

Covered Bond & SSA View

NORD/LB Markets Strategy & Floor Research

Agenda

Market overview	
Covered Bonds	3
SSA/Public Issuers	5
Benchmark deals outside the euro: momentum has returned!	6
Transparency regulations under Section 28 of the Pfandbriefgesetz (PfandBG - German Pfandbrief Act) Q3 2021	9
Beyond Bundeslaender: Auvergne-Rhône-Alpes Region (ARA)	12
ECB tracker	
Asset Purchase Programme (APP)	15
Pandemic Emergency Purchase Programme (PEPP)	20
Aggregated purchase activity under APP and PEPP	23
Charts & Figures	
Covered Bonds	24
Overview of latest Covered Bond & SSA View editions	30
Publication overview	31
Contacts at NORD/LB	32

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

Primary market continues: successful activity from Finland, France, and the Netherlands

Compared to other segments in the rate product universe, the covered bond market is admittedly certainly not one of the most dynamic. Nevertheless, we regard the primary market activity from Finland, France, and the Netherlands we observed in the past five trading days as a pleasing sign of life. After all, a rather lethargic November could have been expected with respect to issuances following the strong months of September and October. Danske Mortgage Bank appeared on the market last Wednesday. The covered bond backed by residential assets under Finnish legislation started with an initial guidance in the region of ms +3bp and narrowed by five basis points to ms -2bp as part of the book-building (reoffer yield: 0.087%). The order book amounted to a respectable EUR 2.4bn. Of the allocated volume, 29% went to investors in the Nordics; followed by Germany/Austria (21%) and UK/Ireland (21%). By investor type, asset managers dominated (43%). Central Banks/OI accounted for 32% and banks for 21%. With this third bond placed out of Finland, the issue volume from this jurisdiction now totals EUR 1.75bn, which would result in a balanced net supply for 2021 – assuming no further issuances. For 2022, we expect the issue volume to amount to EUR 4.5bn with maturities of EUR 4.8bn. From France, Société Générale SFH approached investors with a green benchmark. The mortgage-backed bond intended for the financing and refinancing of green buildings is based on the Sustainable and Positive Impact Bond Framework of the SG Group and also has a soft bullet structure. The issuer's first Positive Impact Covered Bond was already placed back in 2019. The latest bond started the marketing phase in the region of ms +2bp. The reoffer spread was ms -3bp (reoffer yield: -0.115%), and it was ultimately placed at a volume of EUR 1.5bn. With this latest green covered bond from France, the ESG issue volume in the EUR benchmark segment totals EUR 39.05bn in the current year, with France accounting for the largest share with EUR 12bn. From the Netherlands, Rabobank placed its first covered bond of the year. The issuer was last active on the market on 19 November 2020 (EUR RABOBK 0.01 11/27/40; EUR 1bn; 20y). Rabobank chose a maturity of ten years for its new bond. The reoffer spread was set at ms +1bp (guidance: ms +5bp area) and the issue volume was EUR 1.5bn (reoffer yield: 0.212%). With this transaction, the issue volume of the Netherlands totals EUR 6.1bn for 2021, meaning that this jurisdiction has a very pronounced positive net supply (2021 ytd: EUR 2.8bn).

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
Rabobank	NL	23.11.	XS2416563901	10.0y	1.50bn	ms +1bp	- / Aaa / -	-
Société Générale SFH	FR	23.11	FR0014006UI2	5.0y	1.50bn	ms -3bp	AAA / Aaa / -	X
Danske Mortgage Bank	FI	17.11.	XS2412105533	5.0y	0.50bn	ms -2bp	- / Aaa / -	-

