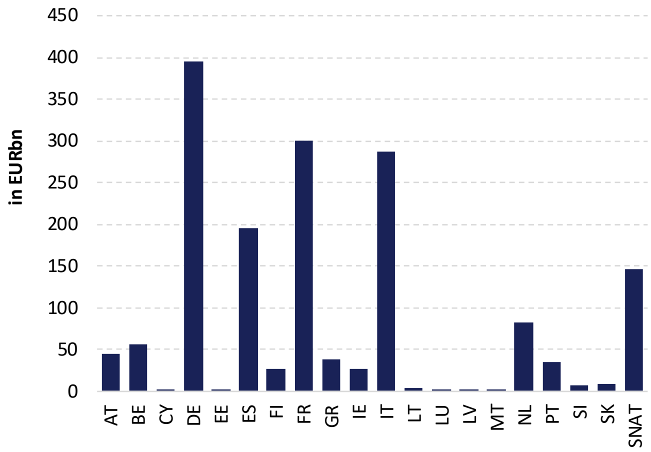
Sep-22	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,298	4,758	15,407	27,826	2,873	0
Share	0.0%	0.0%	21.4%	78.6%	35.6%	64.4%	100.0%	0.0%

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

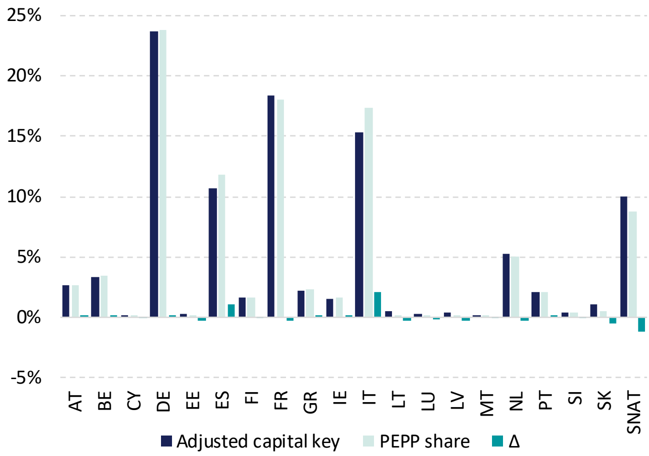
Breakdown of public sector securities under the PEPP

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

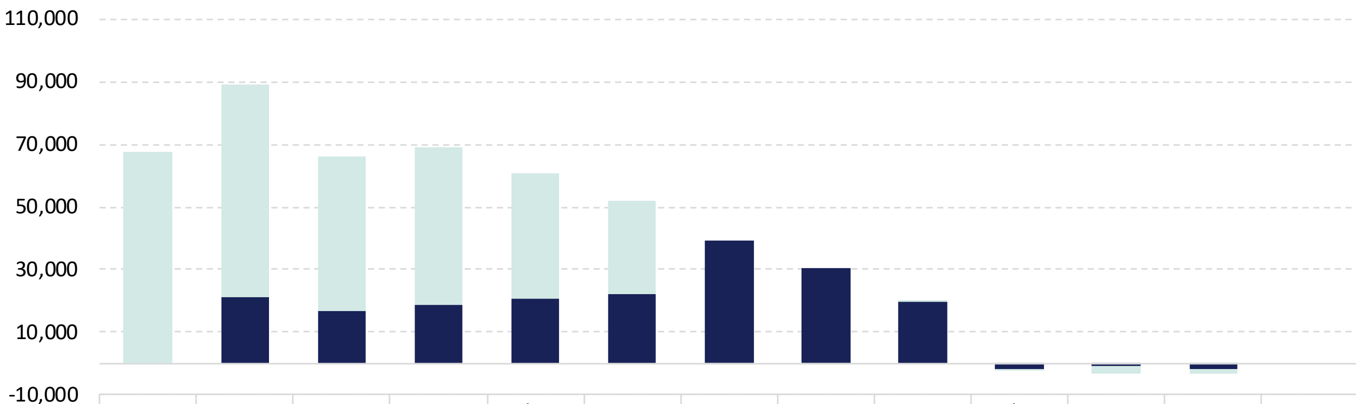
NORD/LB

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

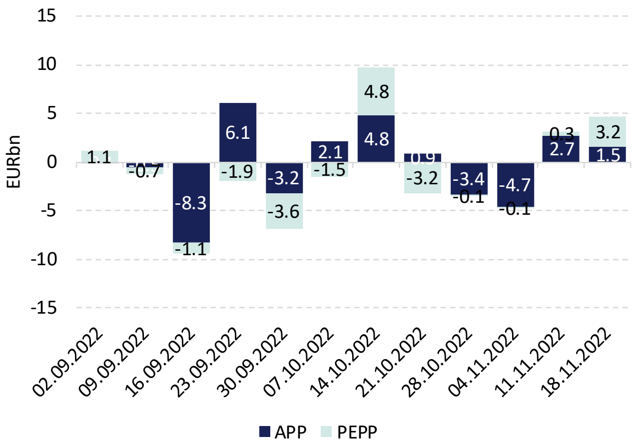
	APP	PEPP	APP & PEPP
Aug-22	3,256,257	1,714,539	4,970,796
Sep-22	3,255,941	1,713,035	4,968,976
Δ	-316	-1,505	-1,821

Monthly net purchases (in EURm)

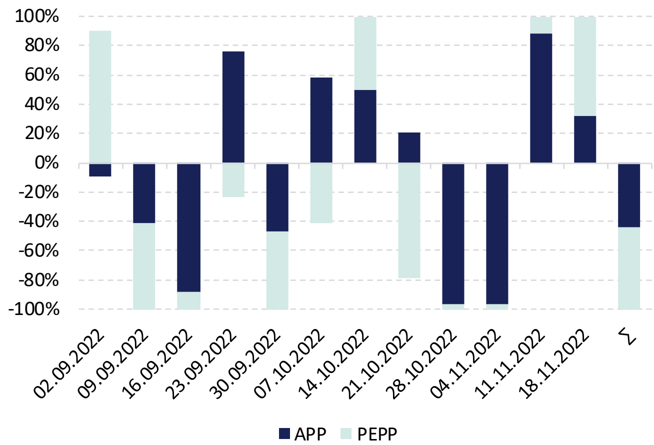


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	∑
∑	67,855	89,245	65,971	68,951	60,882	52,143	39,393	30,222	19,734	-2,481	-3,469	-3,389	485,057
PEPP	67,855	68,045	49,375	50,113	40,184	30,214	-4	-10	12	-722	-2,813	-1,505	300,744
APP	0	21,200	16,596	18,838	20,698	21,929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

