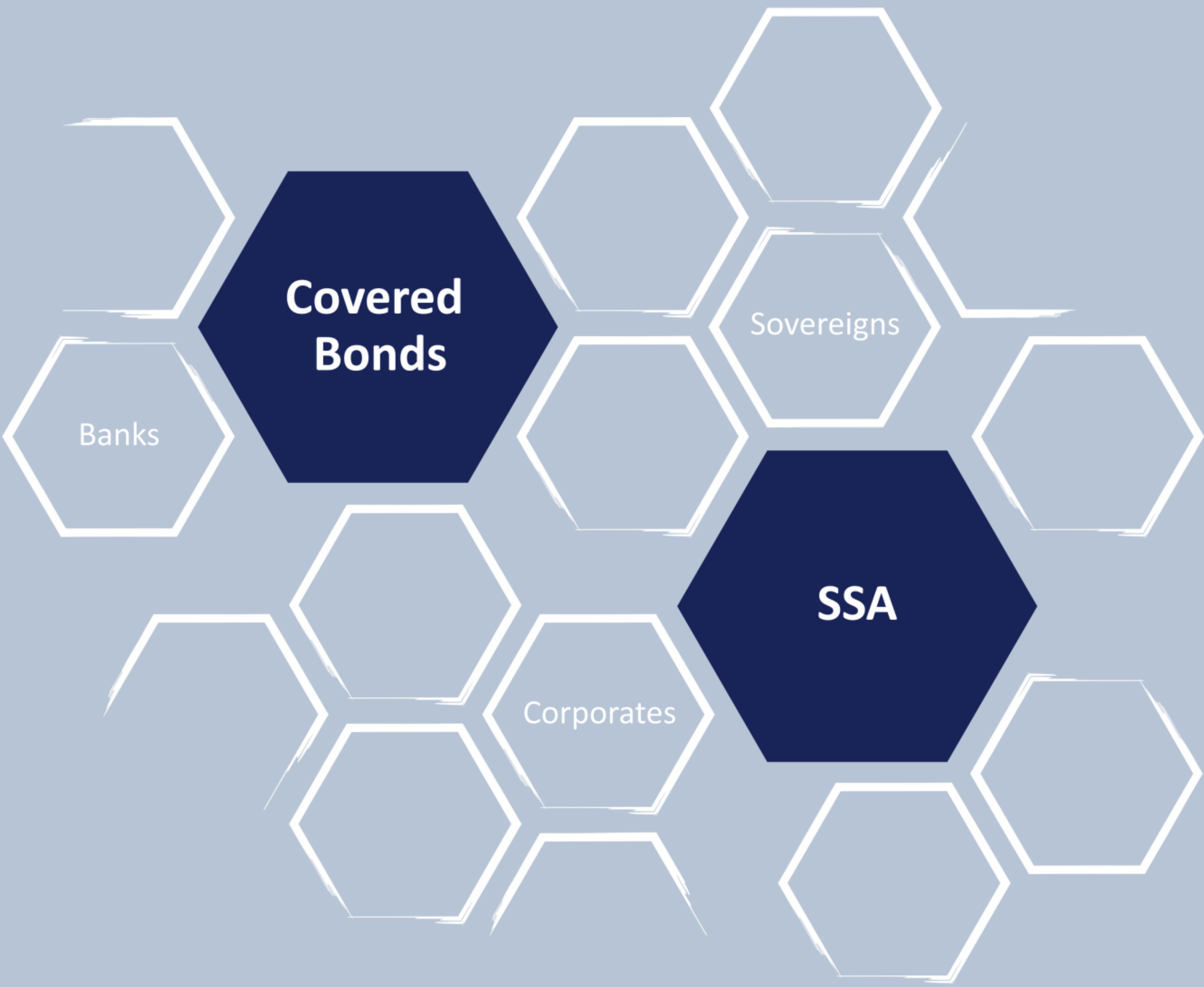


Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

27 October 2021 ♦ 33/2021

Investment strategy recommendation and marketing communication
(see disclaimer on the last pages)

Agenda

Floor analysts:

Dr Frederik Kunze
Covered Bonds
frederik.kunze@nordlb.de

Dr Norman Rudschuck, CIIA
SSA/Public Issuers
norman.rudschuck@nordlb.de

NORD/LB: Markets Strategy & Floor Research

NORD/LB: Covered Bond Research

NORD/LB: SSA/Public Issuer Research

Bloomberg: RESP NRDR <GO>

Market overview Covered Bonds

Author: Dr Frederik Kunze

Covered bond primary market: sustained momentum

Over the past five trading days, activity on the primary market for EUR-denominated covered bond benchmarks remained dynamic. For example, we again welcomed five new issuances in this segment to our screens over recent days. As early as last Wednesday, another French issuer in the form of Société Générale SFH approached investors and placed a bond worth EUR 750m on the market. The mortgage-backed benchmark featured a term to maturity of eight years and started out with guidance of ms +4bp area in the marketing phase. The re-offer spread eventually tightened by five basis points to ms -1bp, while the order book came in at EUR 1.4bn in total. The Korea Housing Finance Corporation (KHFC) made another appearance on the covered bond market. The South Korean financial institution placed its second EUR benchmark in the current year, also last Wednesday, selecting a term two years longer than the 5y maturity seen for its EUR 1.0bn deal in June 2021 (KHFC 0.01 06/29/26) for a covered bond in the amount of EUR 550m on this occasion. The order book for this social bond totalled EUR 630m, which produced a relatively meagre oversubscription ratio (1.1x). The re-offer spread (ms +19bp) was additionally fixed at the level of the initial guidance. On the following Thursday, two further issuers also approached investors. Bausparkasse Schwäbisch Hall opted for a mortgage-backed Pfandbrief (EUR 500m; 10y), which was priced at ms -1bp on the market. The bond started out in the area of ms +3bp and therefore tightened considerably during the book-building process. The fifth primary market issuance from Italy was then placed by Banca Carige (EUR 750m; 7y), with the bank placing its first EUR benchmark in five years. This deal generated orders of EUR 1.3bn overall. The re-offer spread of ms +57bp (IPT: ms +68bp area) can certainly be regarded as one of the higher issuance spreads in the covered bond market. The bond, which was rated by Moody's (Baa3) and DBRS (BBB), also performed fairly well on the secondary market. The issuance volume from Italy for the current year now totals EUR 3.25bn. While this value is certainly in excess of our forecast (EUR 2.0bn), it still lags significantly behind the maturities falling due from Italy in 2021 (EUR 7.1bn). A negative net supply for Italy is therefore certain for 2021. In the meantime, the situation is different in Germany. There were two additional Pfandbrief deals to report in the new trading week from the second-largest market for EUR benchmarks after France. On Monday, Bayerische Landesbank launched a public sector Pfandbrief deal worth EUR 500m (8y) on the market. This deal tightened during the marketing phase by five basis points against IPT, bringing the re-offer spread to ms -1bp. The order book totalled EUR 900m. For the first time since October 2018, Hamburg Commercial Bank made an appearance on the market by placing a mortgage Pfandbrief at ms +2bp (IPT: ms +6bp area). The order book eventually came in at EUR 660m, which equates to a bid-to-cover ratio of 1.3x. With the three deals seen in the current week, the volume of EUR benchmarks from Germany now stands at EUR 16bn. This value is not only above our estimate from March of this year (EUR 12.5bn), but also comfortably exceeds the expected maturities for 2021. As such, Germany will actually be able to look back on positive net supply for 2021 (in contrast to France, for example).

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
HCOB	DE	26.10.	DE000HCB0BC0	7.0y	0.50bn	ms +2bp	- / Aa1 / -	-
Bayerische Landesbank	DE	25.10.	DE000BLB6JL6	8.0y	0.50bn	ms -4bp	- / Aaa / -	-
Banca Carige	IT	21.10.	IT0005461626	7.0y	0.75bn	ms +57bp	- / Baa3 / -	-
BS Schwäbisch Hall	DE	21.10.	DE000A3MP6H1	10.0y	0.50bn	ms -1bp	- / Aaa / -	-
KHFC	KR	20.10.	XS2388377827	7.0y	0.55bn	ms +19bp	- / - / AAA	-
Societe Generale SFH	FR	20.10.	FR0014006713	8.0y	0.75bn	ms -1bp	AAA / Aaa / -	-

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

Tap from Canada: CIBC increases volume of 2026 bond

Tap deals for outstanding bonds are far from unusual in the EUR benchmark segment, although they are not seen on a daily basis either. In this context, we believe that it is noteworthy that a Canadian issuer, namely CIBC, has carried out a tap deal of its bond (CM 0.01 10/07/26), which was only first issued in September. On 29 September, CIBC priced this covered bond worth EUR 1.0bn at ms +4bp (order book: EUR 1.3bn). For this tap of EUR 250m (also priced at ms +4bp), an order book amounting to EUR 275m was reported. The deal was then priced yesterday (26.10.).

Scope: outlook and rating methodology

On 21 October 2021, the covered bond team from Scope issued invitations to a "Review & Outlook" webinar. Alongside current market developments and those expected in 2022, the risk experts also commented on their expectations with regard to rating drivers in this sub-segment. Accordingly, the risk experts take the view that the stability of bank ratings will be reflected in the risk assessments for covered bonds. Scope sees the highest resilience in the rating classifications for covered bonds in the jurisdictions of Finland, France, the Netherlands and Denmark, which, according to the above logic, is due to the high average bank ratings. According to its own information, Scope rates 40 covered bond programmes of 26 issuers from a total of 11 jurisdictions. As we previously noted at this point on September 15, we intend to present the relevant covered bond rating approaches in our weekly publications before briefly discussing what we consider to be the main building blocks of the respective methodologies. We shall therefore take this opportunity to continue our series with a brief overview of the Scope approach (cf. separate article).

Market overview SSA/Public Issuers

Author: Dr Norman Rudschuck, CIIA

Is the ECB's interim step becoming a balancing act?

Having successfully prevented the summer slump with its new strategy, recently the ECB has focused above all on linguistic tweaks and curbing the monthly rate of purchases under the PEPP since the beginning of Q4 2021. Looking at the monetary policy decision-making parameters, we do not anticipate adjustments of any kind for tomorrow. This assessment is based not least on the fact that the ECB's Governing Council still views the inflationary pressures as temporary and, therefore, transitory. Jens Weidmann's announcement last week that he would resign at the end of the year is also likely to add some spice to the meeting. Communication remains the European Central Bank's alpha and omega – more than ever. We do not expect the PEPP to be transferred into the APP before December at the earliest.

Review: KfW Global Investor Broadcast

The "Global Investor Broadcast" digital event organised by the KfW every six months provided the latest information from the funding team. It kicked off with a discussion between the departing CEO, Dr Günther Bräunig, and his successor, Stefan Wintels. This was followed by an interview with the Chief Economist, Dr Fritzi Köhler-Geib, who presented her ideas on the ECB and transitory – or not – inflation. We had also looked at this in greater detail in our ECB preview in the previous week. For us, the focus was on the explanations from Tim Armbruster, Treasurer. The KfW Treasurer is responsible, in particular, for the Bank's asset-liability management with total assets of more than half a trillion euros, funding the KfW as one of the world's largest non-government issuers on the international capital markets and the development bank's asset management. He referred to a strong year to date in 2021, having raised funding of more than EUR 75bn in 15 currencies through over 200 transactions. As of 30 September, the KfW's funding still stood at EUR 70.9bn. The target range for 2021 was still estimated at EUR 75-80bn halfway through the year. They may even be about to exceed their target here and are expected to do some prefunding. For 2022, Armbruster's gut feeling is that the figure could be even higher. He also mentioned flagship projects of 2021: in particular, he highlighted the first issue with a 15-year maturity (EUR 3bn) but also SONIA and SOFR transactions or the very positive result achieved from private placements (over EUR 9bn). These PPs (up to a maximum of 30 years) also include green bonds in some cases and tailor-made placements, which are also breaking records in this financial year. The proportion of green funding already totals over EUR 15bn, which was significant in as much as the forecast for 2021 had been circa EUR 10bn. However, there were far more green assets over the course of the year, meaning that the programme can be described as extremely successful here. Ideally, green bonds are expected to be possible up to ten years, "plain vanilla" KfW bonds up to a maximum of 15 years and PPs up to a maximum of 30 years. TLTRO III funds of EUR 14.7bn and around EUR 36bn of the Economic Stabilisation Fund (ESF) also cropped up in the figures mentioned and explanations. The funding plan for the coming financial year will be published, as always, in mid-December.

Rating outlook for Brandenburg

At this point, we would particularly like to refer once more to our Issuer Guide German Laender 2021, to be published soon in English language, which in addition to the latest budget figures and funding data also will include ratings, of course. Most of the 16 Bundeslaender have come through the crisis with their ratings intact, however, we must mention the new negative outlook for Brandenburg (previously Aaa stable) at this point. According to Moody's, the credit profile of Brandenburg reflects its anticipated economic recovery from this year, the highly supportive federal equalisation system, by and large sound governance and management practices, in addition to its excellent capital market access. At the same time, however, it takes account of its substantial and increasing debt, which is likely to peak at around 190% of operating revenue in 2021. The weaker outlook also reflects the lack of fiscal flexibility. The sub-sovereign will report substantial deficits in 2021 and 2022 at least. Lost tax revenues combined with higher expenditure will lead to gross deficits of around 5% of operating revenue until at least 2022. According to the Credit Opinion, Brandenburg is not expected to return to a balanced financial budget before 2025.

Primary market

Are we already seeing signs of the primary market running down towards the end of the year? As reported in recent editions, the EFSF and ESM have already completed their financial market activities for 2021; as shown above, the KfW is not expected to issue any substantial amounts in EUR either but is focused more on its "outstanding tasks". Calendar weeks with ECB meetings on the agenda are not particularly characterised by high levels of activity on primary markets in any case. Accordingly, we have recorded three new bonds plus three taps and no further outstanding mandates. Investitionsbank Schleswig-Holstein, whose appearances on the market are as rare as they are welcome, issued EUR 500m for seven years at ms -4bp, which was also the pricing suggested in the guidance. The order book apparently reached EUR 445m. The guarantor of IBSH, i.e., the Bundesland of Schleswig-Holstein (SCHHOL), also issued EUR 500m. However, the maturity was five years, and the deal sheets did not reveal the pricing. This is why, for a change, our table is without reliable information with regard to this deal. In the secondary market, we recorded a spread of ms -8bp for the bond. Hesse completed the German trio yesterday. It too opted for EUR 500m but for ten years at ms -9bp. Here, all the information was complete and, in addition to pricing and guidance (ms -8bp area), the order book was also specified at over EUR 900m. The European Union issued the largest tap in the trading week under review (Wednesday to Tuesday): it had announced on 20 October that it wanted to increase its new 2028 bond by EUR 2-2.5bn. This happened on 25 October within the time frame we advised. A total of EUR 2.497bn was allocated, while bids of EUR 3.956bn were received. The bid to cover ratio was consequently indicated at 1.58x. The weighted price was 100.81, while the lowest accepted price was 100.67. Two smaller taps were issued by AGFRNC (EUR 250m) in its 2031 maturity and SACHAN (EUR 500m) in its 2051 maturity. Initially, Saxony-Anhalt had planned a tap of at least EUR 250m but books of EUR 1.2bn meant the volume could be increased. This is Saxony-Anhalt's longest outstanding bond.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
HESSEN	DE	25.10.	DE000A1RQD92	10.0y	0.50bn	ms -9bp	- / - / AA+	-
SCHHOL	DE	22.10.	DE000SHFM824	5.0y	0.50bn	-	AAA / - / -	-
IBBSH	DE	19.10.	DE000A2TR182	7.0y	0.50bn	ms -4bp	AAA / - / -	-

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

Covered Bonds
Insurance firms as covered bond investors: A look at Solvency II and EIOPA statistics

Author: Dr Frederik Kunze

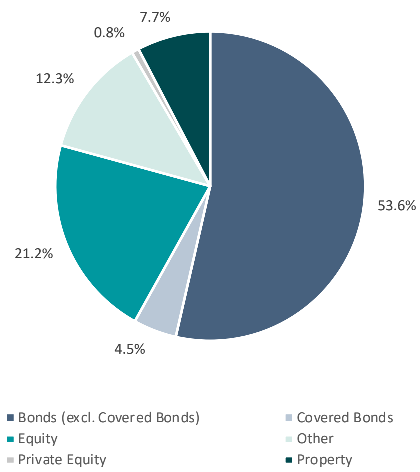
Insurance companies as covered bond investors

From a historical perspective, covered bonds – as a sub-category of investing in bonds – represent a considerable share of the investments made by European insurance companies. Nevertheless, investors from this sector have faced and continue to face far-reaching challenges, including with regard to covered bonds, which may make covered bonds less attractive – at least in relative terms. In this context, the general interest rate level – as a result of the ECB's monetary policy – and the Eurosystem's direct influence on spreads for the asset class of covered bonds via the CBPP3 should be highlighted. However, in our view, it should also be pointed out that covered bonds continue to be significant for insurance companies. We would argue that this is partly due to the regulatory treatment of covered bonds under Solvency II. In this article, we first take a look at the current statistics of the European Insurance and Occupational Pensions Authority (EIOPA) and then address the subject of regulatory categorisation of covered bonds under Solvency II. Finally, we analyse the shares of insurance companies in terms of the primary market distribution in the EUR benchmark segment and consider current yield levels in this market segment.

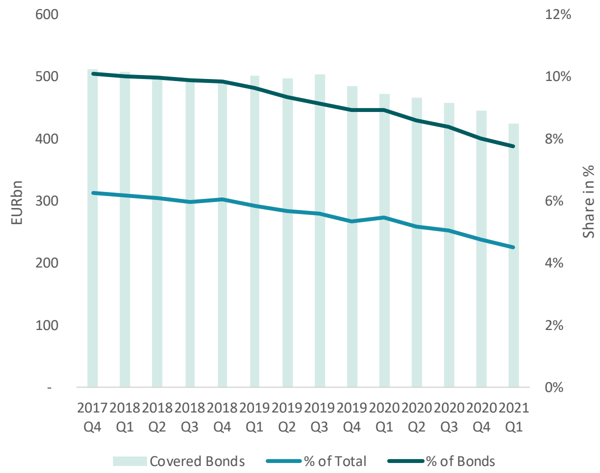
EIOPA statistics – covered bonds account for a 4.5% share of total assets

Based on official EIOPA data, covered bond categories accounted for an asset exposure of EUR 425bn in the first quarter of 2021 (first quarter of 2020: EUR 474bn), as per the statistics supplied on the basis of Solvency II reporting requirements (cf. EIOPA insurance statistics). This represents a share of 4.5% of the total volume of the asset exposure (EUR 9,419bn) reported on the same reporting date. It reflects a continuing downward trend with regard to the share in relation to total assets. The first relevant data point relates to the reporting period of the fourth quarter of 2017. In this period, investments in covered bonds totalled EUR 515bn, which represented a share of 6.3% of the total volume (EUR 8,213bn). Compared with covered bonds, an opposite trend was observed for the categories of Equity and Property. With regard to equity investments, the volume of assets climbed to EUR 1,994bn (Q1/2021), which represents considerable growth on the fourth quarter of 2017 (EUR 1,537bn). Positions in the Property category rose from EUR 552bn to EUR 721bn in the same period. With regard to bond investments, the share of covered bond issues decreased. In the most recent reporting period, covered bonds accounted for a 7.8% share (Q4/2017: 10.1%). The share of bonds (excl. covered bonds) actually rose and currently totals EUR 5,046bn, with growth recorded for both public sector issues (including sovereigns, supras and regional authorities) and corporate bonds.