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

Moody's makes adjustments for mortgage covered bonds from Belgium and Germany

Moody's risk experts recently shared their updates regarding the valuation of German mortgage Pfandbriefe and Belgian pandbrieven. With regard to Belgian mortgage covered bonds, Moody's firstly communicated the lowered refinancing margins for bonds backed by Belgian assets and issued under Belgian law and secondly revealed an increase in the Timely Payment Indicator (TPI) from Probable to Probable-High for covered bonds backed by mortgages. According to Moody's, the amendments are based on a combination of various factors. In this context, the risk experts refer both to the fundamental importance of covered bonds in the funding of Belgian institutions and to the (imminent) implementation of the Covered Bond Directive, which is set to strengthen Belgian law. With reference to Germany, the ratings agency adjusted the assumptions on market risk in such a way that the average maturity assumptions for refinancing and interest rate risks would be reduced. Alongside the balanced maturity profiles of the mortgages in the cover pools, Moody's also established a connection to the implementation of the Covered Bond Directive and the associated amendment of the PfandBG in relation to maturity extensions. Although they should not be overestimated in their direct rating impact, we certainly see the amendments as a welcome consequence of covered bond harmonisation. Overall, the minimum standards for European covered bonds lead to a strengthening of national legislation, especially in connection with the protection of bondholders.

Italian covered bonds: Fitch identifies no rating adjustments for OBG as a result of the Covered Bond Directive being implemented

Ratings agency Fitch does not see the transposition of the European Covered Bond Directive into Italian law triggering any rating adjustments for covered bonds issued under Italian legislation (Obbligazioni Bancarie Garantite, OBG). In a recent Fitch article, this was not least put down to the fact that the prevailing contractual situation for covered bond programmes in Italy already largely included the new legal requirements. As part of its Italy Mortgage Covered Bonds Programmes – Peer Review, the agency furthermore highlighted the increasing weight of fixed-rate loans in the cover pools of Italian issuers. With regard to payment moratoriums (payment holidays), Fitch signals a certain easing. There continued to be decline in this respect in the second quarter of 2021. In addition, the imminent expiry of the equivalent measures is also associated with manageable risk for Italian OBG programmes in Italy. We share the view that the impact of the COVID-19 pandemic on the overall credit quality of covered bonds remains very much limited. After all, feared negative effects on the credit quality of issuers as well as losses in the value of cover assets have not yet been lamented. In our opinion, the end of support measures that are still in place should not adversely affect the overall situation on the covered bond market on a long-term basis.

Market overview

SSA/Public Issuers

Author: Dr Norman Rudschuck, CIIA

French regions: Auvergne-Rhône-Alpes region well connected in Europe

Unsurprisingly, the coronavirus pandemic has also had an impact at regional level. The situation is reflected in the significant declines in economic activity and corresponding counter movements, as do the – in some cases temporary – burdens on employment. With an article on the French region of Auvergne-Rhône-Alpes in this edition of our weekly publication, we would like to provide an up-to-date overview of a region that we think has so far come through the coronavirus pandemic comparatively well. The [article](#) in today's issue of the NORD/LB Covered Bond & SSA View on the Auvergne-Rhône-Alpes region provides an insight into the economic situation and developments as well as rating assessments and capital market presence.

Select weekly publications from the last few months

In 2021, we launched the series “Beyond Bundesländer” to shed light on different regions and held an online conference in a “spotlight format”.

- [Belgian regions](#)
- [Spanish regions](#)
- [Portuguese regions](#)
- [Greater Paris Area](#)

Other publications from our coverage

Here, we are proud of our annual publication of the Issuer Guide series, which is affectionately referred to as the “Bible” by some institutional investors:

- [German Länder 2021](#)
- [Covered Bonds 2021](#)

Primary market

Due to absences, this section remains uncommented. Our weekly publication will return in the usual form again on 15 December and then again in the New Year.

Issuer	Country	Timing	ISIN	Maturity	Size	Spread	Rating	ESG
-	-	-	-	-	-	-	-	-

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

Covered Bonds

Benchmark deals outside the euro: momentum has returned!