Weekly purchases



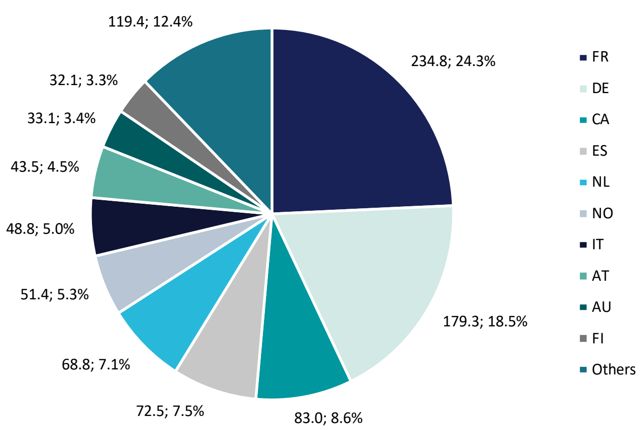
Distribution of weekly purchases



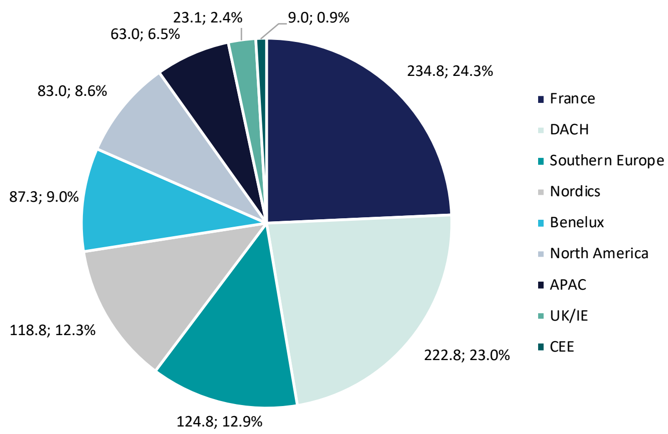
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



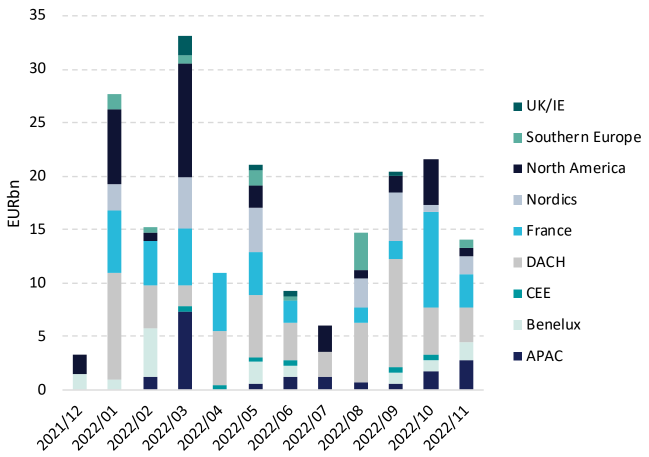
EUR benchmark volume by region (in EURbn)



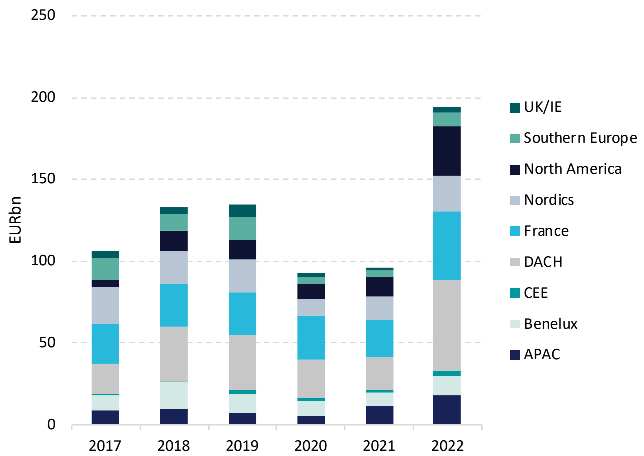
Top-10 jurisdictions

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	234.8	226	15	0.95	9.8	5.3	0.95
2	DE	179.3	256	26	0.64	8.3	4.5	0.67
3	CA	83.0	64	0	1.26	5.6	2.9	0.53
4	ES	72.5	58	5	1.14	11.6	3.6	1.77
5	NL	68.8	70	1	0.92	11.3	7.1	0.81
6	NO	51.4	61	11	0.84	7.2	3.8	0.53
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