EIOPA asset exposures – categories



EIOPA asset exposures – covered bonds

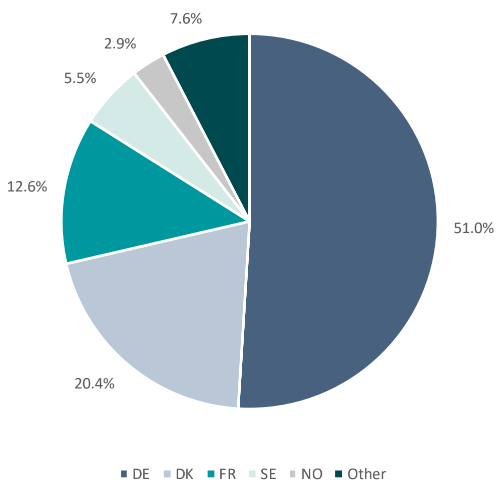


Source: EIOPA, NORD/LB Markets Strategy & Floor Research

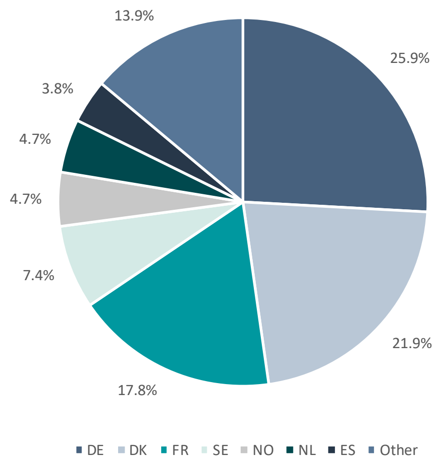
EIOPA statistics – country overview

Nonetheless, these developments regarding the shares of covered bonds should by no means give rise to a view of the asset class as being marginalised in terms of its relevance to insurance companies. As outlined below, demand from insurance firms for covered bonds remains at a significant level. Accordingly, it seems expedient to highlight the regional characteristics of the EIOPA data. With regard to the distribution of the relevant covered bond investments, the highest share was attributable to assets located in Germany at 25.9%, followed by Denmark (21.9%) and France (17.8%). With regard to the reporting country of the relevant insurance companies, the size of the covered bond markets in Germany, Denmark and France explains the high shares attributable to these countries. Furthermore, a detailed analysis of the data revealed a significant home bias. Accordingly, demand from insurance companies often is disproportionately high for covered bonds from their own country.

EIOPA covered bond exposures – reporting country



EIOPA covered bond exposures – target country



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

Solvency capital requirement (SCR) in Solvency II

The relevance of covered bonds as an asset class for insurance firms can also be deduced from their preferential regulatory treatment. Capital requirements for insurance companies are generally regulated by pillar 1 (quantitative requirements) of Solvency II, with a distinction made between two levels of capital requirements. The minimum capital requirement (MCR) marks the regulatory lower limit of solvency capital to be maintained and is calibrated with a confidence level of 85%. In contrast, the second level of capital requirements, the solvency capital requirement (SCR), represents the capital resources required with the aim of ensuring that the financial institution in each case will be able to meet its insurer obligations in the coming twelve months with a 99.5% probability. In other words, the financial institution is not able to meet its obligations once in 200 years on a calculated basis. The provisions for determining the SCR, which are also relevant to covered bonds, are based on EU Directive 2009/138/EC of 25 November 2009 and the Commission Delegated Regulation (EU) 2015/35 published on 17 January 2015 respectively and, for example, were transposed in national law in Germany with effect from 1 January 2016 in the form of the Gesetz zur Modernisierung der Finanzaufsicht über Versicherungen (VAG, Act to modernise the financial supervision of insurance undertakings).

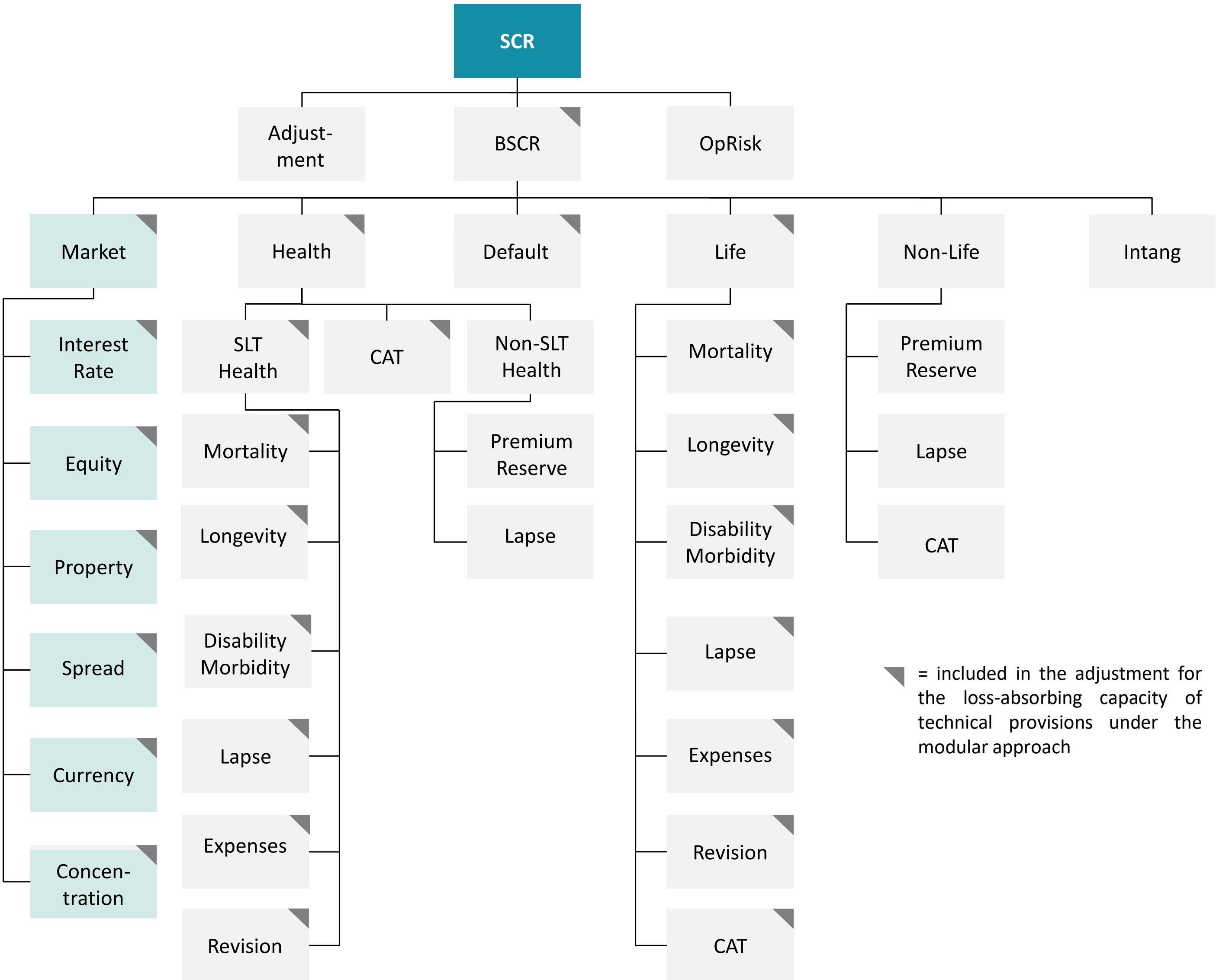
The Solvency II standard model

As part of Solvency II and in the Commission Delegated Regulation (EU) 2015/35, theoretically, three approaches for calculating solvency capital requirements are specified: i) simplified calculation models, ii) the SCR standard model as well as iii) internal models. This article focuses on the SCR standard approach, or standard model, which is based on a modular approach (cf. chart below, Solvency II – overview of the standard model). Capital requirements are calculated at the level of risk models and risk sub-modules respectively, which comprise the SCRnon-life, SCRmarket, SCRdefault, SCRhealth and SCRlife modules and are aggregated for the purpose of determining the SCR. According to the European Insurance and Occupational Pensions Authority (EIOPA), the above-mentioned confidence level (99.5%) is applied at the level of risk model and risk sub-modules. To additionally take into account the relevant diversification effects, appropriate correlation matrices are applied in the standard model when calculating capital requirements.

Market risk model relevant to covered bonds

With regard to covered bonds, the SCR module on market risk (SCRmarket) is particularly relevant. The market risk module comprises the following categories: equity, concentration, spread, interest rate change, property and currency risk. Covered bond positions are only indirectly linked to currency and interest rate change risks. However, spread and concentration risks are far more important. In terms of the method used, a stress scenario is assumed for spread risk, as well as other types of risk, when calculating the SCR, which triggers a decline in prices. In the spread risk, this risk factor is a function of the rating from an external credit assessment institution (ECAI) and the modified duration of the bond.

Solvency II – overview of the standard model

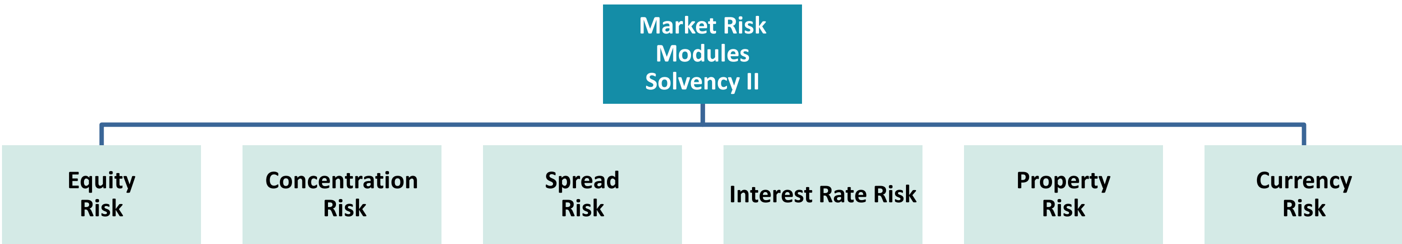


Source: EIOPA, NORD/LB Markets Strategy & Floor Research

Preferential treatment of covered bonds under Solvency II

In view of the high share attributable to bond positions as part of asset allocation at insurance companies, the spread risk is particularly important when calculating the SCR. The spread risk essentially depends on the rating and duration of an investment. Weaker ratings and a longer capital commitment duration result in higher capital requirements for the insurance firm. Nevertheless, with regard to a duration of more than five years, the increase in capital requirement is smaller. This is, partly, aimed at taking into account the investment strategy of life assurance companies, which is based on matching maturities. For covered bonds (i.e. currently for bonds within the meaning of Article 52 (4) of Directive 2009/65/EC), specific requirements apply to capital backing pursuant to Solvency II and the VAG respectively, which result in preferential regulatory treatment compared with other interest rate instruments (e.g. corporate bonds and asset backed securities (ABS)).

Solvency II – market risk modules



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

Spread risk as part of determining the SCR for covered bonds

As part of the Solvency II framework, it is assumed that covered bonds with a high rating are covered by a diversified pool of assets and that this cover pool collateralises the major part of the value of the relevant bond in the event of default. Pursuant to Article 180 (1) of the Commission Delegated Regulation (EU) 2015/35, the following parameters apply in the standard model when determining the risk factor for quantifying the SCR for the spread risk relating to covered bonds within the meaning of Article 52 (4) of Directive 2009/65/EC with credit quality steps (CQS) of 0 or 1 (see mapping table). As is evident from the SCR calculation table, the strain on capital resulting from the SCR for spread risk is lower for covered bonds with the relevant ratings compared with corporate bonds, based on the formulae indicated. For covered bonds of CQS 2 or lower, the applicable risk factor as part of determining the SCR is not lower. This means that when calculating the strain on capital, the formulae for CQS 2 covered bonds match the formulae applicable to corporate bonds.

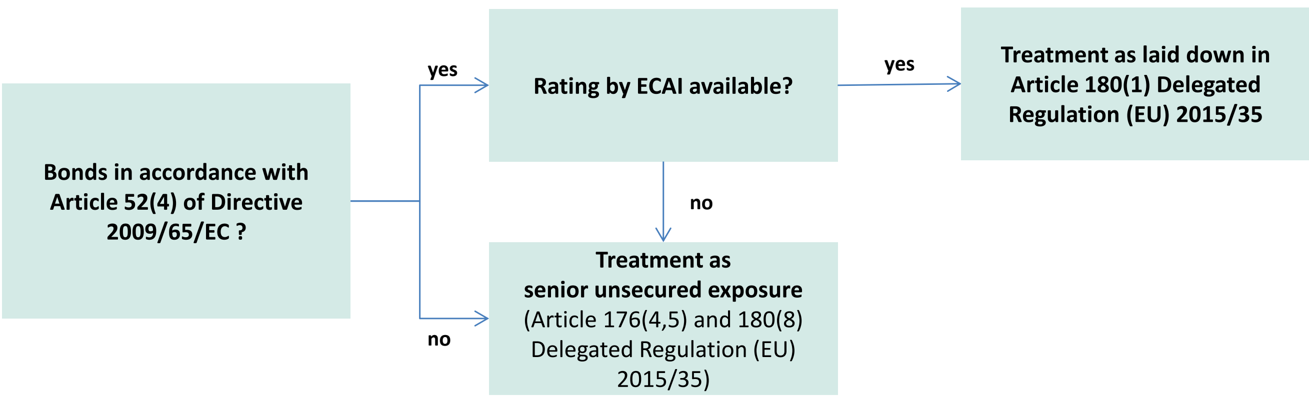
Mapping of ratings under Solvency II

	CQS 0	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5	CQS 6
Fitch	AAA	AA	A	BBB	BB	B	CCC, CC, C, RD, D
S&P	AAA	AA	A	BBB	BB	B	CCC, CC, C, D
Moody's	Aaa	Aa	A	Baa	Ba	B	Caa, Ca, C
DBRS	AAA	AA	A	BBB	BB	B	CCC, CC, C, D
Scope	AAA	AA	A	BBB	BB	B	CCC, CC, C, D

Source: Regulation (EU) 2016/1800, NORD/LB Markets Strategy & Floor Research

Solvency II – overview of the standard model

SCR standard model – treatment of covered bonds



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

Sovereign bonds of EU member states as well as bonds with rating levels 0 and 1 with a risk factor of zero

However, the preferential (in relative terms) treatment of covered bonds when calculating the SCR must be put into perspective in view of the treatment of sovereign bonds. Bonds from EU member states (irrespective of the CQS and/or rating) as well as from countries with credit quality steps 0 and 1 benefit from a risk factor of 0% in a stress scenario, making them more attractive. Although the process of asset allocation must not be reduced solely to the regulatory capital commitment, we would say that, in view of their regulatory capital commitment, these bonds are more attractive than covered bonds.

Solvency II – SCR calculation for covered bonds, sovereigns, corporate bonds and asset backed securities

Assets	CQS	≤5y	5y to ≤10y	10y to ≤15y	15y to ≤20y	>20y
Covered Bonds	CQS 0	0.7%*D	3.5%+0.5%*(D-5)	6.0%+0.5%*(D-10)	8.5%+0.5%*(D-15)	11.0%+0.5%*(D-20)
	CQS 1	0.9%*D	4.5%+0.5%*(D-5)	7.0%+0.5%*(D-10)	9.5%+0.5%*(D-15)	12.0%+0.5%*(D-20)
	CQS 2	1.4%*D	7.0%+0.7%*(D-5)	10.5%+0.5%*(D-10)	13.0%+0.5%*(D-15)	15.5%+0.5%*(D-20)
	CQS 3	2.5%*D	12.5%+1.5%*(D-5)	20.0%+1.0%*(D-10)	25.0%+1.0%*(D-15)	30.0%+0.5%*(D-20)
	CQS 4	4.5%*D	22.5%+2.5%*(D-5)	35.0%+1.8%*(D-10)	44.0%+0.5%*(D-15)	46.6%+0.5%*(D-20)
	Not rated	3.0%*D	15.0%+1.7%*(D-5)	23.5%+1.2%*(D-10)	29.5%+1.2%*(D-15)	35.5%+0.5%*(D-20)
Sovereign EU[1]	not relevant	0.0%	0.0%	0.0%	0.0%	0.0%
Sovereign	CQS 0	0.0%	0.0%	0.0%	0.0%	0.0%
	CQS 1	0.0%	0.0%	0.0%	0.0%	0.0%
	CQS 2	1.1%*D	5.5%+0.6%*(D-5)	8.4%+0.5%*(D-10)	10.9%+0.5%*(D-15)	13.4%+0.5%*(D-20)
	CQS 3	1.4%*D	7.0%+0.7%*(D-5)	10.5%+0.5%*(D-10)	13.0%+0.5%*(D-15)	15.5%+0.5%*(D-20)
	CQS 4	2.5%*D	12.5%+1.5%*(D-5)	20.0%+1.0%*(D-10)	25.0%+1.0%*(D-15)	30.0%+0.5%*(D-20)
Corporate Bonds	CQS 0	0.9%*D	4.5%+0.5%*(D-5)	7.0%+0.5%*(D-10)	9.7%+0.5%*(D-15)	12.0%+0.5%*(D-20)
	CQS 1	1.1%*D	5.5%+0.6%*(D-5)	8.4%+0.5%*(D-10)	10.9%+0.5%*(D-15)	13.4%+0.5%*(D-20)
	CQS 2	1.4%*D	7.0%+0.7%*(D-5)	10.5%+0.5%*(D-10)	13.0%+0.5%*(D-15)	15.5%+0.5%*(D-20)
	CQS 3	2.5%*D	12.5%+1.5%*(D-5)	20.0%+1.0%*(D-10)	25.0%+1.0%*(D-15)	30.0%+0.5%*(D-20)
	CQS 4	4.5%*D	22.5%+2.5%*(D-5)	35.0%+1.8%*(D-10)	44.0%+0.5%*(D-15)	46.6%+0.5%*(D-20)
Asset Backed Securities	CQS 0	2.1%*D (for type 1); 12.5%*D (for type 2); 33.0%*D (for re-securitisation)				
	CQS 1	3.0%*D (for type 1); 13.4%*D (for type 2); 40.0%*D (for re-securitisation)				
	CQS 2	3.0%*D (for type 1); 16.6%*D (for type 2); 51.0%*D (for re-securitisation)				
	CQS 3	3.0%*D (for type 1); 19.7%*D (for type 2); 91.0%*D (for re-securitisation)				
	CQS 4	82.0%*D (for type 2); 100.0%*D (for re-securitisation)				

Source: EIOPA, NORD/LB Markets Strategy & Floor Research, D = modified duration;

[1] direct central government exposure / guaranteed by EU member central governments

Solvency II – thresholds relevant to the SCR concentration risk

Bond type	ECAI Rating	Concentration threshold
Corporate Bonds	AAA - AA	3.0%
	A	3.0%
	BBB	1.5%
	BB or lower	1.5%
Covered Bonds	AAA - AA	15.0%
Exposure to EEA state, European Central Bank (ECB), multilateral development banks (MDB), international organisations (IO)	Not relevant	none

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

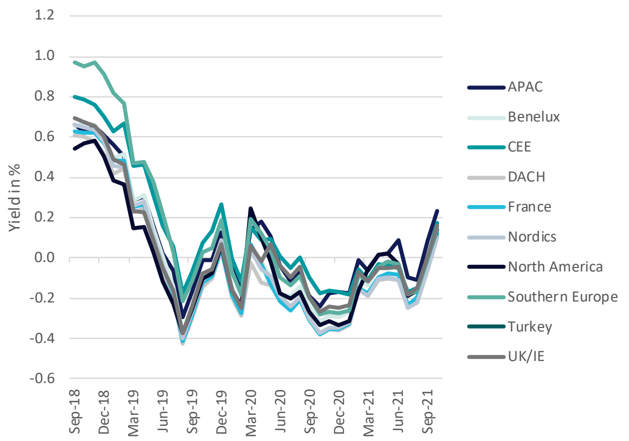
Concentration risk – separate treatment of covered bonds

Too much of a focus on a single issuer is additionally taken into account as part of the SCR market risk sub-module on market risk concentration. As soon as the amount of debt in the event of counterparty default exceeds a specified concentration threshold (or concentration risk threshold), it becomes necessary to calculate the relevant SCR for concentration risk. The concentration risk is regulated in sub-section 6 "Market risk concentrations sub-module", Articles 182 to 187 of Commission Delegated Regulation (EU) 2015/35. The concentration threshold is to be interpreted as a percentage of the assets – that is essentially the value of all assets held by an insurance or reinsurance company. The general rule applies that the weighted average rating of the risk exposure to a single issuer is decisive for deriving the concentration threshold. For ratings of 0, 1 and 2, the applicable threshold is 3%. For ratings of 3 to 6, the threshold is 1.5%. Within the scope of the sub-module on market risk concentration, an increased concentration threshold of 15% must be applied to covered bonds with a rating of 0 or 1 (cf. Article 187 (1) of Commission Delegated Regulation (EU) 2015/35). This means that a significantly higher threshold applies to covered bonds with particularly high ratings than, for example, to corporate bonds and ABS. Overall, this results in the SCR to be applied being lower. Nevertheless, it should also be noted in this respect that debt vis-à-vis EU member states and multilateral development banks is subject to preferential treatment compared with covered bonds, because of a general exemption regarding the SCR calculation for concentration risk.