Author: Dr. Frederik Kunze

Benchmark deals outside the euro: new additions and familiar faces

As we already noted in an article of our weekly publication towards the end of the first half of the year (see [NORD/LB Covered Bond & SSA View dated 2 June 2021](#)), the sub-segment of covered bond benchmarks outside the euro was rather restrained in the first few months of the year. However, the issue volumes for non-EUR covered bonds that were achieved in the months of September and October – and also November – were exceptional. As a result, an issue volume equivalent to EUR 27.9bn has been recorded for 2021 so far. This figure therefore already exceeds the volume of the previous year (2020: EUR 21.4bn). Nevertheless, the issue volume of 2019 (equivalent to EUR 34.8bn) is unlikely to be reached in 2021. In this short article for our weekly publication, we would like to shed light on the latest developments in the non-EUR benchmark segment, focusing in particular on the dominant currencies of USD and GBP.

USD-, AUD- & GBP-Benchmarks in 2021

Issuer	Country	Timing	Currency	ISIN	Maturity	Size	Spread	CPN
Westpac	AU	15.11.	USD	USQ97417FA49	4.8	1.75bn	ms +45bp	fix
DBS Bank	SG	09.11.	GBP	XS2406003314	4.0	1.00bn	SONIA +28bp	float
CBA	AU	20.10.	GBP	XS2401605014	7.0	0.40bn	SONIA +38bp	float
RBC	CA	12.10.	GBP	XS2399670277	5.0	0.75bn	SONIA +28bp	float
Deutsche Pfandbriefbank	DE	07.10.	USD	DE000A3E5KY5	3.0	0.75bn	ms +20bp	fix
FCDQ	CA	06.10.	USD	USC34201MF48	5.0	0.75bn	ms +17bp	fix
Bank of Nova Scotia	CA	04.10.	USD	USC0574BAA64	5.0	3.50bn	ms +17bp	fix
UOB	SG	14.09.	GBP	XS2387450476	5.0	0.85bn	SONIA +29bp	float
Bank of Montreal	CA	08.09.	GBP	XS2386880780	5.0	1.50bn	SONIA +28bp	float
RBC	CA	07.09.	USD	USC7976PAC08	5.0	2.50bn	ms +8bp	fix
CIBC	CA	07.09.	AUD	AU3FN0062956	5.0	1.50bn	BBSW +37bp	float
Bank of Nova Scotia	CA	07.09.	GBP	XS2386592054	3.5	1.50bn	SONIA +23bp	float
MuenHyp	DE	08.07.	GBP	DE000MHB4446	3.4	0.35bn	ms +39bp	fix
RBC	CA	06.07.	GBP	XS2363916474	5.0	1.25bn	SONIA +28bp	float
CIBC	CA	29.06.	USD	USC24285JP17	5.0	2.00bn	ms +22bp	fix
CIBC	CA	16.06.	GBP	XS2356566047	5.0	1.25bn	SONIA +28bp	float
TSB Bank PLC	GB	15.06.	GBP	XS2355578787	7.0	0.50bn	SONIA +37bp	float
Bank of Nova Scotia	CA	14.06.	GBP	XS2356227343	5.0	1.30bn	SONIA +28bp	float
Aareal Bank	DE	22.04.	GBP	XS2337339977	4.0y	0.50bn	SONIA +31bp	float
Deutsche Pfandbriefbank	DE	20.04.	GBP	DE000A3H2Z80	3.0y	0.50bn	SONIA +27bp	float
Nationwide BS	GB	16.02.	GBP	XS2305266137	10.0y	1.00bn	SONIA +40bp	float
Aareal Bank	DE	03.02.	USD	XS2297684842	4.0y	0.75bn	ms +24bp	fix
Deutsche Pfandbriefbank	DE	13.01.	USD	DE000A3H2ZW1	3.0y	0.75bn	ms +23bp	fix

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

More recent momentum in the benchmark segments outside the euro: DBS Bank places inaugural bond in GBP while Westpac sets new standard in USD