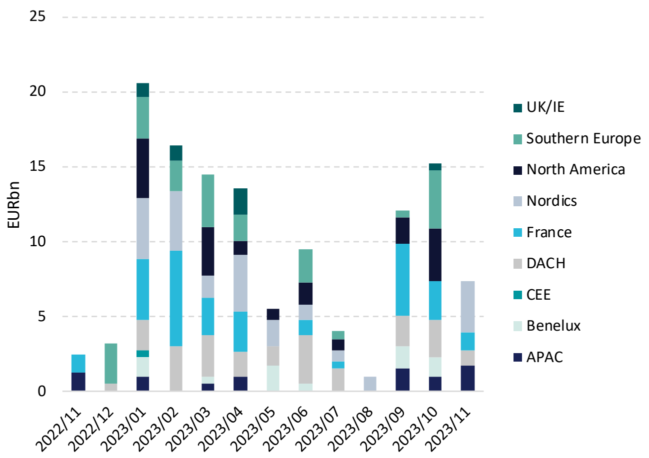


EUR benchmark issue volume by year

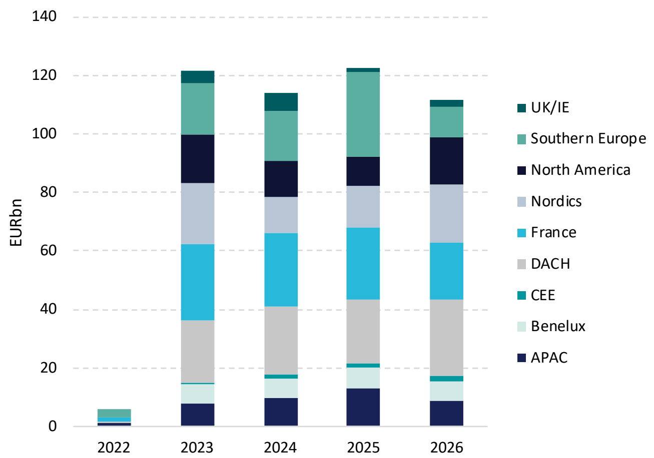


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

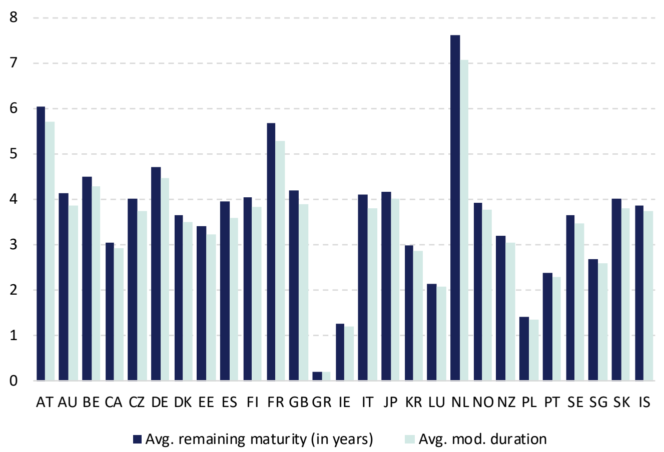
EUR benchmark maturities by month



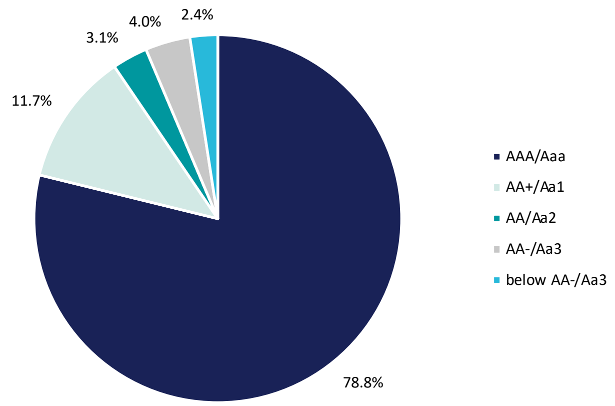
EUR benchmark maturities by year



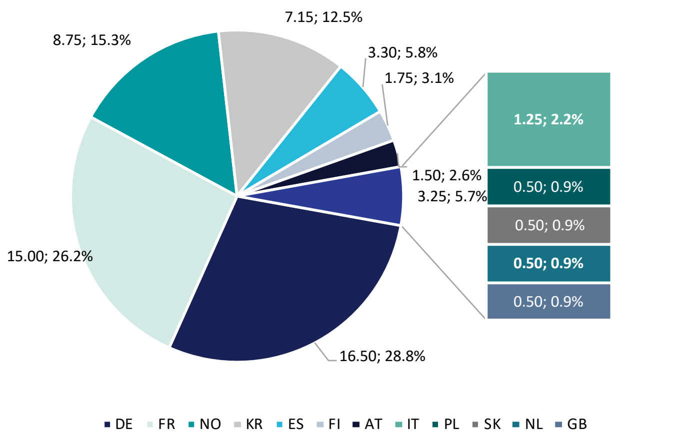
Modified duration and time to maturity by country



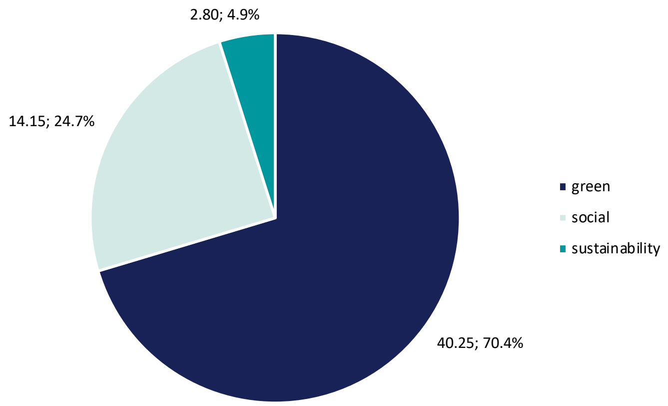
Rating distribution (volume weighted)



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

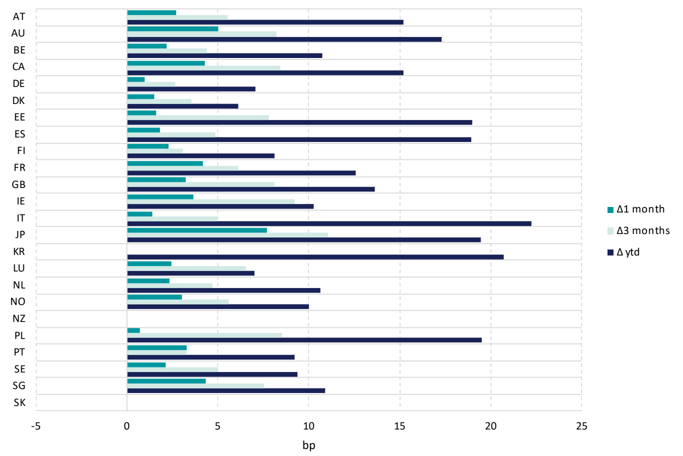


EUR benchmark volume (ESG) by type (in EURbn)