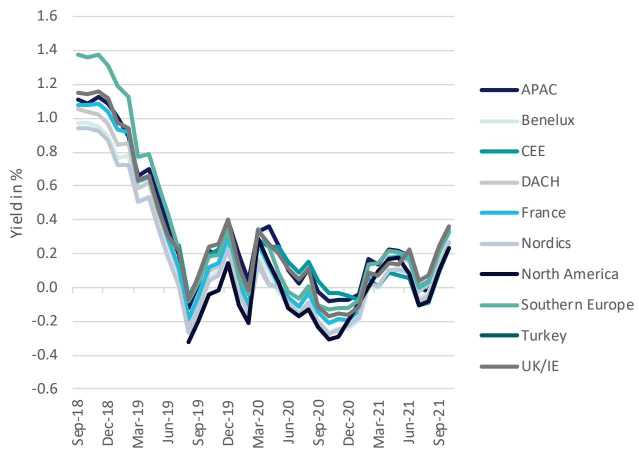
Yield trend for covered bonds as a result of the general market trend

As mentioned above, monetary policy has had a significant impact on the investment behaviour of insurance companies. We would definitely interpret the yield pick-up observed at present for covered bonds, if viewed in isolation, as an indication that covered bonds are more attractive in absolute terms. However, from a relative value perspective, alternative investments in public sector bonds that enjoy preferential regulatory treatment compared with covered bonds and corporate bonds with higher yields, where applicable, should also be considered. This applies, in particular, against the backdrop that yield increases on covered bonds are more likely to be attributable to the trend in swap rates and consequently less to spread widening on covered bonds. However, from the perspective of insurance companies, we see a stronger focus on covered bonds as an asset class returning, especially in a market environment that is characterised by the higher pricing of risk.

Trend in covered bond yields (7Y)



Trend in covered bond yields (10Y)

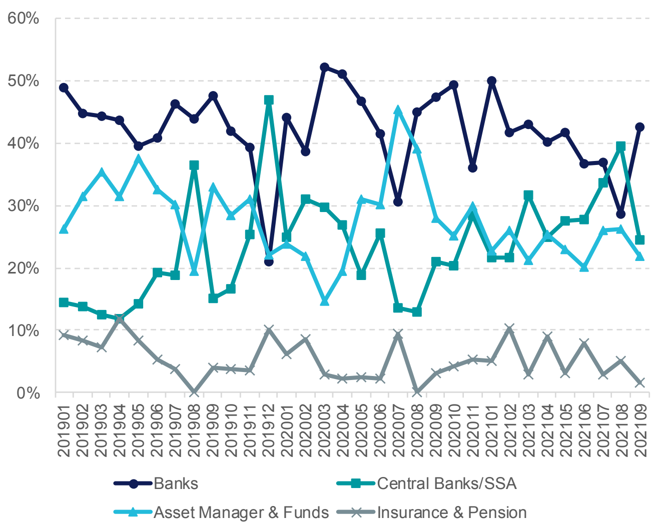


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

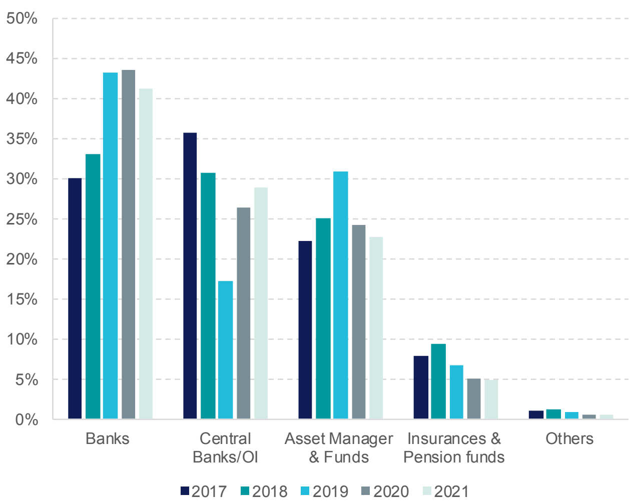
Investor distribution – share of insurance companies at a low level

The crowding-out of insurance companies in terms of the shares of primary market issues in the EUR benchmark bond segment is certainly evident in the investor structure based on deal reviews. The shares of the "Insurances & Pension Funds" category reflect the relevant decreases in both the monthly and annual view. Necessary conditions for a return to higher levels include the above-mentioned more attractive covered bonds, in relative terms, compared with alternative investment options and a higher allocated share of primary market orders from insurance companies. Both factors largely depend on the future course of the ECB's monetary policy.

EUR benchmark – investor distribution (monthly)



EUR benchmark – investor distribution (annual)



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

Conclusion

Based on the current EIOPA data for the first quarter of 2021, a continuation of the downward trend with regard to the absolute volume of covered bonds can be deduced. In relative terms, the share of covered bonds has also continued to decrease. However, we would not deduce a fundamental loss in the importance of covered bonds for insurance companies from these trends. Instead, the attractiveness of this asset class is subject to market conditions, which are mainly brought about by monetary policy. Pursuant to Solvency II, covered bonds benefit from preferential treatment when determining capital requirements, compared with corporate bonds and ABS. With regard to SCR calculation as part of the sub-module for spread risk, which is comprised under market risk, as well as for the concentration risk, specific risk parameters are stipulated for covered bonds, depending on the rating level. This is to take account of the fact that covered bonds are collateralised by a cover pool comprising assets with a high asset quality. Nevertheless, it must be noted that risk positions vis-à-vis EMU countries entail less of a strain on capital under Solvency II, compared with covered bonds. In a different market environment in which the pricing of risk also plays a more important role, covered bonds could certainly become more relevant. This would then – partly at least – also be due to their regulatory treatment.

Covered Bonds
The ratings approach of Scope

Author: Dr Frederik Kunze

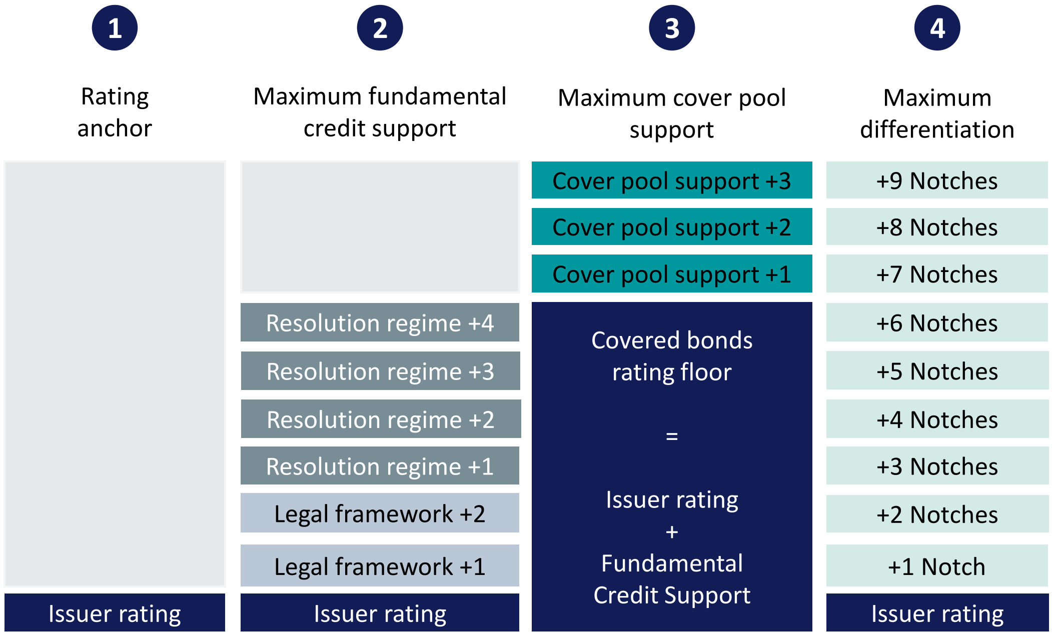
Structure and logic of the Scope methodology

The Scope rating methodology takes into account the dual recourse character of covered bonds. Consequently, the analysis of the issuer and the derivation of the issuer rating provides the basis for the covered bond rating. Potential uplifts are derived using this anchor rating; these result from the legal framework for covered bonds applicable in each case and the resolution regime to be applied to banks and the extent of systemic support. In this context, maximum uplifts of four notches are possible based on the resolution regime, while the legal framework allows uplifts of up to two notches. In total, a rating of up to six notches above the issuer rating can be recorded from the "fundamental credit support". This potential for uplifts is a consequence of the high probability that the relevant regime will ensure that covered bonds are still serviced, or the programme continues even in the case of regulatory interventions affecting the issuer. As part of the analysis of the cover pool, recourse to the cover pool, which only takes place if necessary (i.e. upon default by the issuer), is rated. The "cover pool support" element is based on the rating, which is worked out from the combination of the issuer rating with the uplifts from the "fundamental credit support". Governance considerations may lead to adjustments in the potential cover pool-based uplift, reflected as the cover pool complexity (CPC) score. Furthermore, the cover pool support takes into account the considerations below. For example, Scope evaluates the risks as to whether the issuer is unable to comply with their payment obligations and whether the payment surpluses from the cover pool are insufficient. The expected loss (EL) associated with these risks is also inferred. Here, in line with the basic principle of dual recourse, the approach provides for the fact that losses are only expected in the event of both an issuer default and that the covered bond structure does not guarantee complete and timely repayment. In total, a covered bond rating with a maximum of nine notches above the issuer rating is possible, even with an uplift of more than nine notches in individual cases (such as some CPT structures).

Fundamental credit support: Analysis of the legal framework

The analysis of the legal framework for covered bonds, which can produce a maximum uplift of two notches, is based on the assessment of the ring fencing of the cover pool and the design of the SPV structure. Therefore, the evaluation of the legal framework includes ensuring that payments can be made at all times and that the cover pool is protected from insolvency. The analysis also looks at the question of whether and to what extent the permitted cover assets are high quality and how market and liquidity risks are dealt with adequately before and after the issuer's insolvency. In addition, the analysis of the legal framework also addresses issues such as sufficient overcollateralisation, how conflicts of interest are dealt with in the event of insolvency and independent supervision of the programmes in question, among other things.

Scope: Structure of covered bond rating methodology



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

Fundamental credit support: Assessment of the resolution regime

Improved regulatory conditions, which also include new resolution regimes, can in particular lead to a lower probability of default for covered bonds in a scenario of this kind. Among other things, this is attributable to the fact that banks and issuers can withstand a far higher stress level before investors may access the cover pool if need be. Scope derives the actual uplifts from the resolution regime and from specific factors linked to the preservation of the covered bonds credit quality in a resolution scenario. In addition to questions with regard to the possible prevention of an issuer default, Scope focuses on the systemic relevance of the issuer or of covered bonds in the domestic market here, among other things. As part of the methodological description of the analysis of the resolution regime, Scope also considers the case that there is no suitable resolution mechanism.

Cover pool support analysis: CobEL model

The analysis of the cover pool is based on the results from the fundamental credit support. Even though, as mentioned initially, an uplift of up to three notches in the covered bond rating floor (issuer rating + notch uplift from the fundamental credit support) is possible in the context of the cover pool support. The covered bond expected loss model (CobEL) is used to evaluate if the maximum cover pool uplift is possible. In addition, the rating uplift can be constrained as outlined further below. It is divided into four elements, namely credit risk analysis, cash flow risk analysis, auxiliary risk considerations and sensitivity analysis. The credit risk analysis is based on identifying the relevant asset risks arising from the cover pool and is included in the cash flow risk analysis where the CobEL is used to stress the cash flows. The model takes into account both scenarios where the issuer remains in a position to service the covered bonds and the theoretical cases, where investors have to take recourse to the cover pool. The individual components of the assessments as part of the application of the CobEL model extend to both credit risk relevant aspects of the cover pool and the analysis of the risks of cash flows (such as refinancing risks, liquidity premiums, exchange and interest rate risks or reinvestment risks).

Available OC

Scope also provides for the assessment of the available overcollateralisation and securing the liquidity of the cover pool following a default by the issuer. In addition, the CobEL model incorporates auxiliary risk considerations and a sensitivity analysis, as both can constrain the potential rating uplift. As part of the auxiliary risk considerations, attention is also focused on counterparty risks by analysing possible negative consequences for covered bonds potentially arising from the credit quality of counterparties.

Cover pool support analysis: Cover pool complexity (CPC) score

Scope applies a cover pool complexity (CPC) score to rate the individual cover pool based on transparent criteria such as the availability of information on key risk drivers as well as on the interplay of the covered bond programmes complexity and transparency. The CPC score, therefore, reflects those factors and limits the potential cover pool-based uplift. For example, a CPC score of 1 equals the maximum uplift of three notches and a CPC score of 4 indicates that no additional cover pool uplift is possible. No additional rating uplift is possible, when the available information is insufficient to perform a cover pool analysis. In the absence of necessary data for their full rating process, the covered bond rating can also be withdrawn.

Cover pool analysis now also includes ESG risks

In the course of the auxiliary risk considerations for the cover pool support analysis, Scope explains how ESG aspects (ESG = environmental, social and governance) could impact the quantitate cover pool analysis. In the case, an issuer can sufficiently support the assumption that environmental or social cover assets exhibit lower credit risk, these can be taken into account in the analysis (lower default probability because of a borrower's higher affordability of a mortgage, and or all things equal potential higher recovery proceeds as more energy efficient houses achieve higher sale proceeds). Similarly, if ESG assets can be robustly identified, they likely would receive lower haircuts upon a forced asset sale. However, empirical evidence of differences in credit risk or pricing differences between "traditional" and ESG assets or covered bonds is currently very scarce and often not sufficiently robust supported. For now ESG aspects have thus limited relevance for the rating analysis.

Country risks: no general sovereign limit

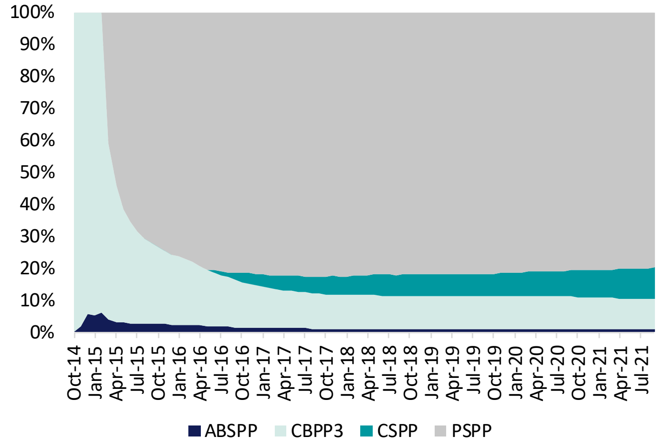
In its consideration of country risks, Scope ranks as one of the rating agencies that does not, in principle, restrict the covered bond rating to the sovereign limit. Nevertheless, Scope's methodology does provide for consideration of country-specific risk factors and in this context lists, among other things, the possible influence of transfer risks, convertibility risks and the risks of an institutional crisis on the covered bond rating.

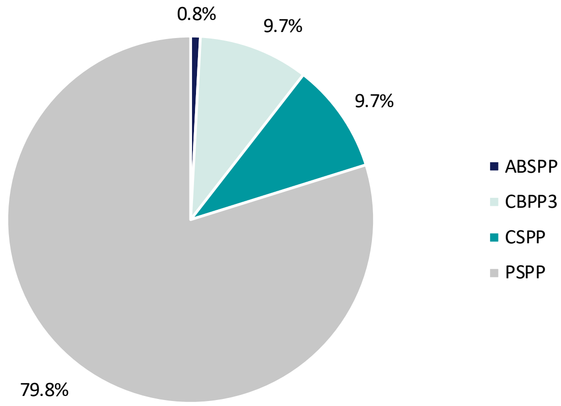
ECB tracker

Asset Purchase Programme (APP)

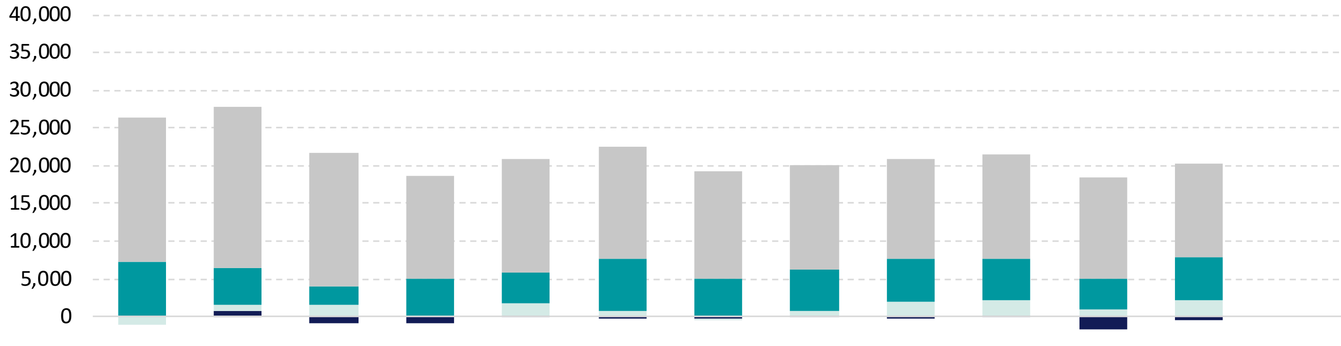
	ABSPP	CBPP3	CSPP	PSPP	APP
Aug-21	26,582	294,775	291,169	2,442,837	3,055,363
Sep-21	26,036	296,590	296,403	2,449,278	3,068,307
Δ	-516	+2,184	+5,590	+12,423	+19,681

Portfolio structure





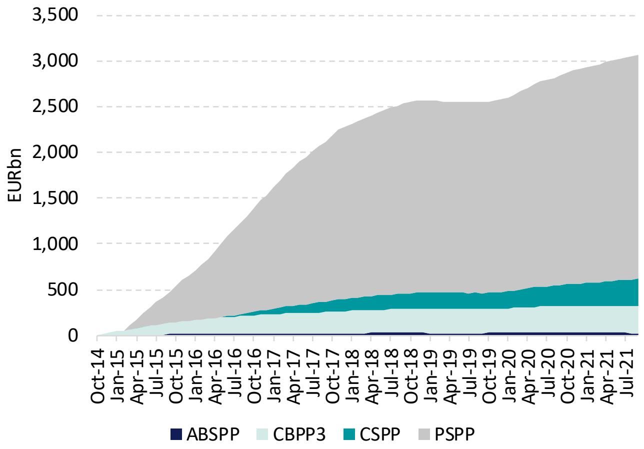
Monthly net purchases (in EURm)



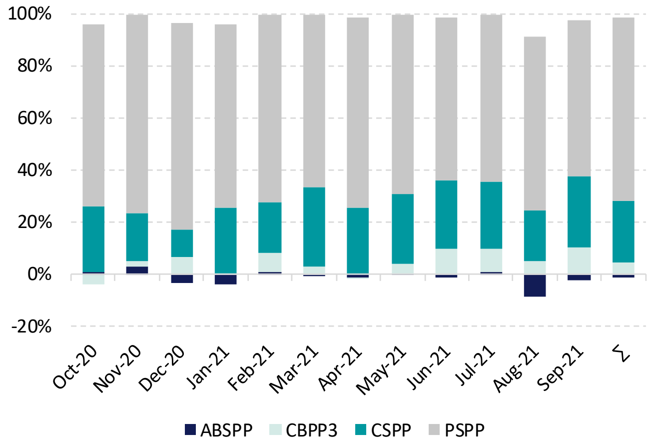
	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	∑
APP	25,349	27,720	20,929	17,846	20,915	22,561	18,918	20,141	20,640	21,597	16,749	19,681	253,046
PSPP	19,182	21,241	17,822	13,655	15,129	14,955	14,186	13,973	13,320	13,943	13,563	12,423	183,392
CSPP	6,983	5,009	2,378	4,924	4,064	6,929	5,015	5,394	5,602	5,502	3,936	5,590	61,326
CBPP3	-1,041	646	1,529	74	1,539	684	-5	686	2,037	2,011	999	2,184	11,343
ABSPP	225	824	-800	-807	183	-7	-278	88	-319	141	-1,749	-516	-3,015