The Bank of Nova Scotia's bond, which was successfully placed at the beginning of October, played a significant role in the momentum of the USD segment. The Canadian institution's covered bond sets new standards in the USD sub-segment both in terms of issue size (USD 3.5bn) and issue spread (ms +17bp). A few weeks ago, DBS Bank from Singapore entered new currency territory in its covered bond placements. The issuer placed its inaugural GBP 1.0bn deal at SONIA +28bp. Compared to the previous GBP deals out of Singapore, we think this is a notable volume. The last GBP deal from Singapore before this was on 14 September, when UOB placed a benchmark of GBP 850m and five years maturity at SONIA +29bp. The most recent deal this year was delivered by Westpac from Australia. After almost two years of absence from the market, the bank was able to place a USD benchmark of USD 1.75bn. At this point, we would like to highlight the maturity of the USD deal. At just under five years, the initial residual maturity of the deal is at the upper end. Nevertheless, when looking at the USD deals after the summer break, it is quite noticeable that the majority of market activity opted for maturities above the previous "market standard" of three years. In our opinion, a stronger overlap of the maturity bands of USD issuances and EUR deals would help improve chances of funding that matches maturities, while also taking pricing advantages from using different currencies into account.

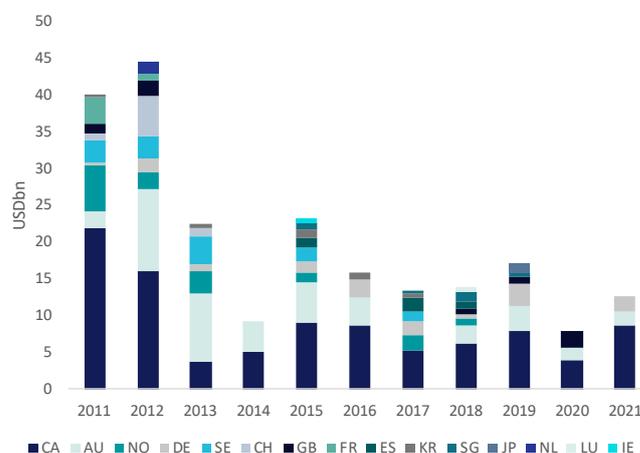
2021 ytd: 14 issues in GBP; eight in USD and one AUD benchmark

In terms of the issuing currency, GBP bonds have so far dominated 2021, accounting for a total equivalent to EUR 13.6bn (14 issues). This is closely followed by the eight USD benchmarks, for which the issue volume adds up to EUR 12.6bn. However, more significant than the distribution by currency in our view is the country breakdown. This is also the case with regard to general funding behaviour. Here, Canada dominates the FX segment with an issue volume of EUR 18.5bn, or 11 bonds, followed by Germany (EUR 3.3bn; six bonds) as well as – with two bonds each in the current year – Australia (EUR 2.5bn), Singapore (EUR 2.2bn) and the United Kingdom (EUR 1.4bn). This is noteworthy because Canadian issuers were not even active in the AUD, USD and GBP currencies until 14 June 2021.

GBP: issuing activity



USD: issuing activity



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

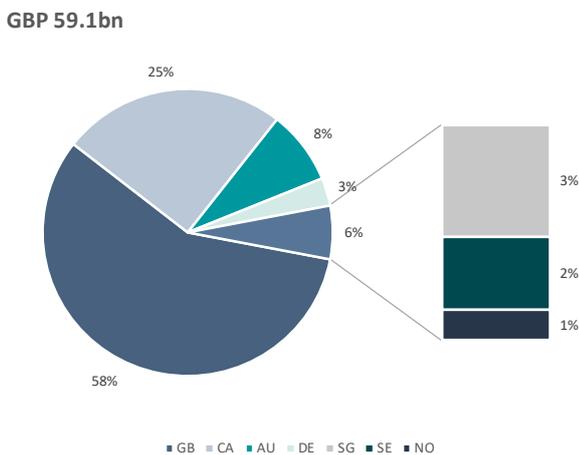
Canadian issuers particularly active in September and October

Hainving said that, the high momentum in September and October was largely driven by the market presence of Canadian issuers. Of the ten new issues, seven were attributable to banks from Canada, with all three currency areas targeted (GBP, USD and AUD). It should be emphasised that the placements made on 7 and 8 September took place at the same time as market activity from some Canadian issuers in the EUR benchmark segment. In our opinion, this once again underscores the significance of covered funding for Canadian institutes.