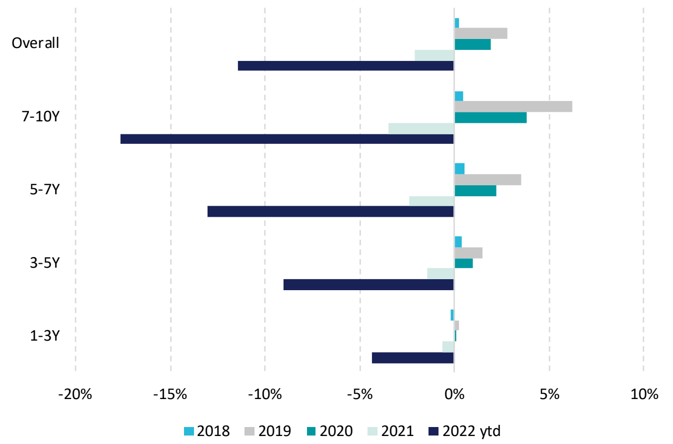


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

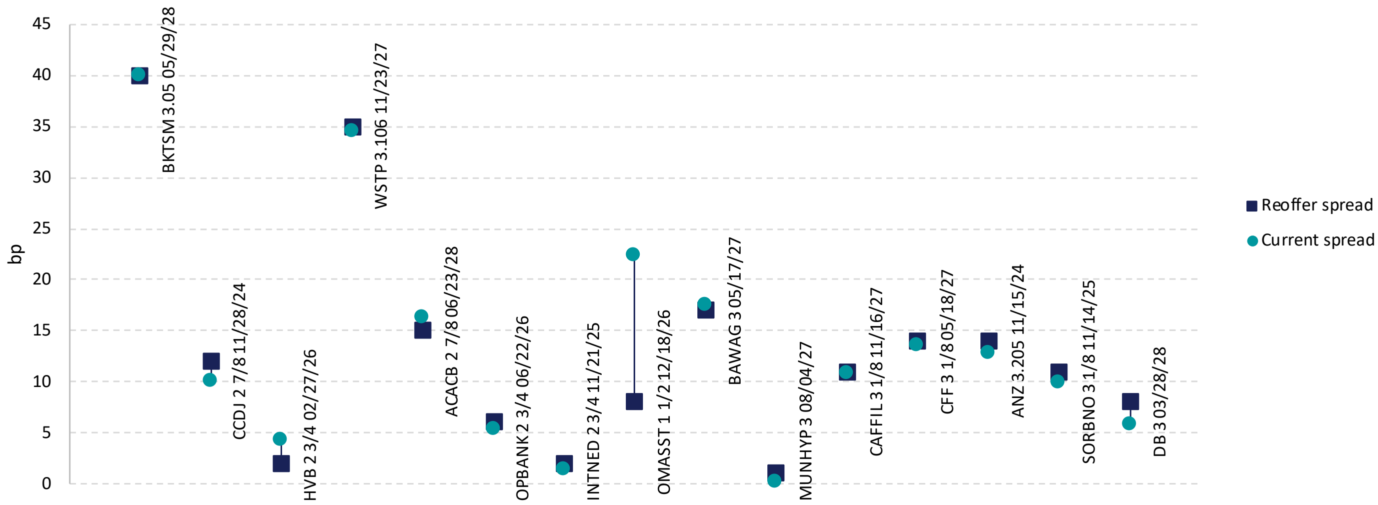
Spread development by country



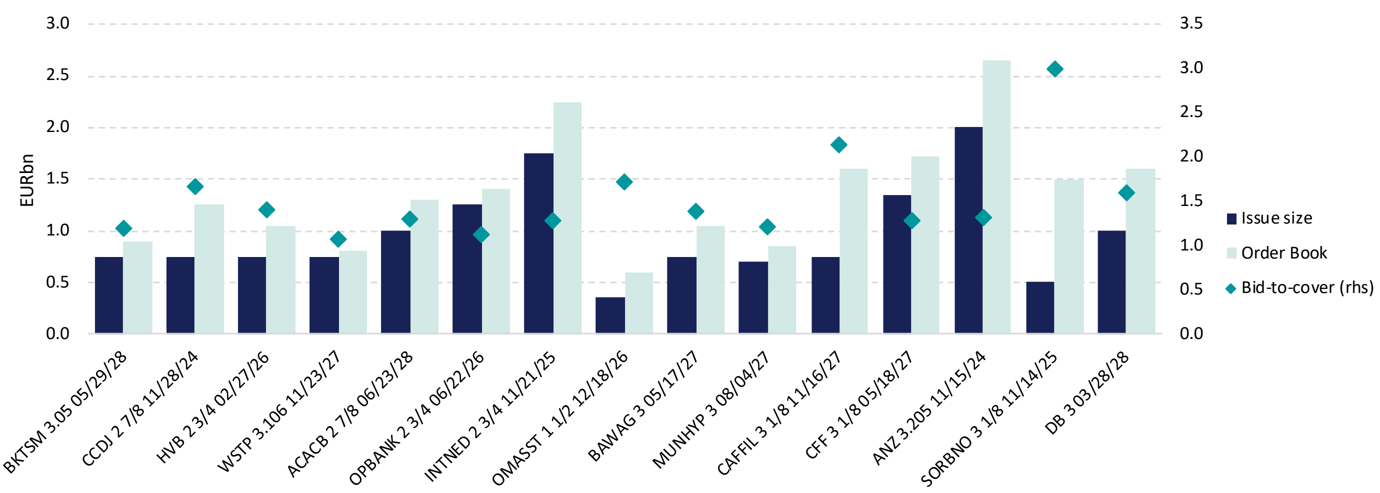
Covered bond performance (Total return)



Spread development (last 15 issues)



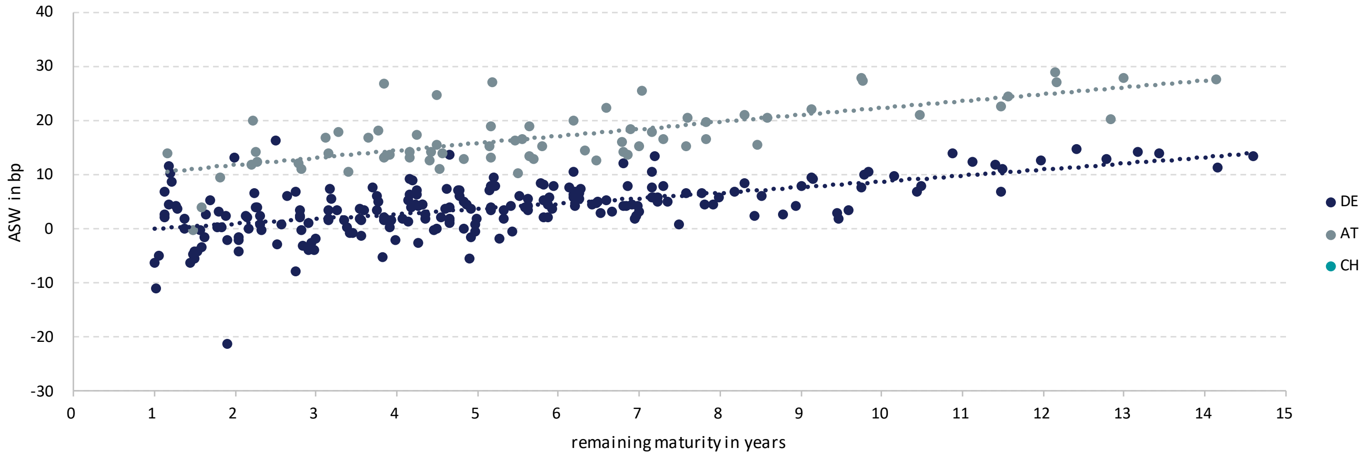
Order books (last 15 issues)



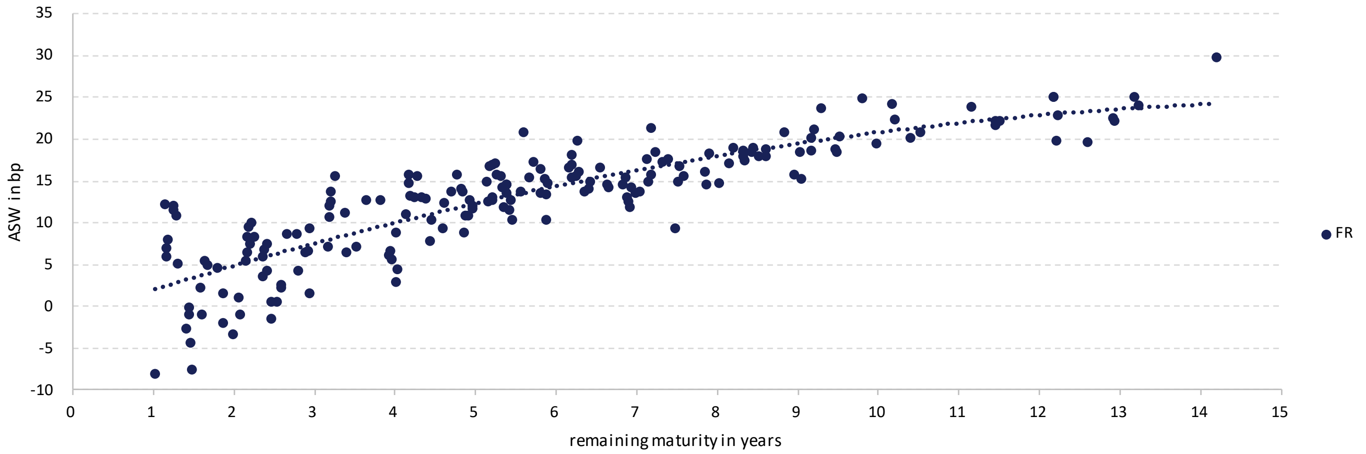
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread overview[1]