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

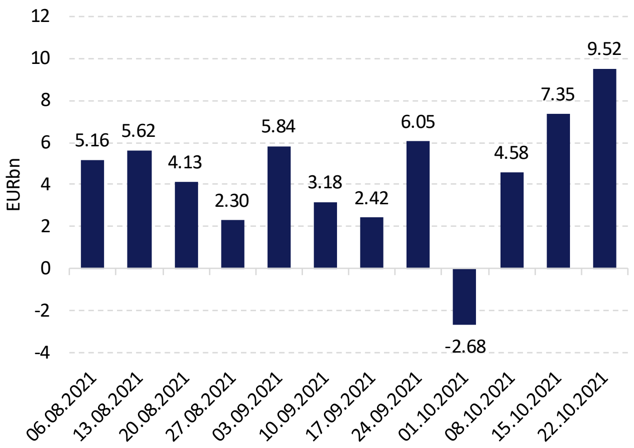
Portfolio development



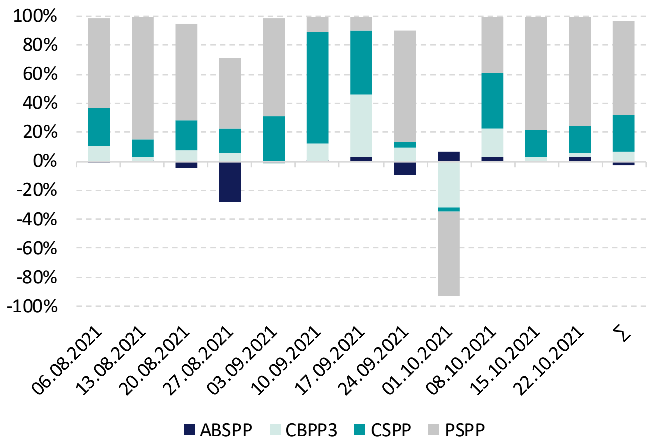
Distribution of monthly purchases



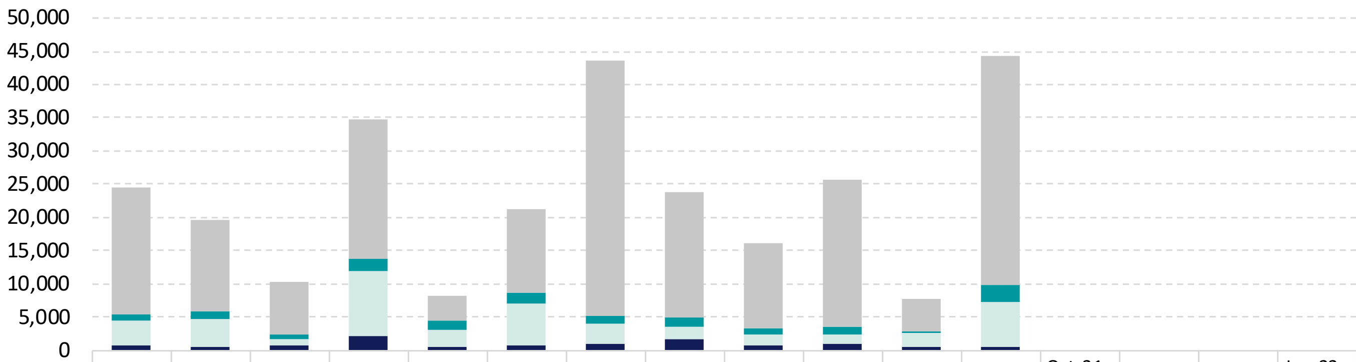
Weekly purchases



Distribution of weekly purchases



Expected monthly redemptions (in EURm)

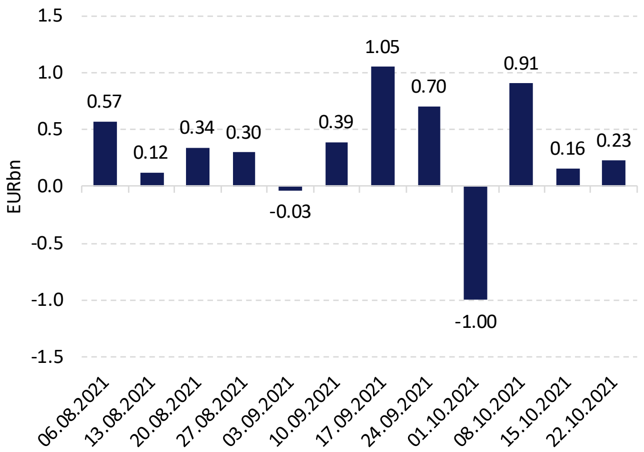


	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-21 - Sep-22	2020	2021	Jan-22 - Sep-22
APP	24,616	19,672	10,233	34,653	8,182	21,164	43,548	23,889	16,127	25,769	7,762	44,329	279,944	262,253	245,993	225,423
PSPP	19,224	13,801	7,811	20,906	3,625	12,603	38,428	18,998	12,714	22,120	4,841	34,554	209,625	201,482	188,482	168,789
CSPP	915	1,269	826	1,880	1,590	1,416	1,125	1,341	1,017	1,191	280	2,426	15,276	18,267	16,403	12,266
CBPP3	3,775	4,048	937	9,797	2,524	6,380	3,002	1,866	1,553	1,578	2,226	6,827	44,513	33,236	30,143	35,753
ABSPP	702	554	659	2,070	443	765	993	1,684	843	880	415	522	10,530	9,268	10,965	8,615

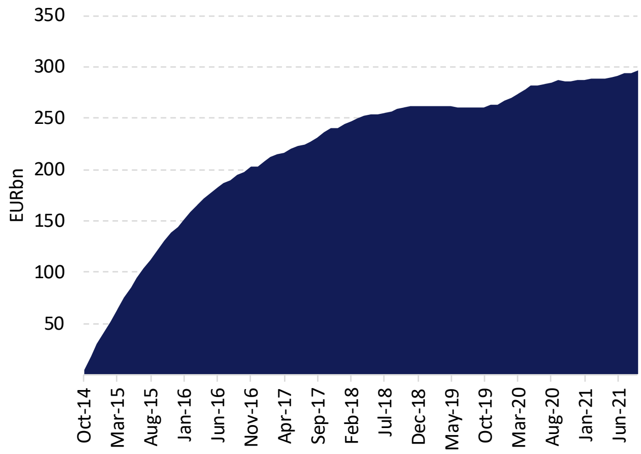
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

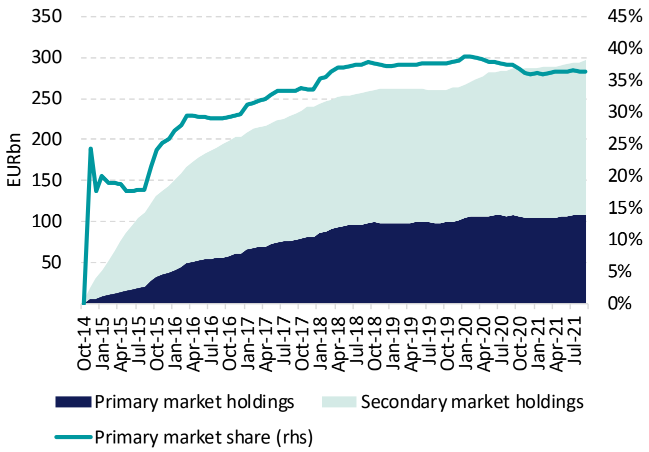
Weekly purchases



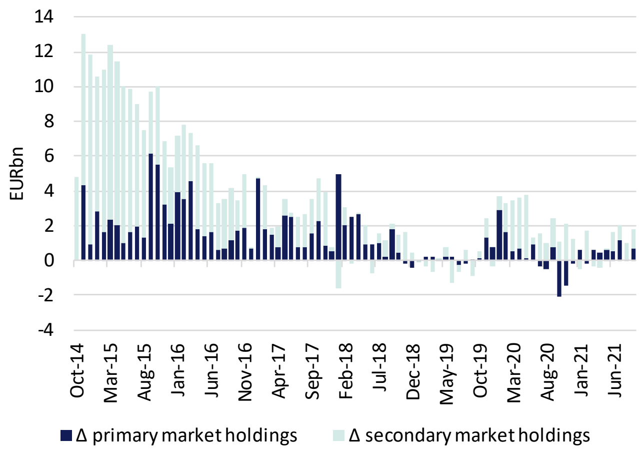
Development of CBPP3 volume



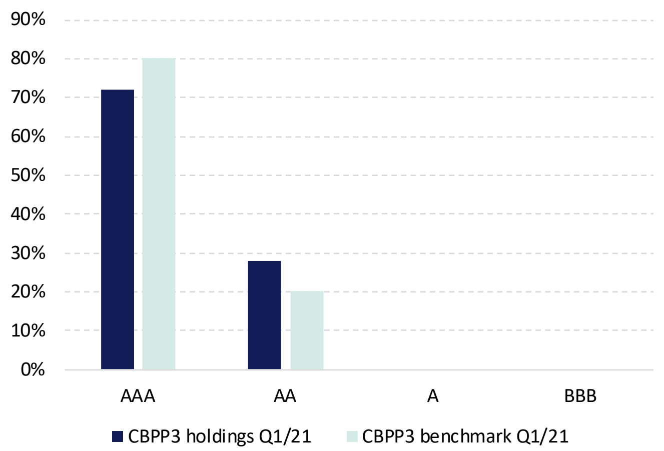
Primary and secondary market holdings



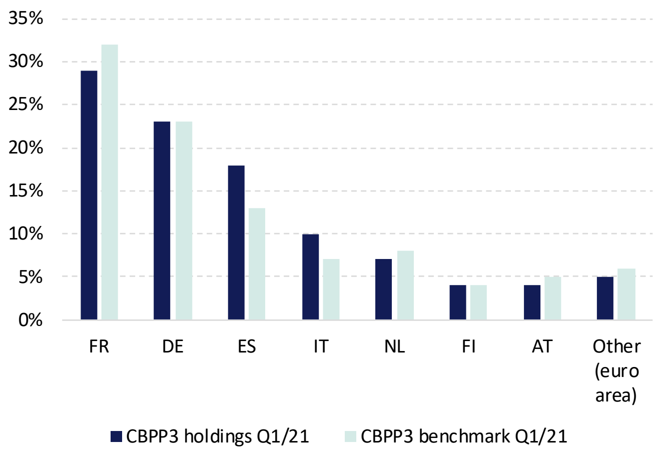
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating



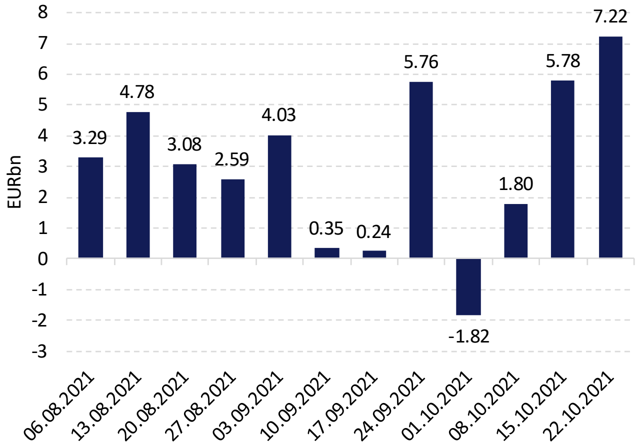
Distribution of CBPP3 by country of risk



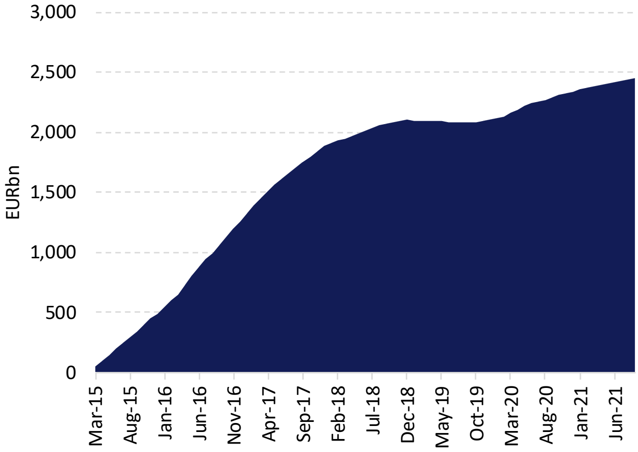
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



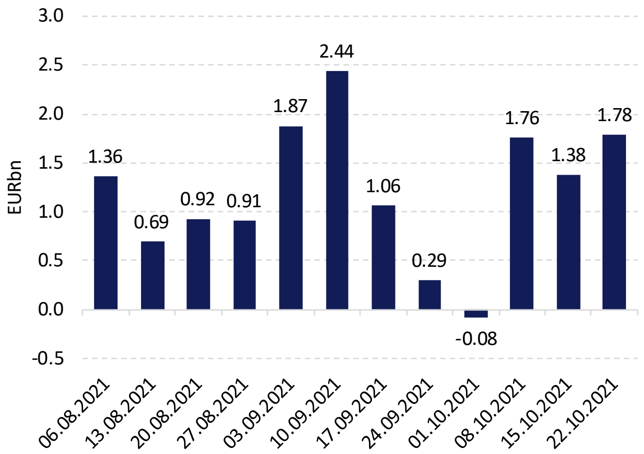
Overall distribution of PSPP buying at month-end

Jurisdiction	Adjusted distribution key[1]	Purchases (EURm)	Expected purchases (EURm)[2]	Difference (EURm)	Avg. time to maturity[3] (in years)	Market average[3] (in years)[3]	Difference (in years)
AT	2.7%	70,787	69,909	878	7.5	7.6	-0.1
BE	3.4%	89,262	87,020	2,242	8.0	10.2	-2.2
CY	0.2%	3,990	5,140	-1,150	9.9	8.8	1.1
DE	24.3%	619,752	629,648	-9,896	6.6	7.6	-1.0
EE	0.3%	403	6,728	-6,325	9.2	7.5	1.7
ES	11.0%	302,219	284,821	17,398	8.0	8.4	-0.4
FI	1.7%	39,947	43,874	-3,927	6.9	7.7	-0.8
FR	18.8%	510,664	487,838	22,826	7.2	8.1	-0.9
GR	0.0%	0	0	0	0.0	0.0	0.0
IE	1.6%	40,254	40,447	-193	8.5	10.1	-1.6
IT	15.7%	430,515	405,773	24,742	7.1	7.9	-0.8
LT	0.5%	5,258	13,824	-8,566	10.2	10.6	-0.4
LU	0.3%	3,719	7,868	-4,149	5.6	7.2	-1.7
LV	0.4%	3,102	9,307	-6,205	11.3	10.4	0.9
MT	0.1%	1,234	2,505	-1,271	9.5	9.2	0.3
NL	5.4%	123,400	139,977	-16,577	7.7	9.0	-1.4
PT	2.2%	49,073	55,903	-6,830	7.0	7.2	-0.2
SI	0.4%	9,933	11,501	-1,568	9.9	10.2	-0.3
SK	1.1%	16,647	27,354	-10,707	8.2	8.3	-0.1
SNAT	10.0%	268,104	258,827	9,278	7.7	8.9	-1.2
Total / Avg.	**100.0%**	**2,588,265**	**2,588,265**	**0**	**7.3**	**8.2**	**-0.9**

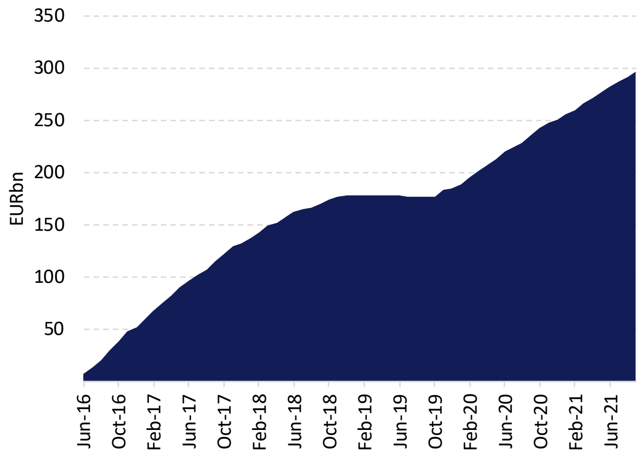
[1] Based on the ECB capital key, adjusted to include supras and the disqualification of Greece
[2] Based on the adjusted distribution key
[3] Weighted average time to maturity of the bonds eligible for purchasing under the PSPP (semi-annual data, Q1/2021)
Source: ECB, NORD/LB Markets Strategy & Floor Research

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

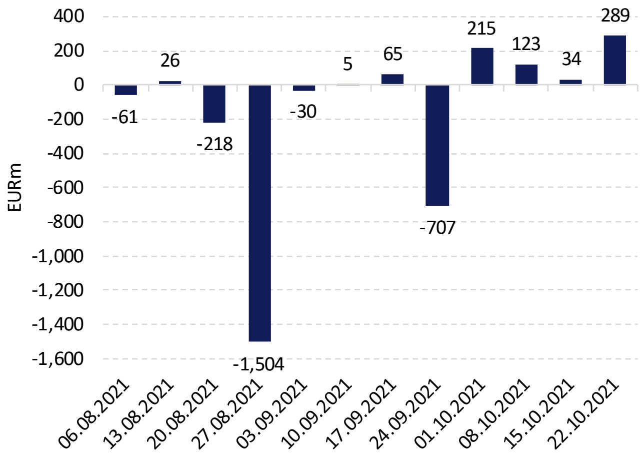


Development of CSPP volume

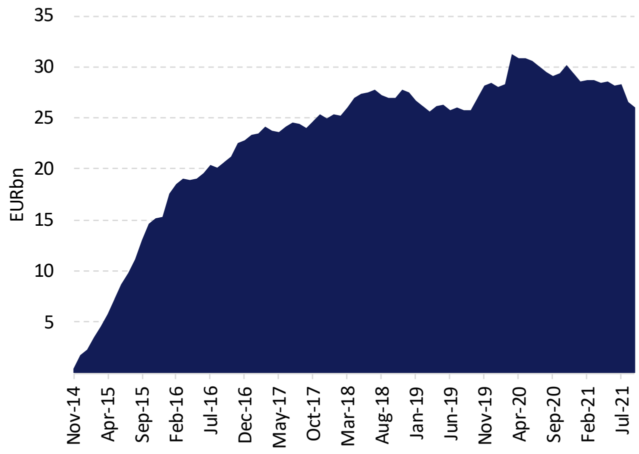


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



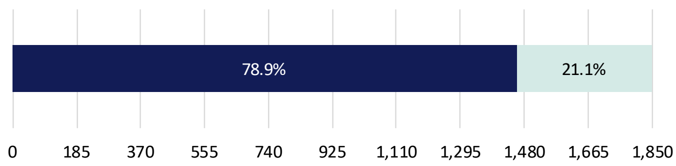
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

Holdings (in EURm)