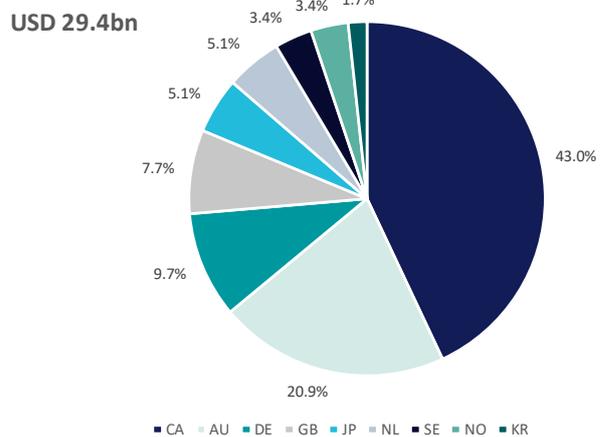
USD benchmarks as fixed coupon transactions; GBP opts for FRNs

With regard to the two dominating markets (USD and GBP), it can be said that they are structured differently. For example, there are currently significantly more jurisdictions in the USD benchmark market than in the GBP benchmark segment, but significantly fewer ISINs than in the GBP market. There is also a significant difference in the structure of coupon payments. While GBP benchmarks here rely on a variable interest rate, USD benchmarks are by a large majority – though not exclusively – furnished with a fixed coupon, as is the case for EUR benchmarks. All GBP benchmarks issued since September 2019 are based on pricing against the SONIA reference rate, which has consequently emerged as a new market standard in recent years. In the pie charts below, we have therefore based the GBP illustration on outstanding benchmark bonds, while the iBoxx USD Covered is the basis for the USD universe.

Market for GBP benchmarks (in GBP bn)



Market for USD benchmarks (in USD bn)



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

Conclusion

After activity at the start of 2021 was more than simply restrained, the primary market for the US dollar, pound sterling and Australian dollar has been far more dynamic since the middle of the year. Canadian issuers played a major role in this, invigorating these three currencies in parallel with the EUR benchmark segment. For the remaining trading weeks of 2021, we would not rule out isolated appearances, but the issue volume of 2019 is not likely to be matched.

Covered Bonds

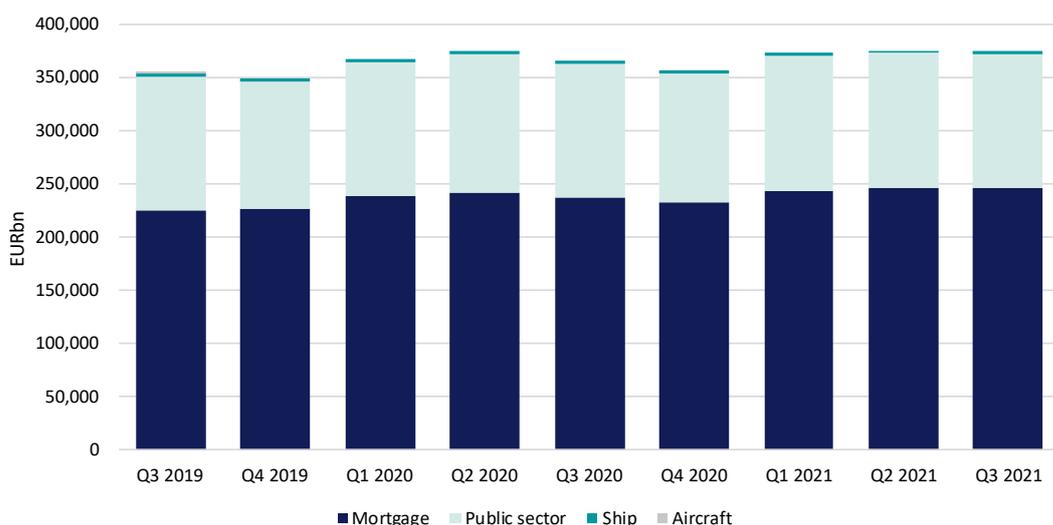
Transparency regulations under Section 28 of the Pfandbriefgesetz (PfandBG - German Pfandbrief Act) Q3 2021