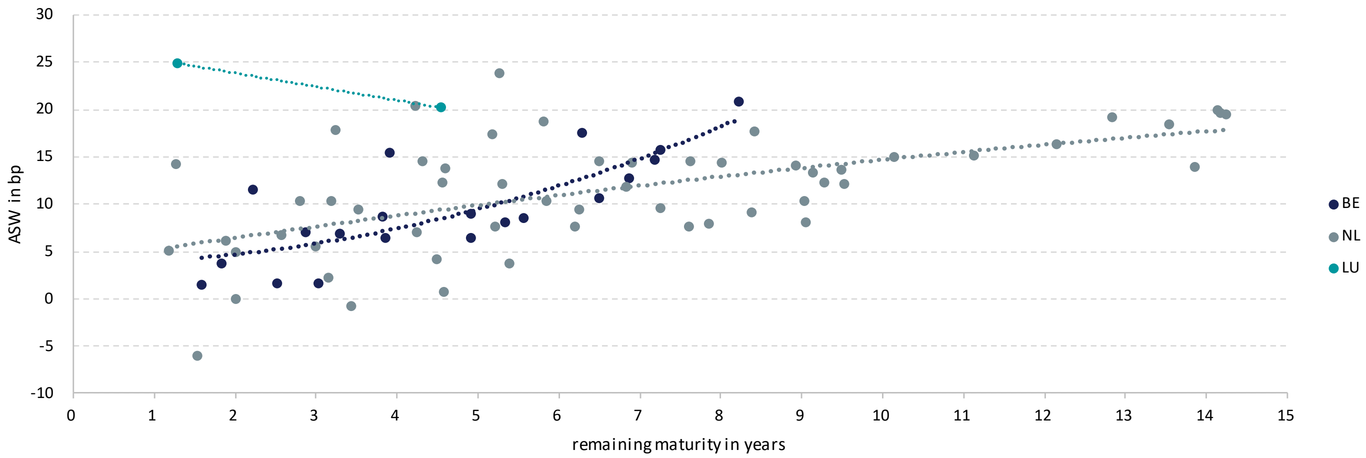
DACH



France

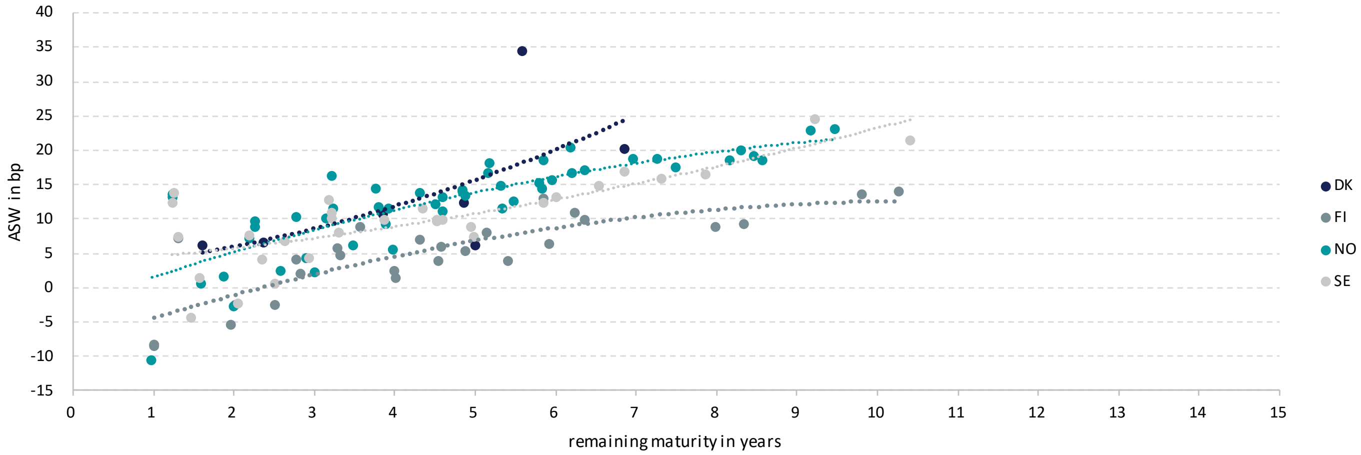


Benelux

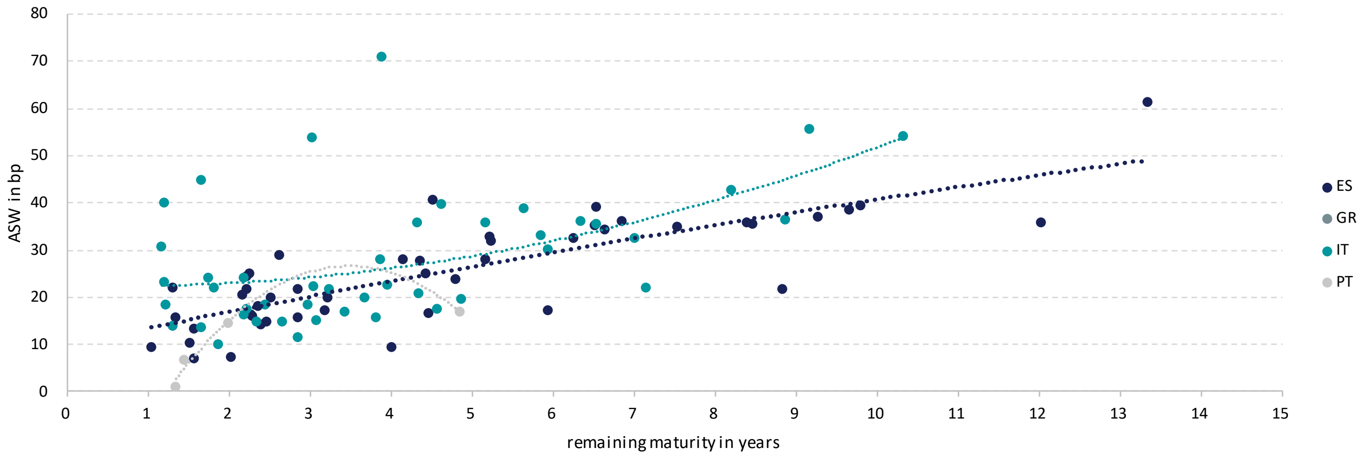


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

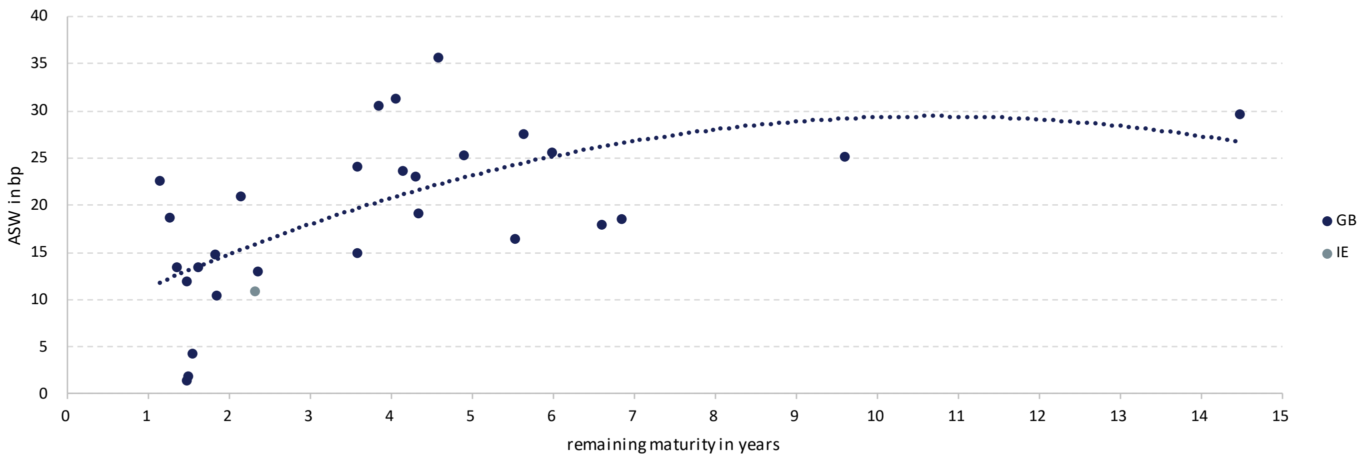
Nordics



Southern Europe

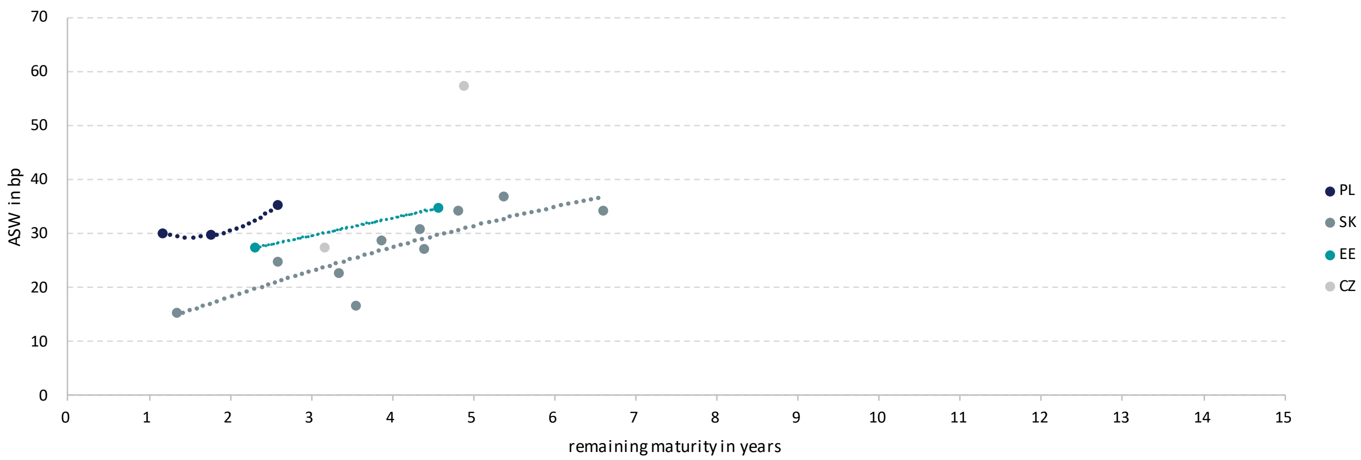


UK/IE

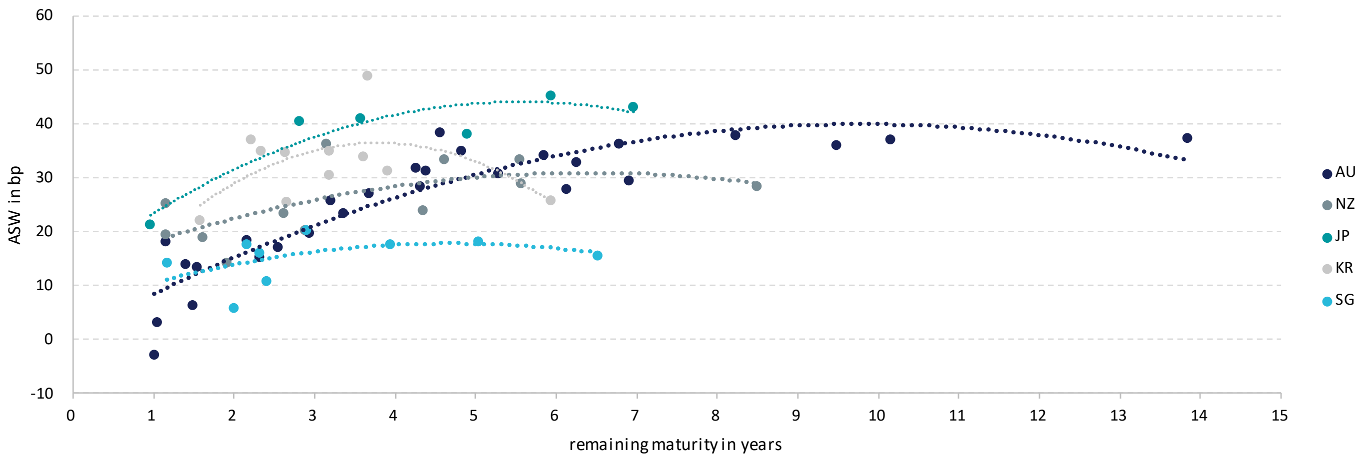