	PEPP
Aug-21	1,337,240
Sep-21	1,412,291
Δ	+75,051

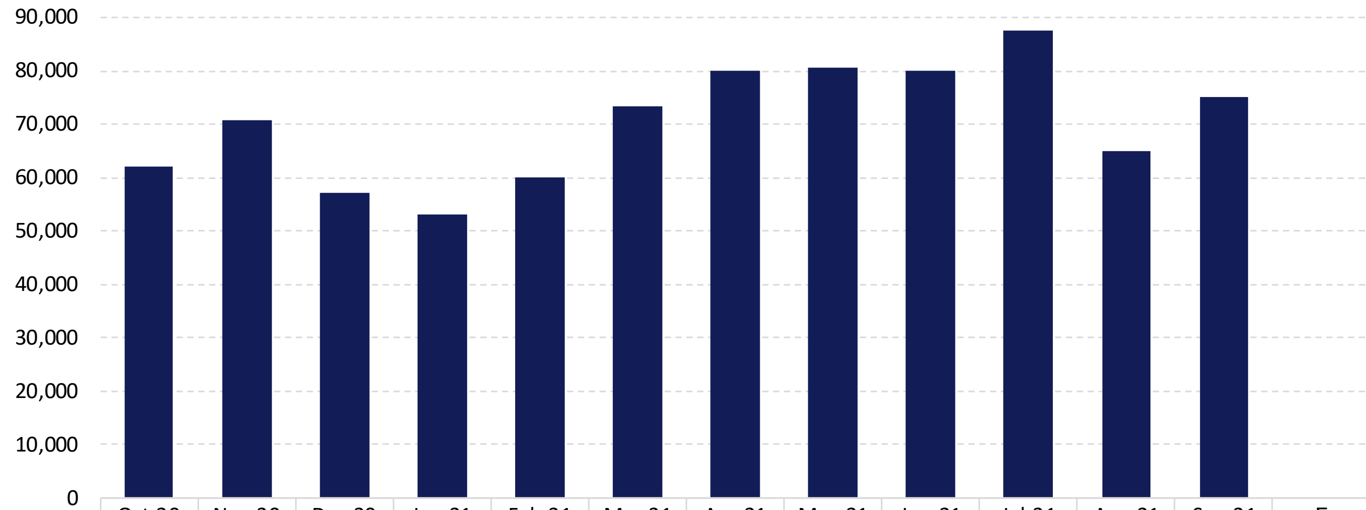
Volume already invested (in EURbn)



Estimated portfolio development

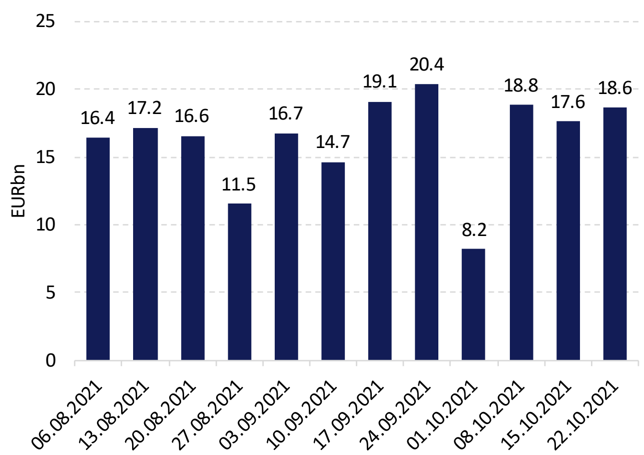
Assumed pace of purchases	Weekly net purchase volume	PEPP limit hit in …
Average weekly net purchase volume so far	EUR 17.8bn	22 weeks (25.03.2022)

Monthly net purchases (in EURm)

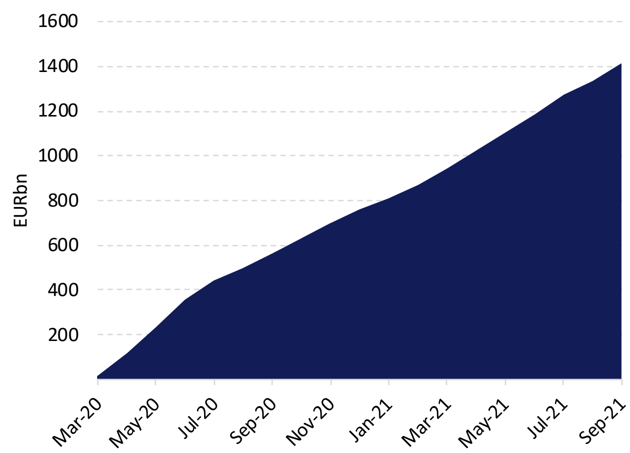


	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	∑
■ PEPP	61,985	70,835	57,163	53,046	59,914	73,521	80,118	80,700	80,168	87,577	65,050	75,051	845,128

Weekly purchases



Development of PEPP volume

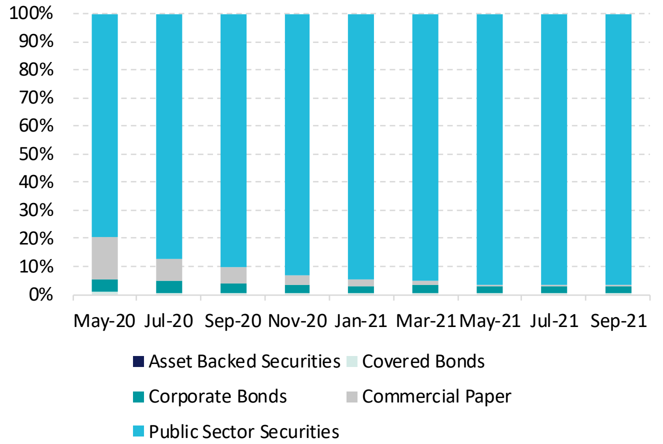


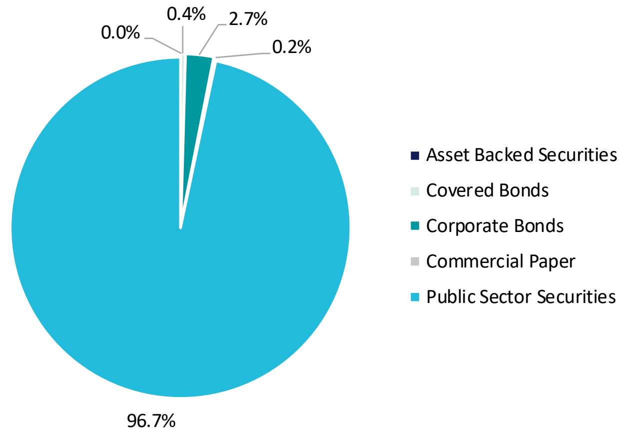
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Holdings under the PEPP (in EURm)

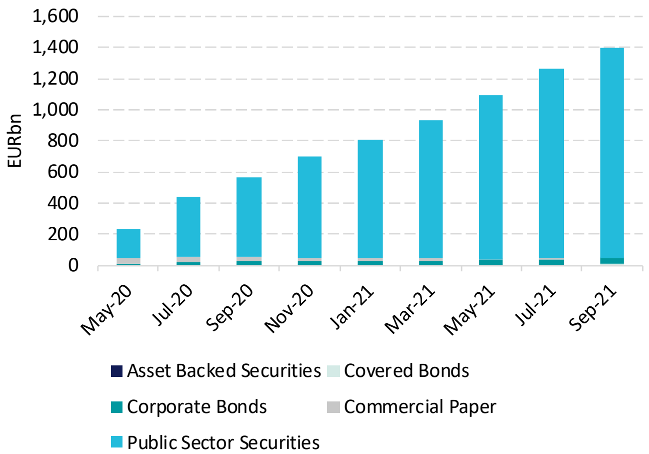
	Asset-backed Securities	Covered Bonds	Corporate Bonds	Commercial Paper	Public Sector Securities	PEPP
Jul-21	0	5,379	33,684	3,861	1,220,424	1,263,348
Sep-21	0	6,079	37,139	3,314	1,353,076	1,399,609
Δ	0	+707	+3,489	-545	+136,451	+140,101

Portfolio structure

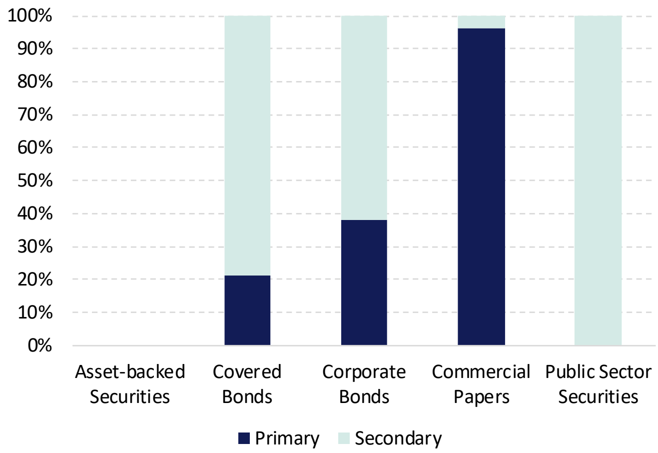




Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

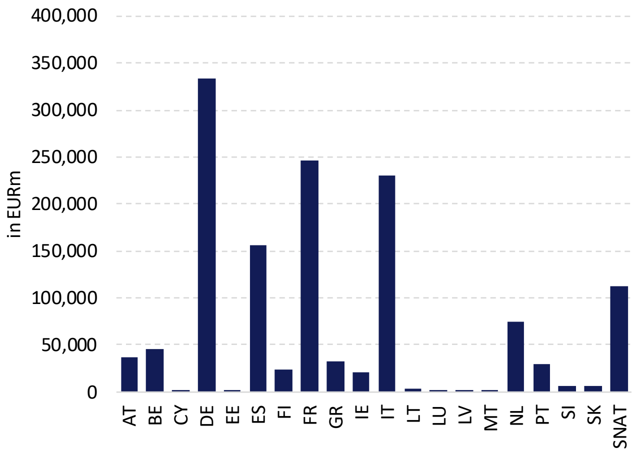
Sep-21	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,298	4,781	14,113	23,026	3,191	123
Share	0.0%	0.0%	21.4%	78.7%	38.0%	62.0%	96.3%	3.7%

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

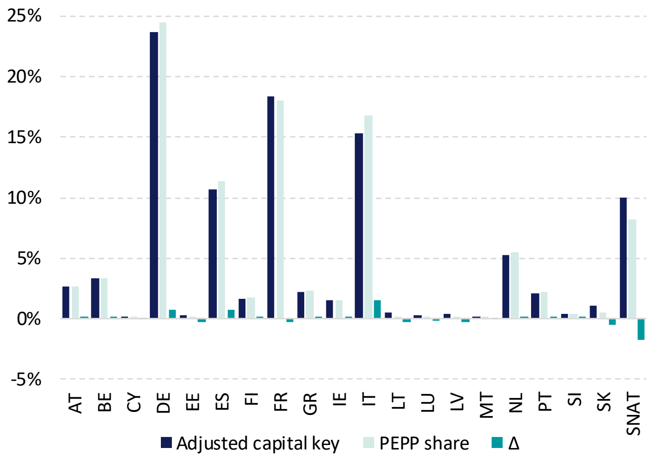
Breakdown of public sector securities under the PEPP

Jurisdiction	Holdings (in EURm)	Adj. distribution key[1]	PEPP share	Deviations from the adj. distribution key[2]	ø time to maturity (in years)	Market average[3] (in years)	Difference (in years)
AT	36,922	2.6%	2.7%	0.1%	8.5	7.2	1.4
BE	46,226	3.3%	3.4%	0.1%	6.7	9.1	-2.4
CY	2,308	0.2%	0.2%	0.0%	9.0	8.0	1.0
DE	334,500	23.7%	24.5%	0.8%	6.2	6.8	-0.6
EE	256	0.3%	0.0%	-0.2%	8.7	7.0	1.7
ES	155,773	10.7%	11.4%	0.7%	8.1	7.5	0.6
FI	23,292	1.7%	1.7%	0.1%	7.4	7.6	-0.2
FR	246,513	18.4%	18.1%	-0.3%	8.4	7.6	0.8
GR	32,185	2.2%	2.4%	0.1%	9.2	9.7	-0.5
IE	21,486	1.5%	1.6%	0.0%	8.8	9.2	-0.4
IT	230,234	15.3%	16.9%	1.6%	7.0	6.9	0.0
LT	2,767	0.5%	0.2%	-0.3%	11.5	10.4	1.1
LU	1,854	0.3%	0.1%	-0.2%	6.8	6.2	0.5
LV	1,532	0.4%	0.1%	-0.2%	9.3	9.3	0.0
MT	383	0.1%	0.0%	-0.1%	9.7	9.0	0.7
NL	74,352	5.3%	5.4%	0.2%	7.2	8.2	-1.1
PT	30,245	2.1%	2.2%	0.1%	7.0	7.2	-0.3
SI	6,003	0.4%	0.4%	0.0%	9.5	9.3	0.2
SK	6,892	1.0%	0.5%	-0.5%	9.1	8.2	0.9
SNAT	111,925	10.0%	8.2%	-1.8%	10.9	8.5	2.4
Total / Avg.	**1,365,650**	**100.0%**	**100.0%**	**0.0%**	**7.7**	**7.5**	**0.2**

Distribution of public sector assets by jurisdiction



Deviations from the adjusted distribution key



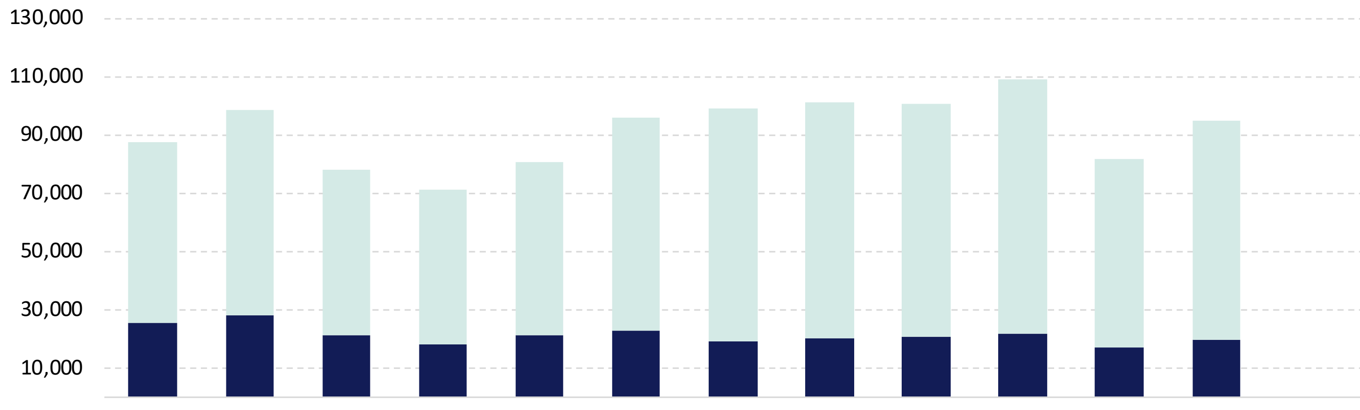
[1] Based on the ECB capital key, adjusted to include supras [2] Based on the adjusted distribution key
[3] Weighted average time to maturity of the bonds eligible for purchasing under the PEPP
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

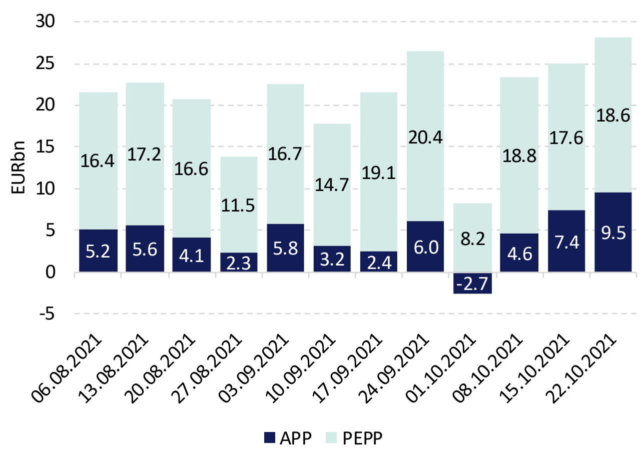
	APP	PEPP	APP & PEPP
Aug-21	3,055,363	1,337,240	4,392,603
Sep-21	3,068,307	1,412,291	4,480,598
Δ	+19,681	+75,051	+94,732

Monthly net purchases (in EURm)

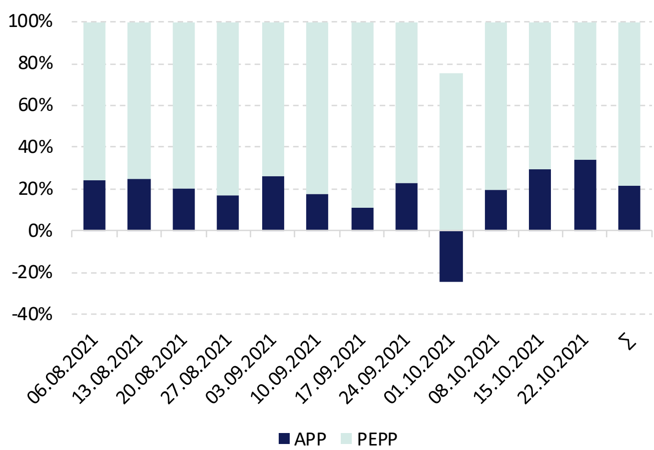


	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	∑
∑	87,334	98,555	78,092	70,892	80,829	96,082	99,036	100,841	100,808	109,174	81,799	94,732	1,098,17
PEPP	61,985	70,835	57,163	53,046	59,914	73,521	80,118	80,700	80,168	87,577	65,050	75,051	845,128
APP	25,349	27,720	20,929	17,846	20,915	22,561	18,918	20,141	20,640	21,597	16,749	19,681	253,046

Weekly purchases



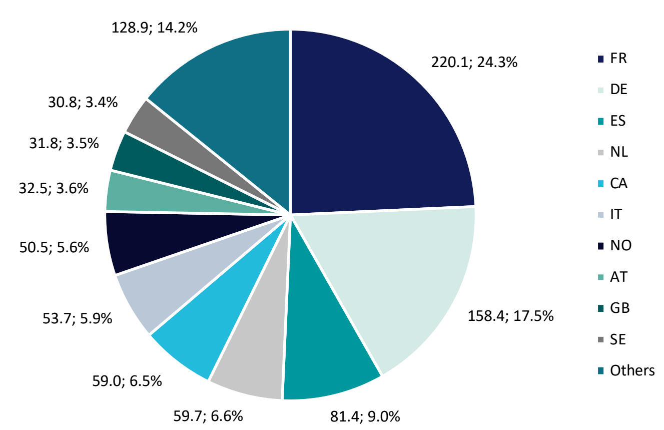
Distribution of weekly purchases



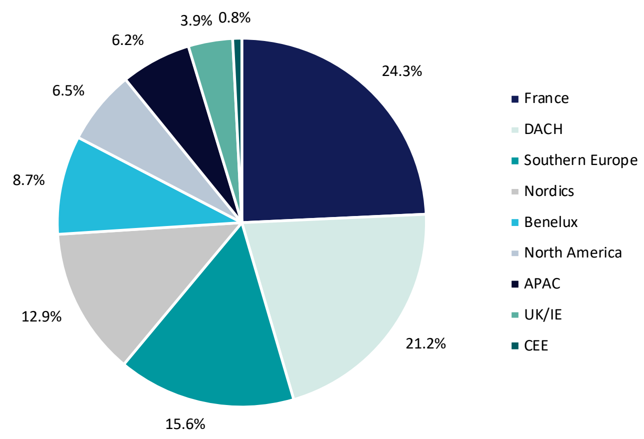
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures
Covered Bonds

EUR benchmark volume by country (in EURbn)



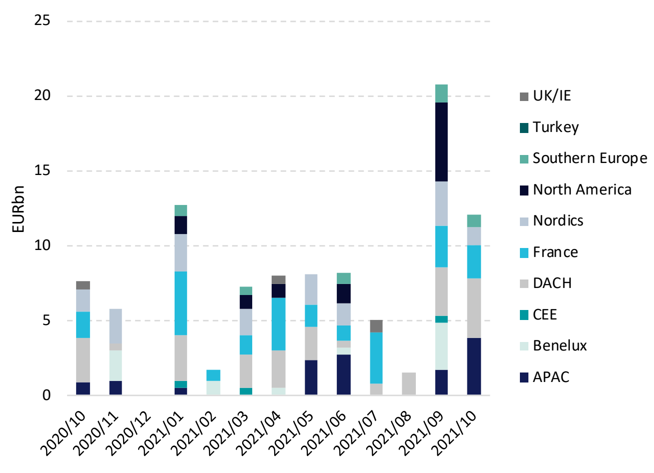
EUR benchmark volume by region (in EURbn)