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

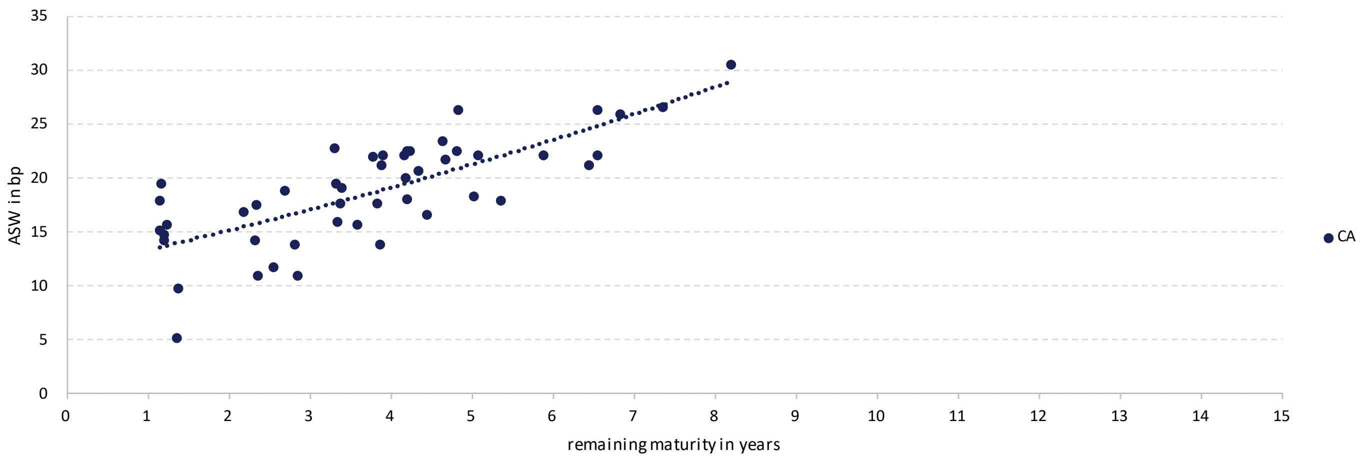
CEE



APAC



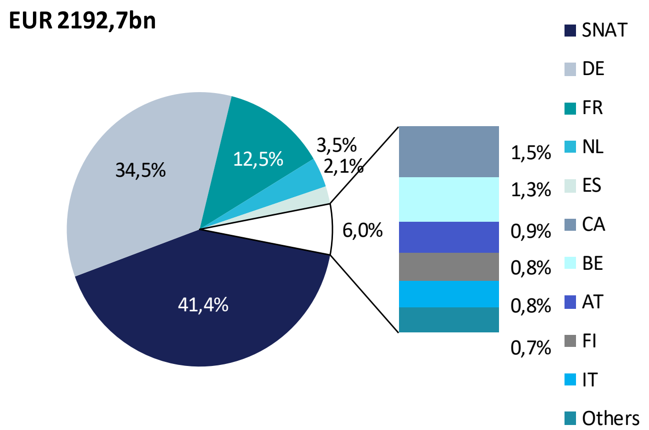
North America



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

Charts & Figures
SSA/Public Issuers

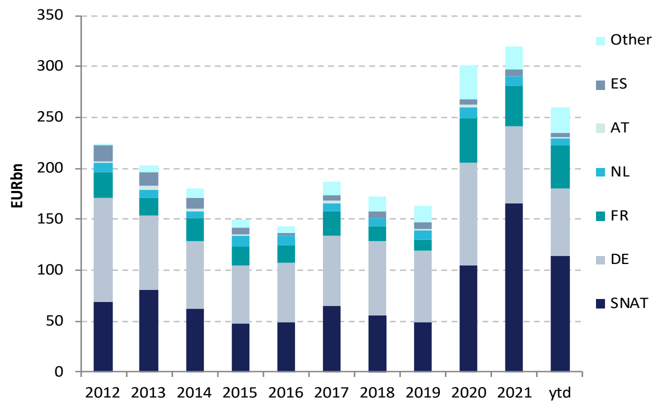
Outstanding volume (bmk)