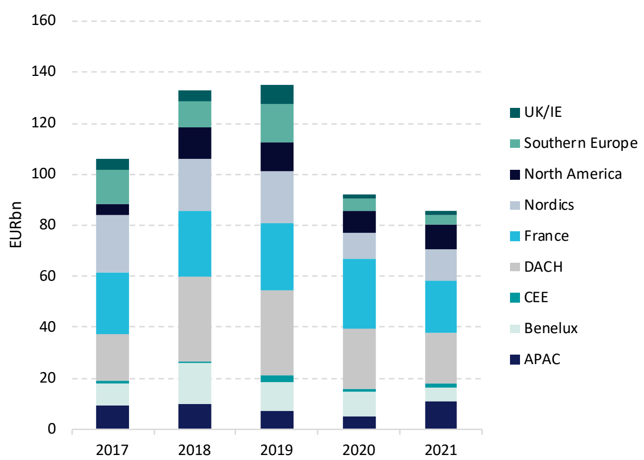
Top-10 jurisdictions

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	220.1	209	10	0.94	10.1	5.6	0.94
2	DE	158.4	235	16	0.61	8.4	4.6	0.42
3	ES	81.4	66	4	1.14	11.5	3.7	1.79
4	NL	59.7	62	0	0.91	11.7	7.6	0.82
5	CA	59.0	52	0	1.11	6.1	3.2	0.23
6	IT	53.7	63	1	0.82	9.0	4.0	1.35
7	NO	50.5	58	9	0.87	7.3	4.0	0.38
8	AT	32.5	60	2	0.54	9.9	6.3	0.60
9	GB	31.8	38	0	0.86	8.4	3.5	0.92
10	SE	30.8	37	0	0.83	7.6	3.6	0.42

EUR benchmark issue volume by month

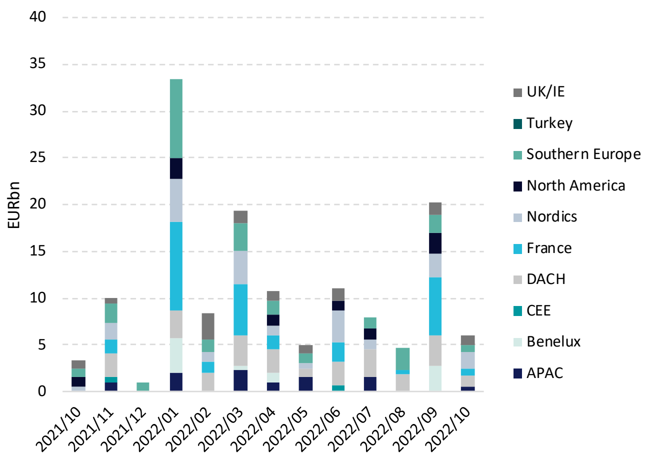


EUR benchmark issue volume by year

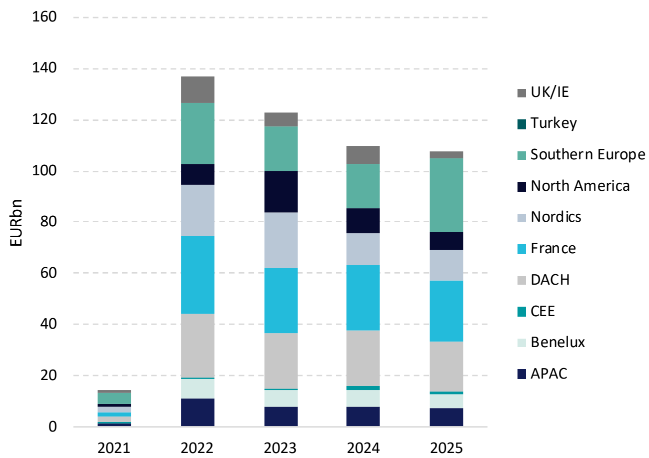


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

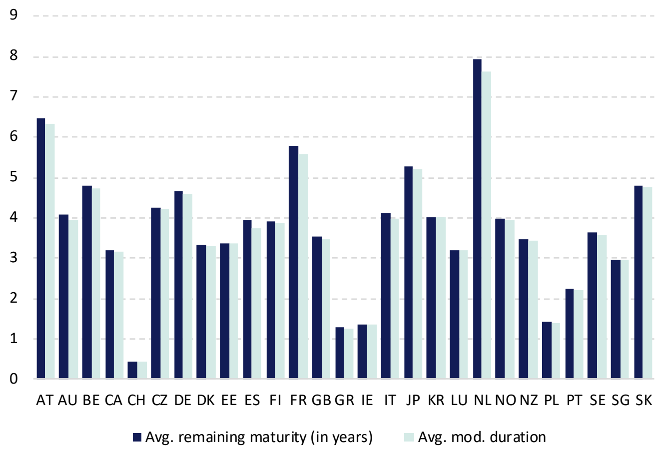
EUR benchmark maturities by month



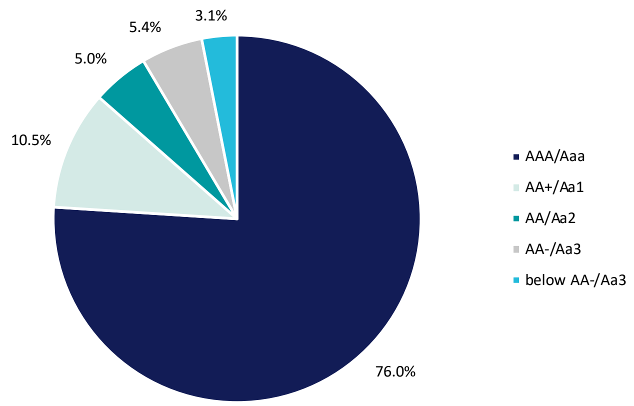
EUR benchmark maturities by year



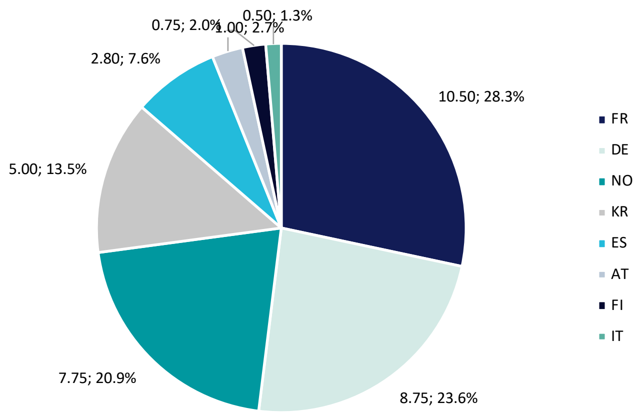
Modified duration and time to maturity by country



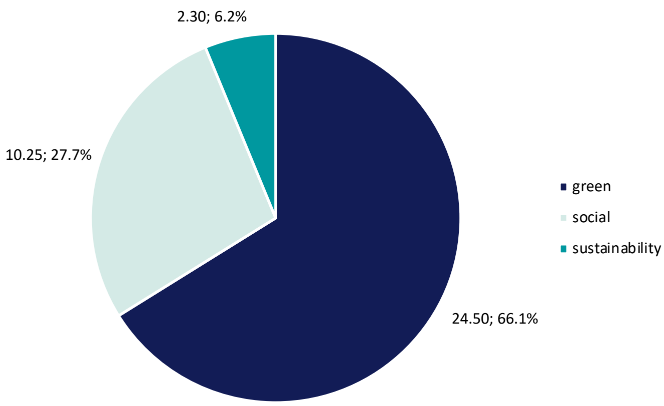
Rating distribution (volume weighted)



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



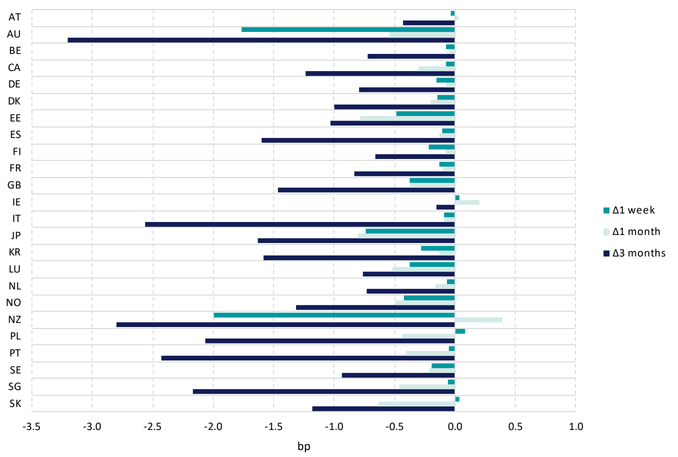
EUR benchmark volume (ESG) by type (in EURbn)



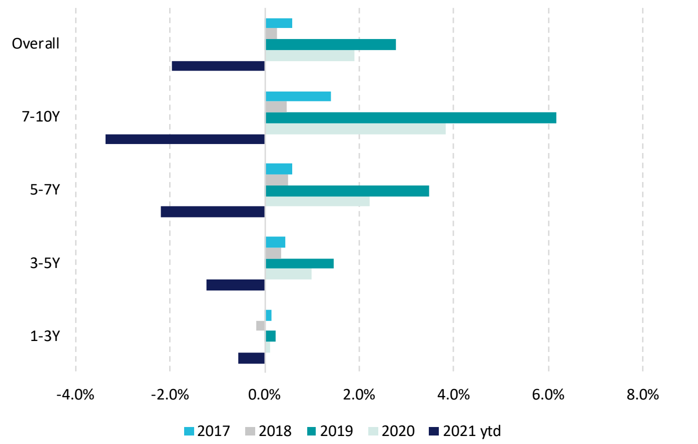
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

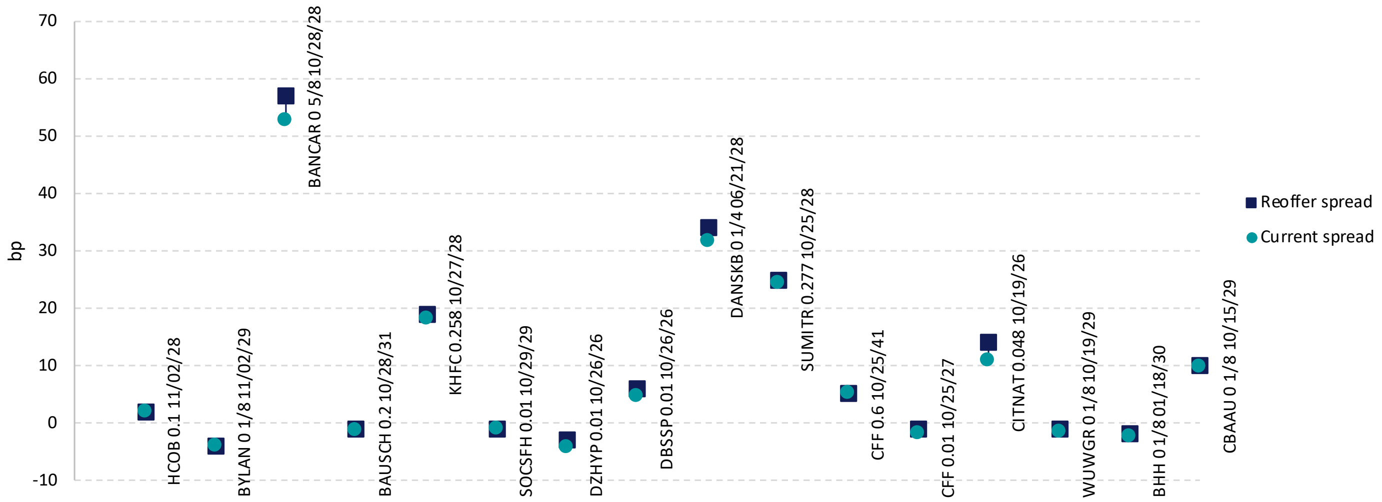
Spread development by country



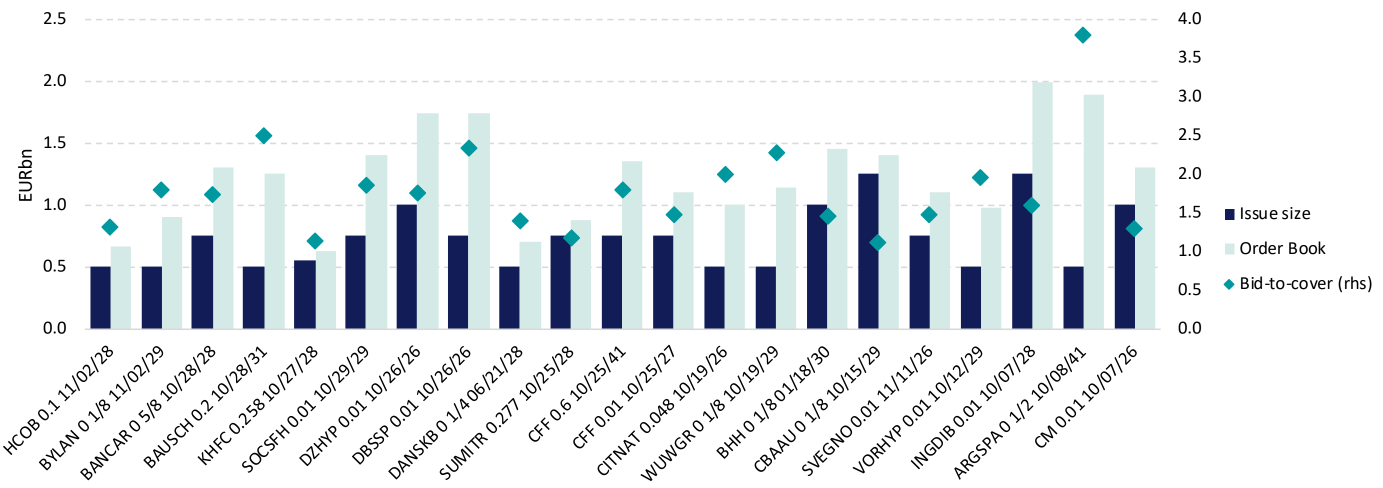
Covered bond performance (Total return)



Spread development (last 15 issues)



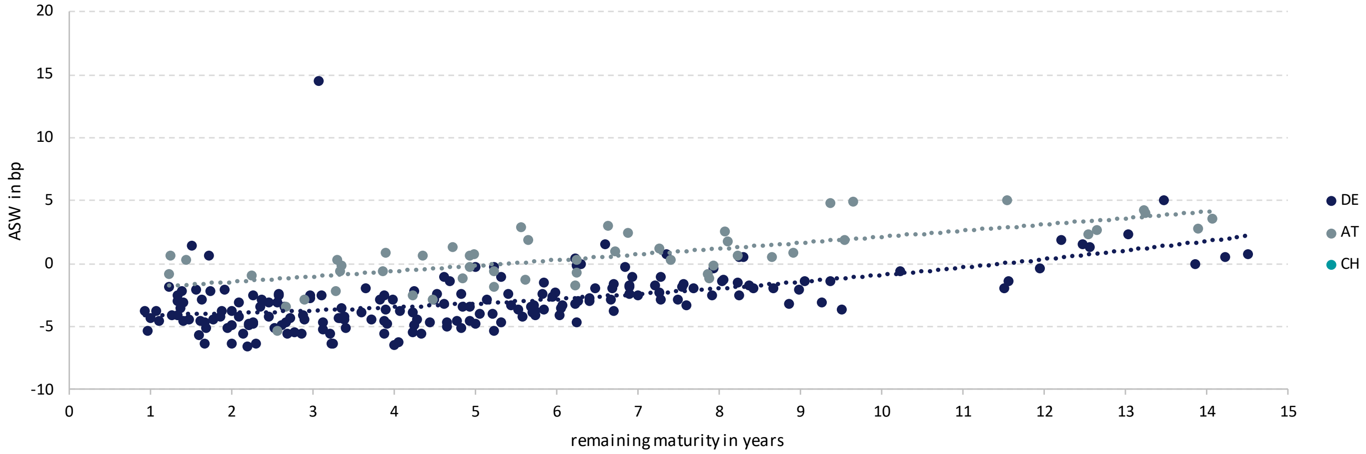
Order books (last 15 issues)



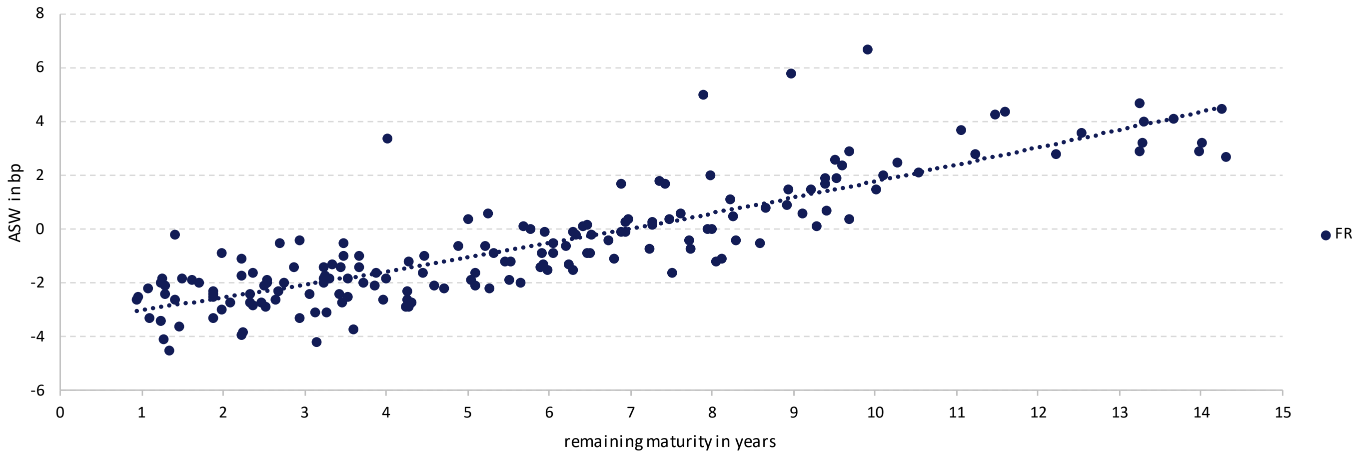
Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

Spread overview[1]

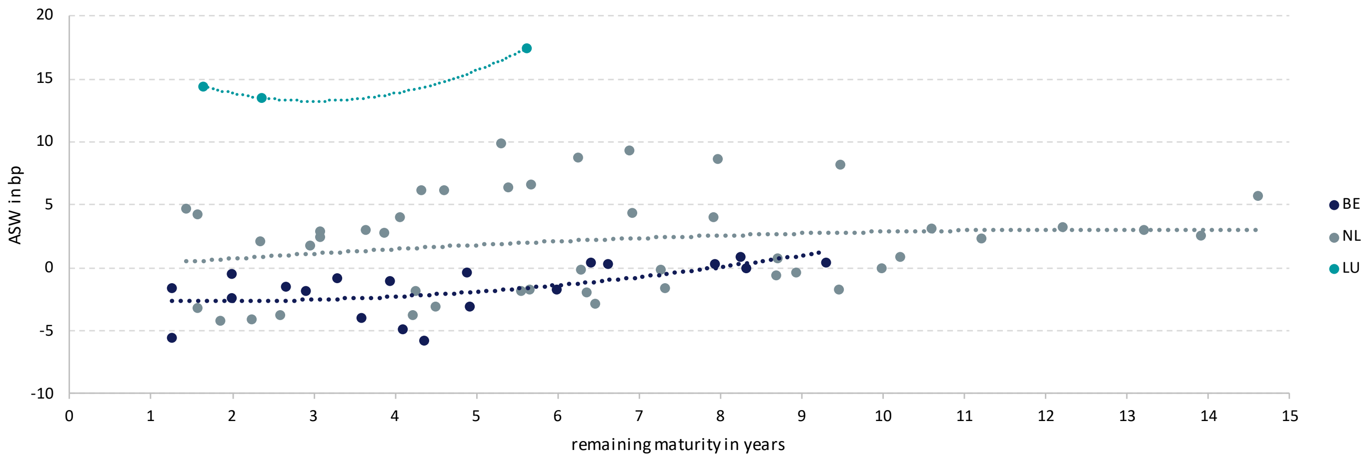
DACH



France

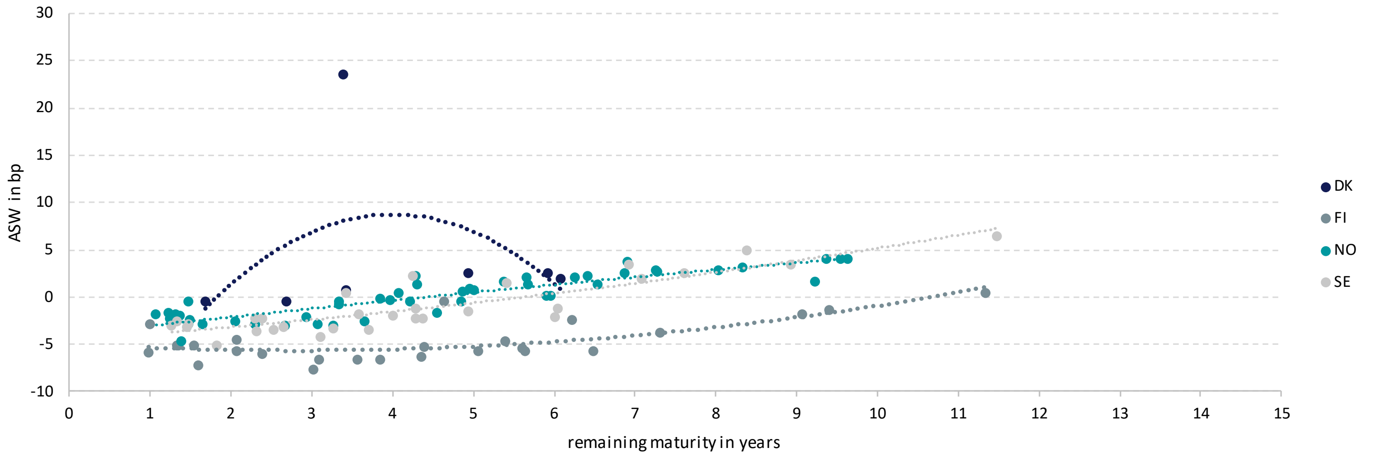


Benelux

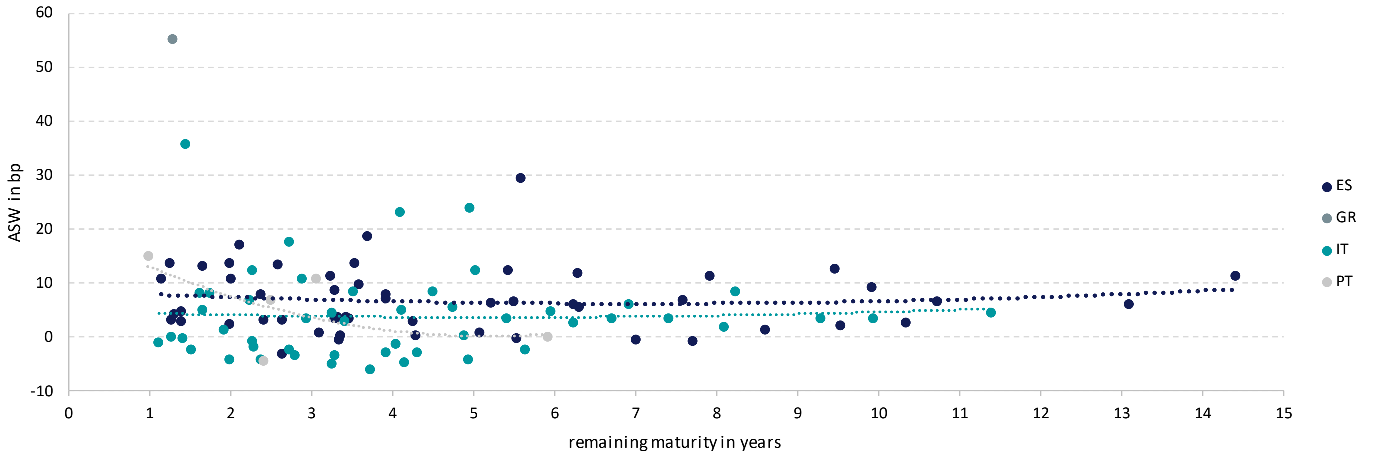


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research [1]Time to maturity 1 ≤ y ≤ 15

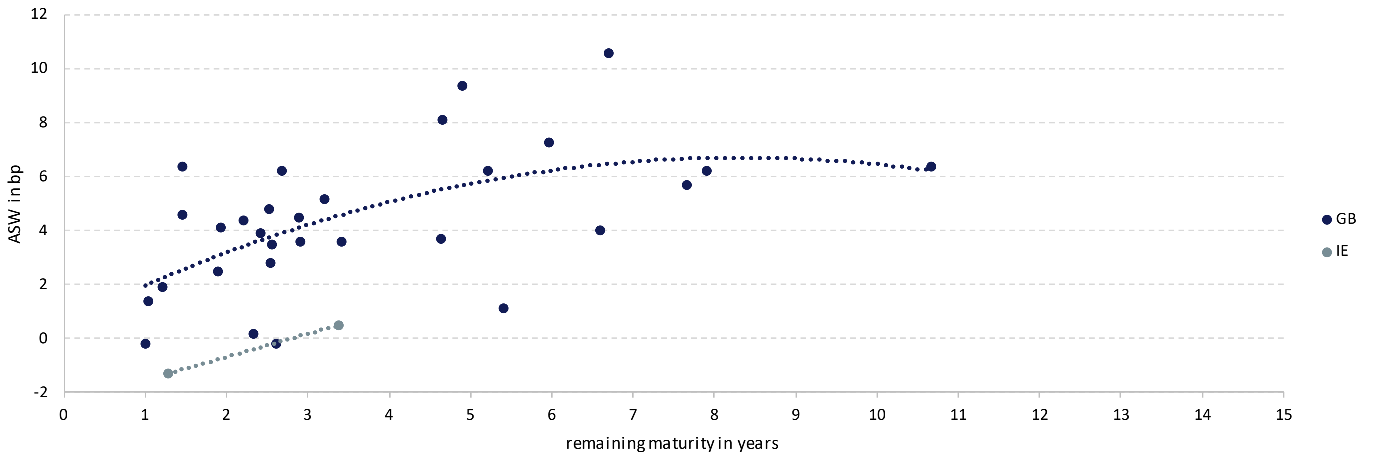
Nordics



Southern Europe

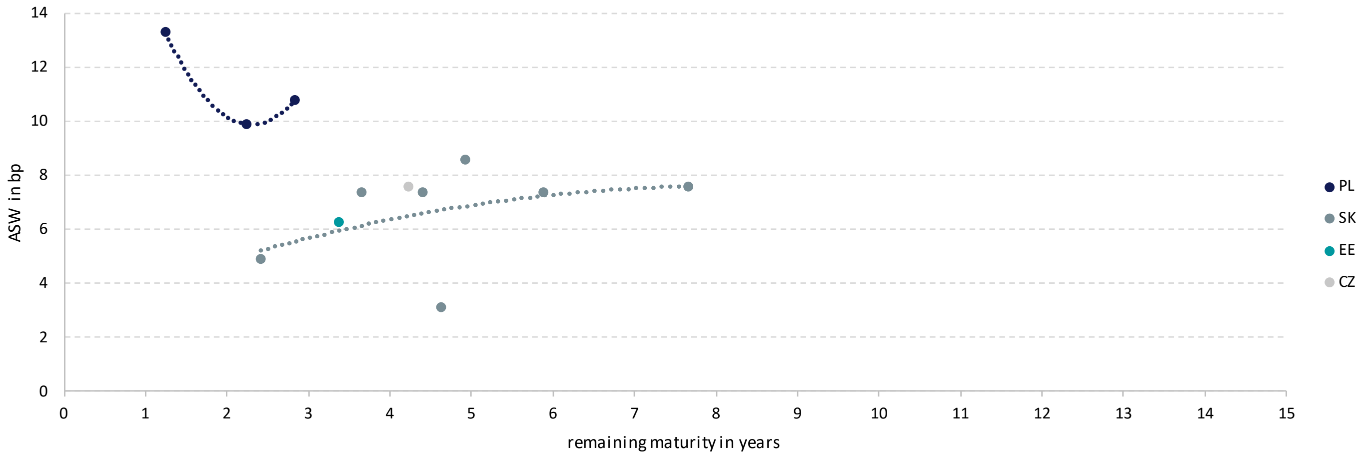


UK/IE

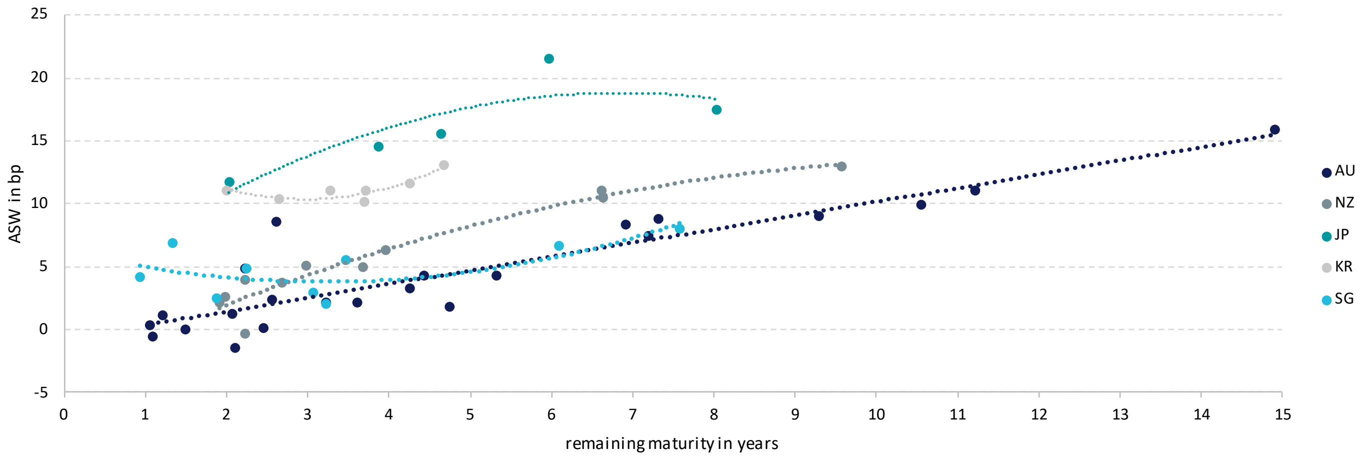


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

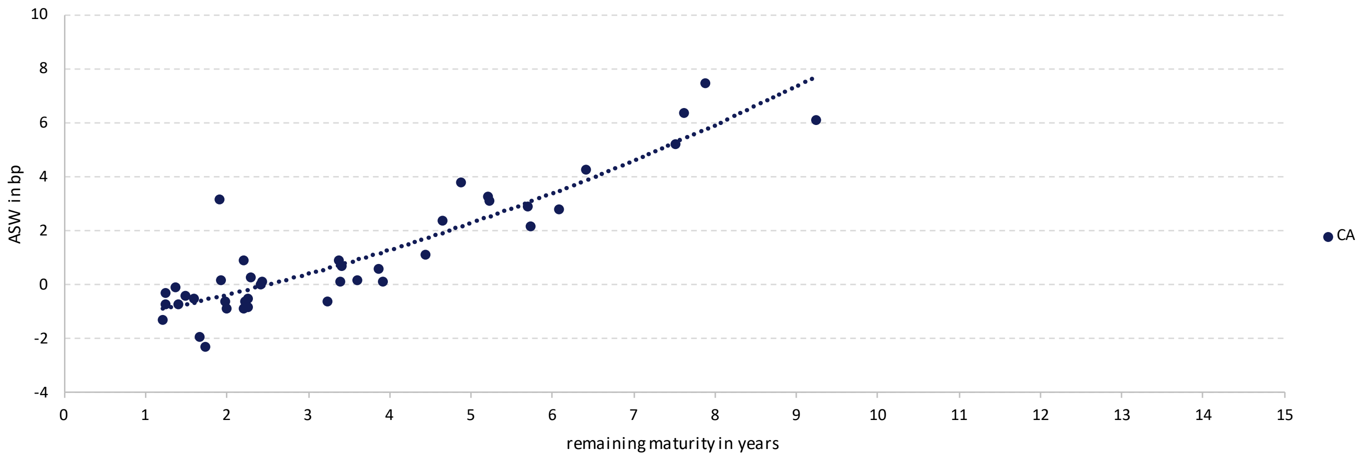
CEE



APAC



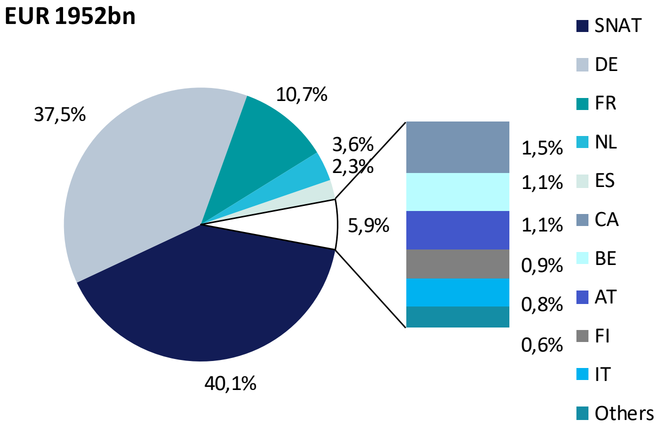
North America



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

Charts & Figures
SSA/Public Issuers

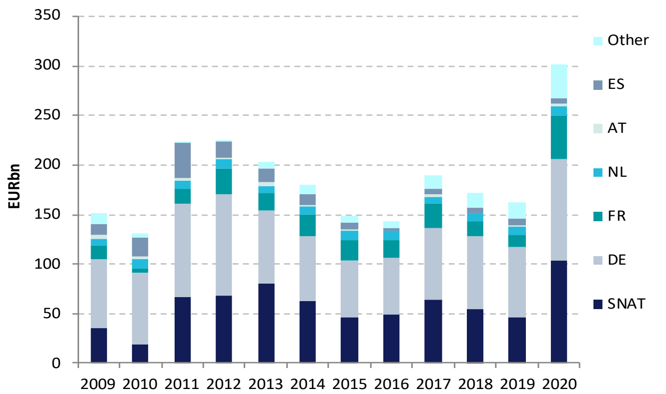
Outstanding volume (bmk)



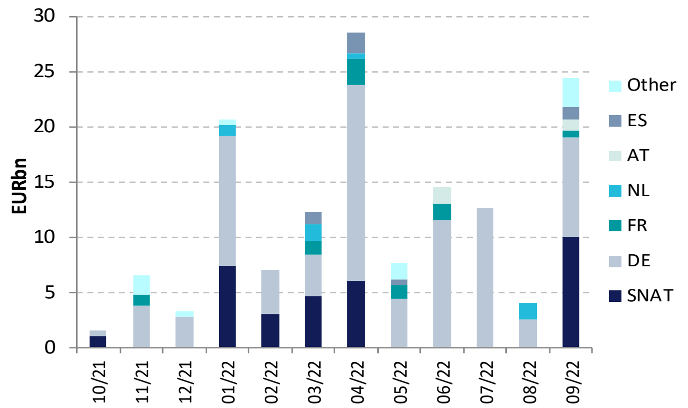
Top 10 countries (bmk)

Country	Vol. (€bn)	No. of bonds	ØVol. (€bn)	Vol. weight. ØMod. Dur.
SNAT	782,5	194	4,0	8,7
DE	731,4	570	1,3	6,8
FR	208,4	147	1,4	5,6
NL	69,4	67	1,0	6,6
ES	45,3	56	0,8	5,2
CA	28,5	20	1,4	5,4
BE	21,7	25	0,9	14,0
AT	21,2	23	0,9	5,1
FI	16,8	21	0,8	6,0
IT	15,0	19	0,8	5,8

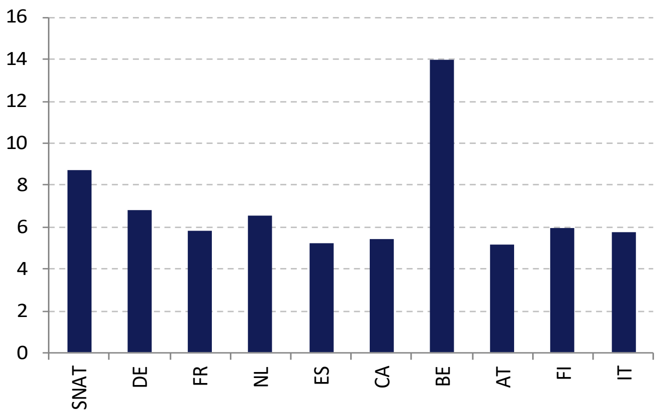
Issue volume by year (bmk)



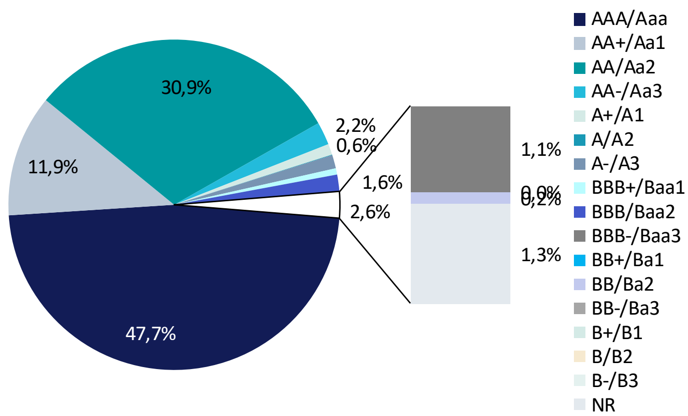
Maturities next 12 months (bmk)



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

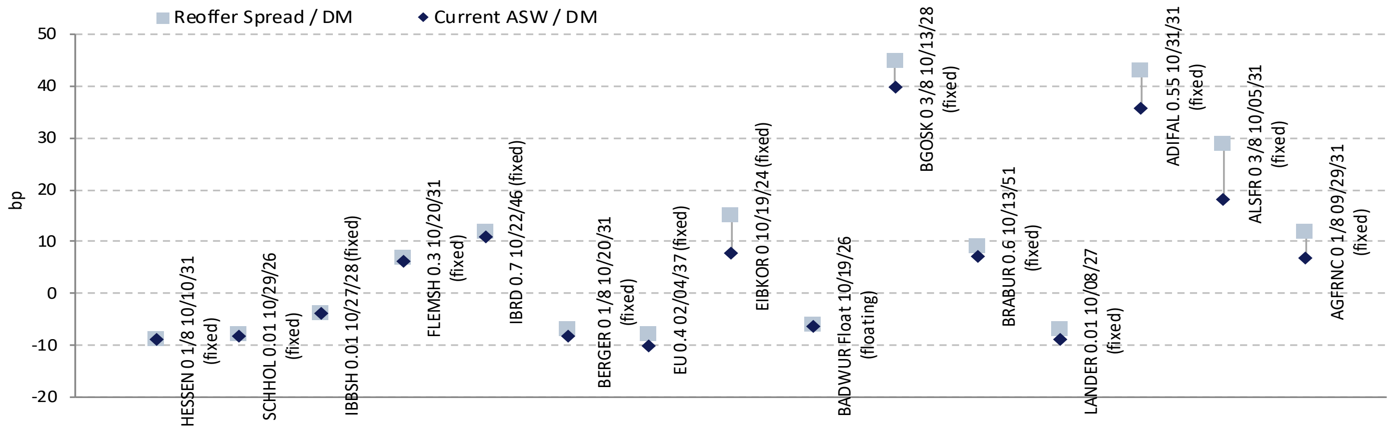


Rating distribution (vol. weighted)