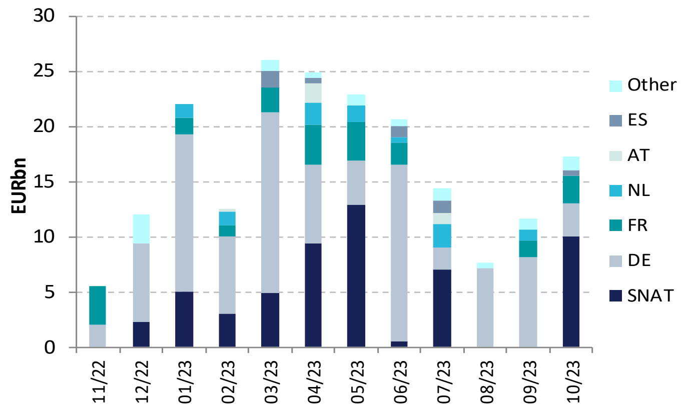
Top 10 countries (bmk)

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

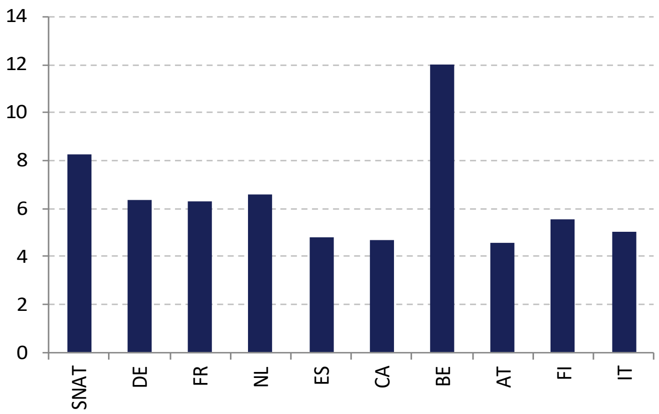
Issue volume by year (bmk)



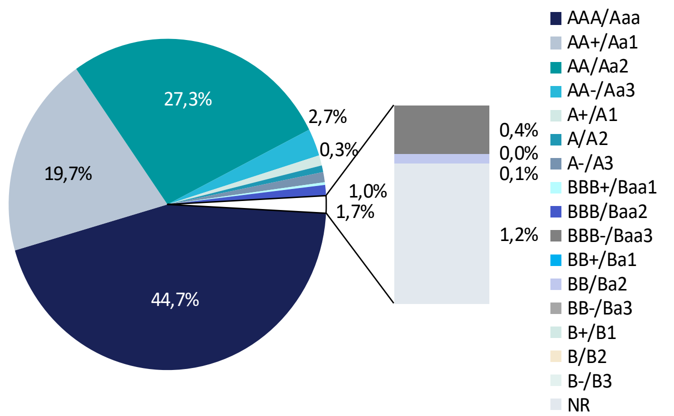
Maturities next 12 months (bmk)



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

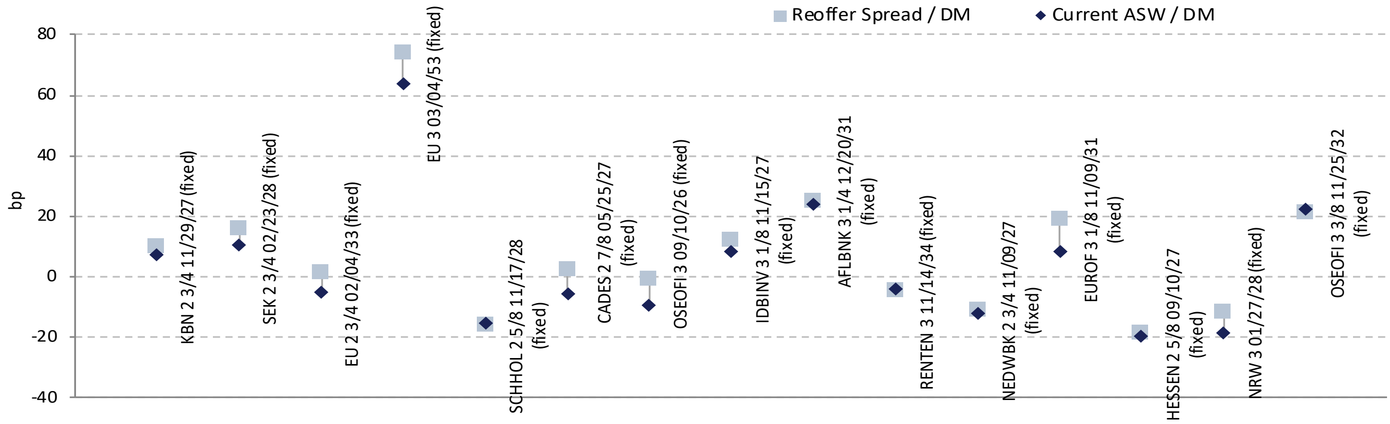


Rating distribution (vol. weighted)

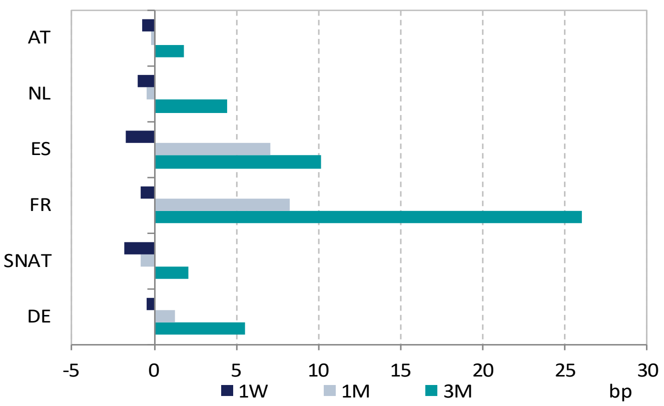


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

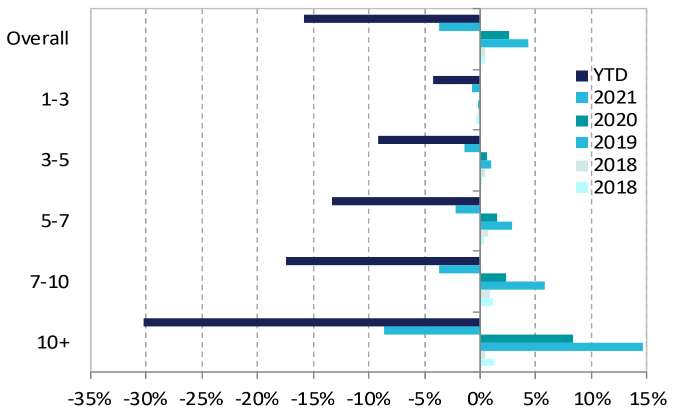
Spread development (last 15 issues)



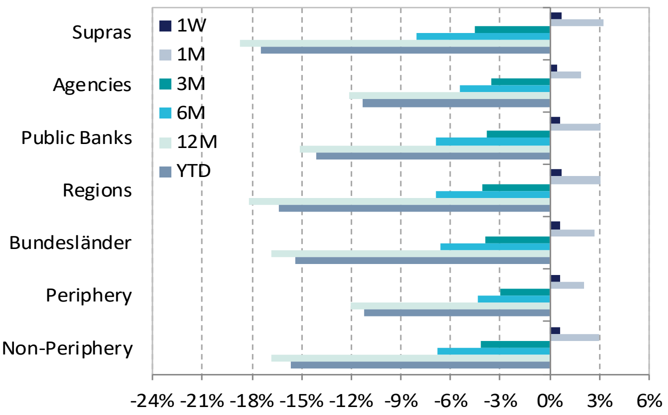
Spread development by country



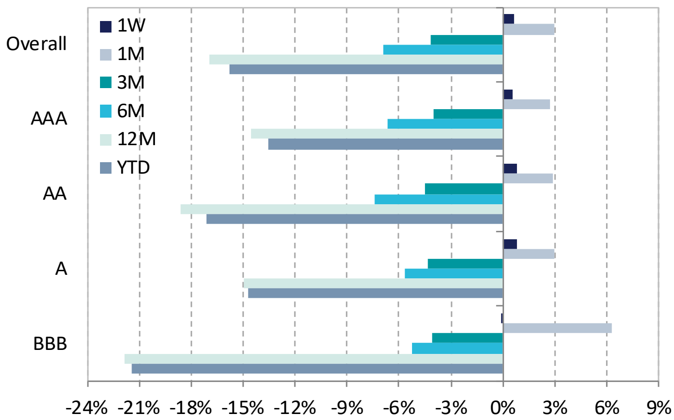
Performance (total return)



Performance (total return) by segments

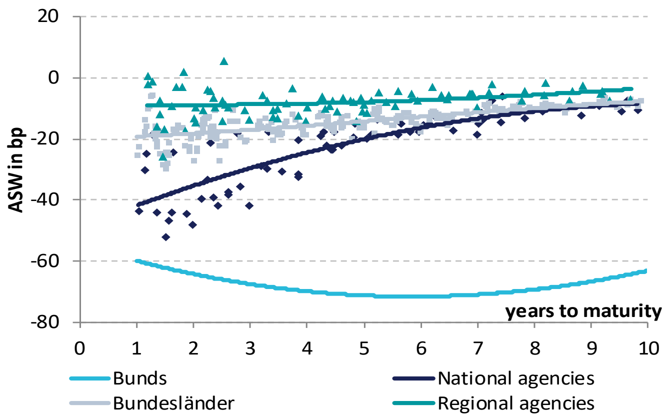


Performance (total return) by rating

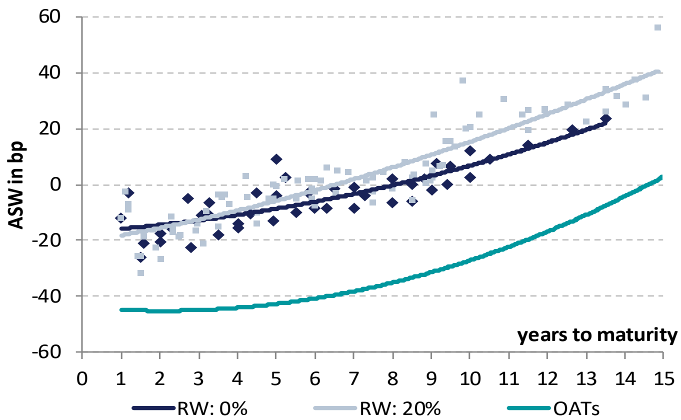


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

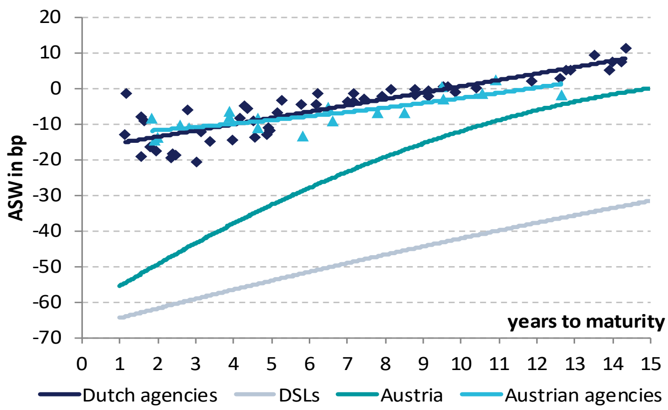
Germany (by segments)



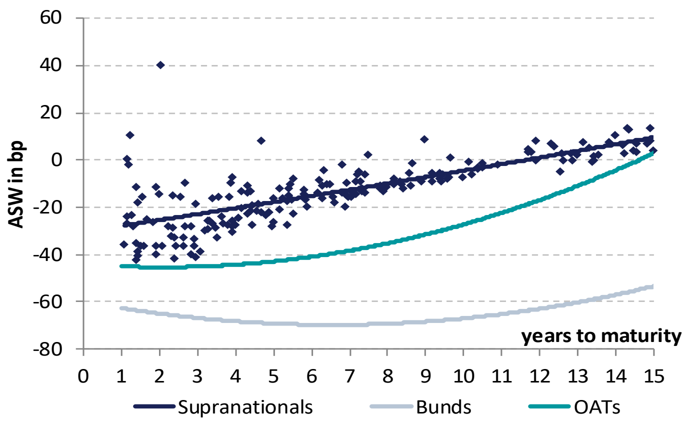
France (by risk weight)



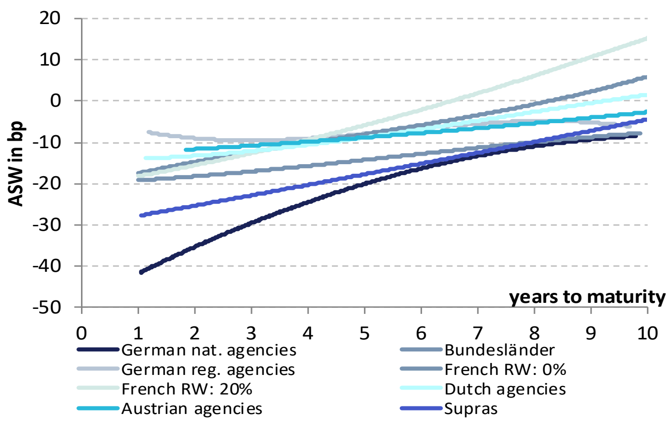
Netherlands & Austria



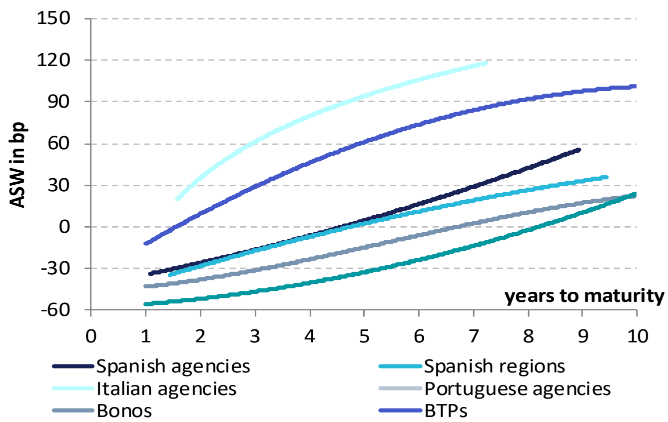
Supranationals



Core



Periphery



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

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Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
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
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

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SSA/Public Issuer Research

Bloomberg:
RESP NRDR <GO>

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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Origination Corporates	+49 511 361-2911

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

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Financials	+49 511 9818-9490
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Länder/Regionen	+49 511 9818-9550
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Time of going to press: Wednesday, 23 November 2022 (08:55)