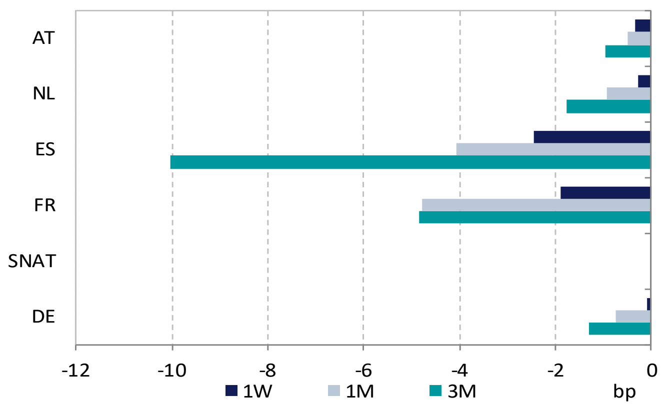


Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

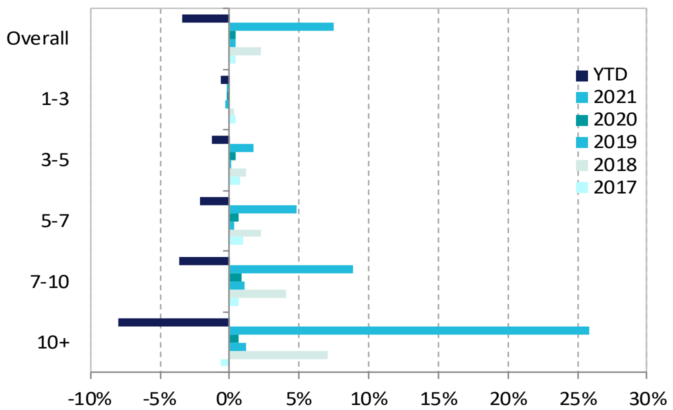
Spread development (last 15 issues)



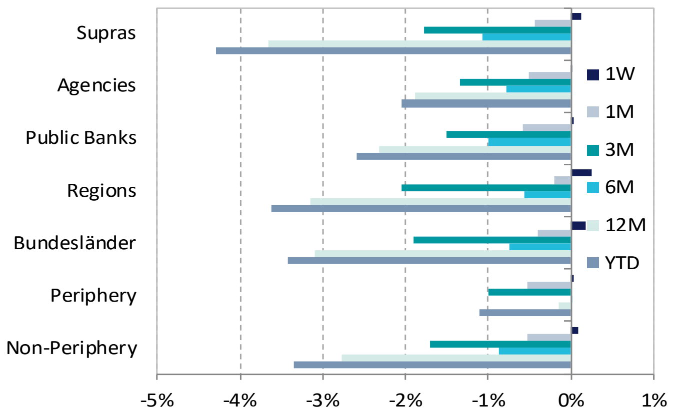
Spread development by country



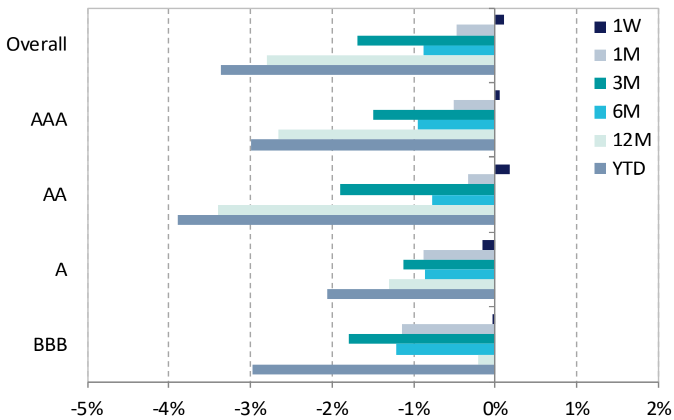
Performance (total return)



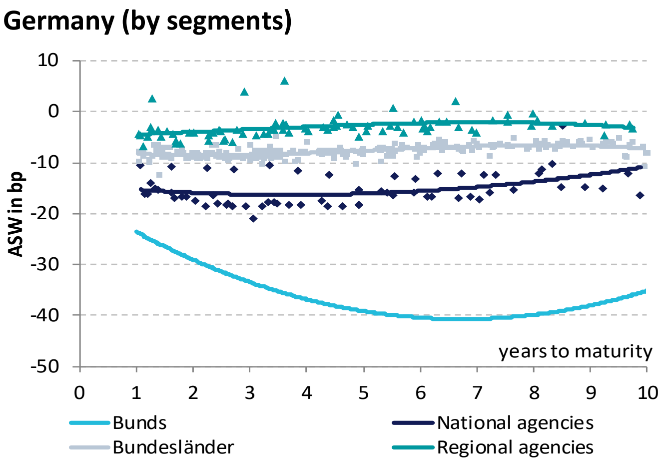
Performance (total return) by regions

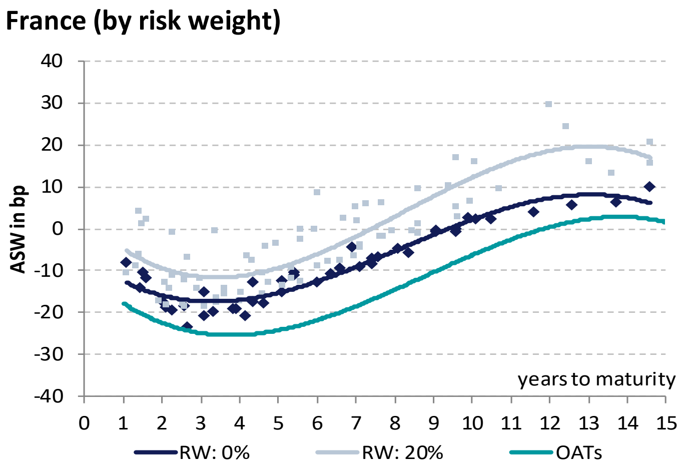


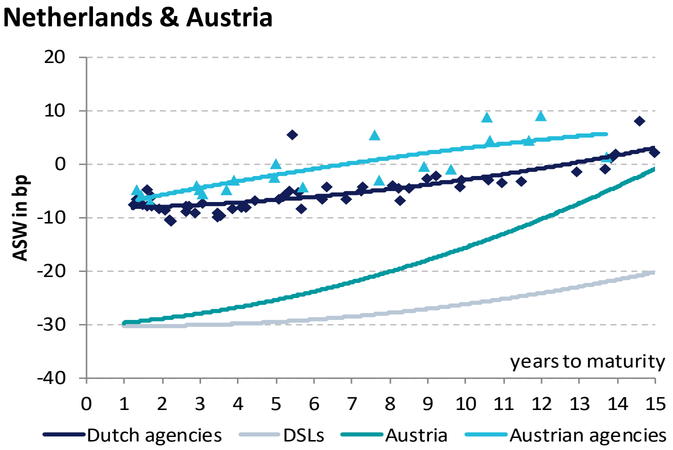
Performance (total return) by rating

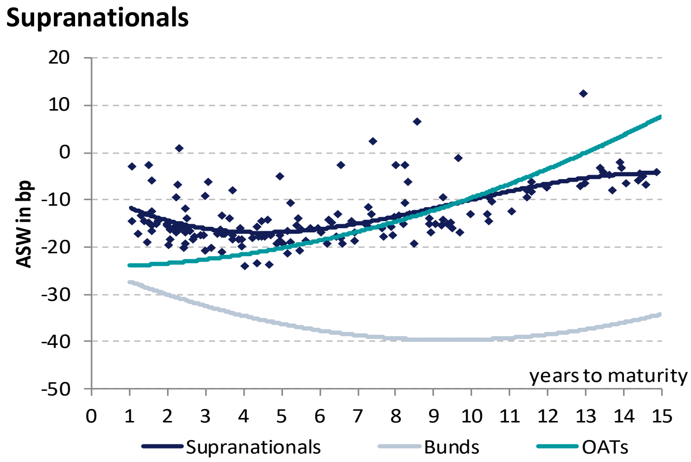


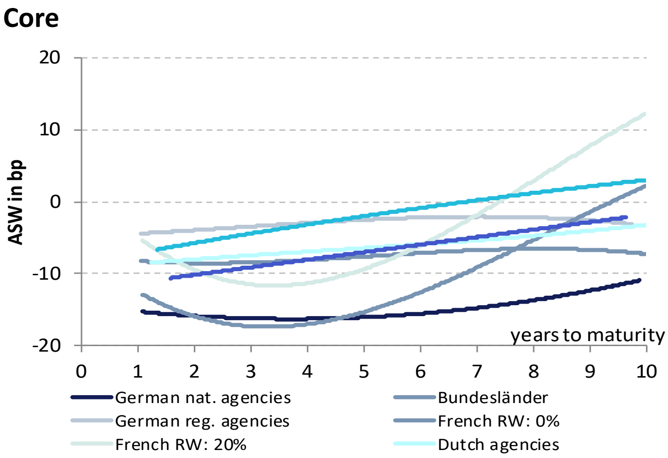
Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

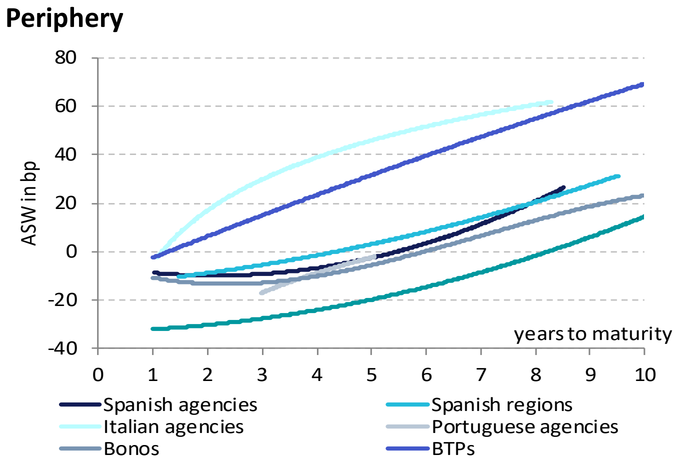












Source: Bloomberg, NORD/LB Markets Strategy & Floor Research

NORD/LB

Appendix
Overview of latest Covered Bond & SSA View editions

Publication	Topics
32/2021 ♦ 20 October	▪ ECB preview: interim step before a landmark December? ▪ ECBC publishes annual statistics for 2020 ▪ Covered bonds in the context of the ECB collateral framework
31/2021 ♦ 22 September	▪ Covered bond primary market: a September to remember ▪ Announcement: Issuer Guide German Bundeslaender 2021
30/2021 ♦ 15 September	▪ Transparency requirements § 28 PfandBG Q2 2021 ▪ Fitch: rating approach covered bonds ▪ Update: Joint Laender (Ticker: LANDER)
29/2021 ♦ 08 September	▪ New dynamic on the Canadian covered bond market: Two debut EUR issuers ▪ Development of the German property market ▪ NGEU in the starting blocks: 3, 2, 1 … EU auctions!
28/2021 ♦ 01 September	▪ ECB preview: focus on the pace of PEPP purchases? ▪ France – largest jurisdiction in EUR benchmark bond segment: a covered bond overview of the “Grande Nation”
27/2021 ♦ 28 July	▪ NORD/LB Issuer Guide Covered Bonds 2021: A constant during turbulent times ▪ Beyond Bundeslaender: Madeira and the Azores
26/2021 ♦ 21 July	▪ Summer break just around the corner – a glance at covered bonds in USD and GBP
25/2021 ♦ 14 July	▪ New ECB strategy – communication remains the be-all and end-all ▪ ECB preview: the first meeting under the “new” regime
24/2021 ♦ 07 July	▪ Covered Bonds: Review of H1 and outlook for H2 2021 ▪ Half-time report 2021 – how will the SSA segment fare in the second half?
23/2021 ♦ 30 June	▪ Return of the Australian covered bond market: National Australia Bank issues first EUR benchmark since 201)
22/2021 ♦ 23 June	▪ TLTRO III.8 neither really strong nor extraordinarily weak: implications for the covered bond market ▪ Realignment of the German real property tax
21/2021 ♦ 16 June	▪ ICMA Green and Social Bond Principles: 2021 update ▪ The covered bond universe of Moody’s: an overview Covered bonds vs. senior unsecured bonds
20/2021 ♦ 09 June	▪ PEPP reporting: increased pace of purchases in Q2 ▪ Covered bonds vs. senior unsecured bonds
19/2021 ♦ 02 June	▪ ECB preview: Spectre of inflation fuelling tapering thoughts ▪ FX covered bonds: Same symptomatology as EUR benchmarks?
18/2021 ♦ 19 May	▪ United Overseas Bank reinvigorates the market in Singapore ▪ Transparency requirements §28 PfandBG Q1 2021
17/2021 ♦ 12 May	▪ ASB Finance opens primary market “Down Under”: Our outlook for the rest of the year ▪ Development of the German property market
16/2021 ♦ 05 May	▪ Austria implements requirements of the covered bond directive and harmonises existing legal framework ▪ EIB goes Blockchain

Appendix
Publication overview

Covered Bonds:

Issuer Guide Covered Bonds 2021

Risk weights and LCR levels of covered bonds

Transparency requirements §28 PfandBG

Transparenzvorschrift §28 PfandBG Sparkassen (German only)

SSA/Public Issuers:

Issuer Guide – Supranationals & Agencies 2019

Issuer Guide – Canadian Provinces & Territories 2020

Issuer Guide – German Bundeslaender 2021

Issuer Guide – Down Under 2019

Fixed Income:

ESG update

Analysis of ESG reporting

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

ECB launches corona pandemic emergency

ECB responds to corona risks

Appendix
Contacts at NORD/LB

Markets Strategy & Floor Research

Melanie Kiene
Banks
+49 511 361-4108
+49 172 169 2633
melanie.kiene@nordlb.de

Dr Norman Rudschuck
SSA/Public Issuers
+49 511 361-6627
+49 152 090 24094
norman.rudschuck@nordlb.de

Dr Frederik Kunze
Covered Bonds
+49 511 361-5380
+49 172 354 8977
frederik.kunze@nordlb.de

Sales

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

Trading

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

Origination & Syndicate

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

Sales Wholesale Customers

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

Treasury

Collat. Management/Repos	+49 511 9818-9200
Liquidity Management	+49 511 9818-9620 +49 511 9818-9650

Disclaimer

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

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

The present information does not constitute financial analysis within the meaning of Art. 36 (1) of the Delegate Regulation (EU) 2017/565, but rather represents a marketing communication for your general information **within the meaning of Art. 36 (2) of this Regulation. Against this background, NORD/LB expressly points out that this information has not been prepared in accordance with legal provisions promoting the independence of investment research and is not subject to any prohibition of trading following the dissemination of investment research.** This information also constitutes an investment recommendation or investment strategy recommendation within the meaning of Market Abuse Regulation (EU) No. 596/2014 and complies with the applicable provisions of this regulation and Delegated Regulation (EU) 2016/958 as well as the Securities Trading Act (see the supplementary details at the end of this information).

This information has been prepared by the Markets Strategy & Floor Research division, which is organisationally assigned to the Markets trading division within NORD/LB and which offers comprehensive securities services to the clients of the bank. Information may therefore be exchanged between the Floor Research and Trading divisions which may influence the content of this information. Against this background, the possibility cannot be ruled out that NORD/LB has its own holdings in the financial instruments described herein or in the issuers described herein and participates in the issue of such financial instruments as well as providing other services to such issuers or has other financial interests in these financial instruments or issuers. It also cannot be ruled out that the remuneration of the employees of the Markets Strategy & Floor Research division is indirectly linked to the overall performance of the Markets division, however, a direct linking of remuneration to transactions in investment services or trading fees is prohibited. Against this background, there are potential conflicts of interest that could fundamentally influence the objectivity of the recommendations contained herein.
NORD/LB has, however, taken extensive precautions to deal with potential conflicts of interest and to avoid them:

Arrangements for dealing with and avoiding conflicts of interest and for the confidential treatment of sensitive client and business data:
Business areas that may have regular access to sensitive and confidential information are classified as confidentiality areas by the Compliance Office and separated from other areas in terms of function, location and technical data processing measures. The trading division (Markets) is classified as such a confidentiality area. The exchange of information between individual confidentiality areas requires the approval of the Compliance Office.
The forwarding of confidential information which may have an impact on securities' prices is monitored by the NORD/LB Compliance Office, which is independent of the trading, business and settlement departments. The Compliance Office can issue any trading prohibitions and restrictions which may be necessary to ensure that information which may have an influence on securities' prices is not misused and to prevent confidential information from being passed on to areas which may only use publicly accessible information. Employees of the Markets Strategy & Floor Research unit are obliged to inform the Compliance Office of all transactions (including external) that they carry out for their own account or on behalf of a third party or in the interests of a third party. This will enable the Compliance Office to identify any unauthorised transactions by these employees.
Further information on this can be found in our Conflict of Interest Policy, which is available on request from the NORD/LB Compliance Office.

Supplementary important information:
This information and the details contained herein have been prepared and are provided for information purposes only. It is not intended to be an incentive for investment activities. It is provided for the personal information of the Recipient with the express understanding, acknowledged by the Recipient, that it does not constitute a direct or indirect offer, an individual recommendation, solicitation to buy, hold or sell, an invitation to subscribe or acquire any securities or other financial instruments, nor any measure by which financial instruments might be offered or sold.

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

Past performance is not a reliable indicator of future performance. Exchange rates, price fluctuations of the financial instruments and similar factors may have a negative impact on the value and price of and return on the financial instruments referred to herein or any instruments linked thereto. Fees and commissions apply in relation to securities (purchase, sell, custody), which reduce the return on investment. An evaluation made on the basis of the historical performance of any security does not necessarily give an indication of its future performance.

The present information neither constitutes any investment, legal, accounting or tax advice nor any assurance that an investment or strategy is suitable or appropriate in the light of the Recipient's individual circumstances, and nothing in this information constitutes a personal recommendation to the Recipient thereof. The securities or other financial instruments referred to herein may not be suitable for the Recipient's personal investment strategies and objectives, financial situation or individual needs.

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

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

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

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

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

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

By making use of this information, the Recipient shall accept the terms and conditions outlined above.

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

Additional information for Recipients in Australia

NORD/LB IS NOT A BANK OR DEPOSIT TAKING INSTITUTION AUTHORISED UNDER THE 1959 BANKING ACT OF AUSTRALIA. IT IS NOT SUPERVISED BY THE AUSTRALIAN PRUDENTIAL REGULATION AUTHORITY.

NORD/LB does not provide personal advice with this information and does not take into account the objectives, financial situation or needs of the Recipient (other than for the purpose of combating money laundering).

Additional information for Recipients in Austria

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

Additional information for Recipients in Belgium

Evaluations of individual financial instruments on the basis of past performance are not necessarily indicative of future results. It should be noted that the reported figures relate to past years.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Additional information for Recipients in Singapore
This information is directed only at accredited investors or institutional investors under the Securities and Futures Act in Singapore. This information is intended for general distribution only. It does not constitute investment advice and does not take into account the specific investment objectives, financial situation or particular needs of the Recipient. It is recommended that advice be obtained from a financial adviser regarding the suitability of the investment product in light of the specific investment objectives, financial situation and special needs of the Recipient before agreeing to purchase the investment product.

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

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

Additional information
Time of going to press: 27 October 2021 08:46h (CET)

Disclosure of possible conflicts of interest at NORD/LB in accordance with Section 85 (1) of the German Securities Trading Act (WpHG) in conjunction with Article 20 of the Market Abuse Regulation (EU) No. 596/2014 and Articles 5 and 6 of Regulation (EU) 2016/958.
None

Sources and price details
For the preparation of investment recommendations, we use issuer-specific financial data providers, our own estimates, company information and publicly available media. Unless otherwise stated in the information, price information refers to the closing price of the previous day. Fees and commissions are incurred in connection with securities (purchase, sale, custody), which reduce the return on the investment.

Basis of valuation and frequency of updates
For the preparation of investment recommendations, we use company-specific methods from fundamental securities' analysis, quantitative / statistical methods and models as well as from technical information processes. It should be noted that the results of the information are snapshots and past performance is not a reliable indicator of future returns. The basis of valuation may change at any time and in an unforeseeable manner, which may lead to divergent assessments. The recommendation horizon is 6 to 12 months. The above information is prepared on a weekly basis. Recipients have no right to publish updated information. For more detailed information on our assessment bases, check under: www.nordlb-pib.de/Bewertungsverfahren.

Recommendation system
Positive: Positive expectations for the issuer, a bond type or a bond placed by the issuer.
Neutral: Neutral expectations for the issuer, a bond type or a bond of the issuer.
Negative: Negative expectations for the issuer, a type of bond or a bond placed by the issuer.
Relative Value (RV): Relative recommendation to a market segment, an individual issuer or a range of maturities.

Breakdown of recommendations (12 months)

Positive:	37%
Neutral:	55%
Negative:	8%

Recommendation record (12 months)
For an overview of our overall pension recommendations for the past 12 months, please visit www.nordlb-pib.de/empfehlungsuebersicht_renten. The password is "renten/Liste3".

Issuer / security	Date	Recommendation	Bond type	Cause