Author: Dr Frederik Kunze

Transparency information as per Section 28 PfandBG: 36 mortgage and 24 public Pfandbrief issuers

The Pfandbrief issuers organised in the Association of German Pfandbrief Banks (Verband deutscher Pfandbriefbanken (vdp)) recently published their transparency reports on the composition of their cover pools for Q3 of this year in accordance with Section 28 PfandBG. As regards the issuers in the vdp, there were changes for the reporting period which can be ascribed to the fact that the cover pools of NORD/LB and Deutsche Hypothekbank will henceforward also be combined for the purpose of reporting under Section 28. On the other hand, there were no newcomers. With immediate effect, our Covered Bond Special "[Transparency Regulation Section 28 PfandBG Q3 2021](#)" therefore now includes cover pool data on 36 mortgage Pfandbrief issuers and still includes 24 public Pfandbrief issuers. Please note that we have manually added cover pool information regarding Deutsche Bank which is no longer reported on the vdp website.

Development of outstanding volume



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

Outstanding Pfandbriefe: total volume down slightly in Q3 2021

At EUR 375.0bn, the total volume of outstanding Pfandbriefe has fallen by a small amount against the previous quarter (as per 30.06.2021: EUR 375.6bn). This included a further increase in the volume of outstanding mortgage Pfandbriefe (up by EUR 730m or 0.3% q-o-q), while the volume of public and ship Pfandbriefe fell by EUR 1,008m and EUR 300m respectively. As regards cover assets, there was an increase of EUR 6.8bn of mortgage assets, but here also a decline in the case of the two other types of Pfandbriefe of EUR 156m (public assets) and EUR 181m (ships) respectively.

Development of Mortgage Pfandbriefe



Development of Public Pfandbriefe



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

Mortgage Pfandbriefe up by EUR 730m or 0.3% quarter on quarter

Mortgage Pfandbriefe once again presented a far less dynamic picture during the reporting period from July to September 2021 than in the first six months of the year, when there was an increase of EUR 13.6bn. Nonetheless, they continued their upwards trend with +EUR 730m or +0.3% quarter on quarter. The year-to-date increase therefore still amounts to a respectable EUR 14.3bn. As a result of combining the cover pools of NORD/LB and Deutsche Hypothekbank, the acquiring bank, namely NORD/LB, showed the biggest rise (EUR 8.2bn) mathematically. The outstanding mortgage Pfandbriefe of Deutsche Bank showed the next biggest increase (EUR 2.4bn). A substantial decline in absolute terms was reported by among others Helaba (EUR 1.6bn). All in all, at the end of Q2 2021, there were cover assets of EUR 332.3bn against mortgage Pfandbriefe outstanding amounting to EUR 247.4bn. The average OC rose further to 34.3% (previous quarter: 32.0%).

Public Pfandbrief segment: down by EUR 1bn or 0.8% quarter on quarter

In Q3 2021, the decline in the nominal volume of outstanding public Pfandbriefe amounted to EUR 1,008m (down 0.8% q-o-q). A year-on-year comparison also shows a setback in the Pfandbrief volume, which fell by EUR 748m or 0.6% year on year. As regards the issuers, Bayerische Landesbank showed the sharpest absolute decline in Q3 2021 (EUR 1.1bn). The strongest increase (EUR +2.8bn) once again reflected the combined NORD/LB covered bond programmes. We should also mention the increase in the Pfandbrief volume involving public collateral in the case of DZ HYP (EUR +352m) and DekaBank (EUR +225m). In all, the volume outstanding of public Pfandbriefe amounted to EUR 125.8bn at the end of Q3 2021. This was countered by cover assets amounting to EUR 152.1bn, as a result of which average overcollateralisation was up slightly from 20.1% to 20.9%, as in the case of mortgage-backed Pfandbriefe.

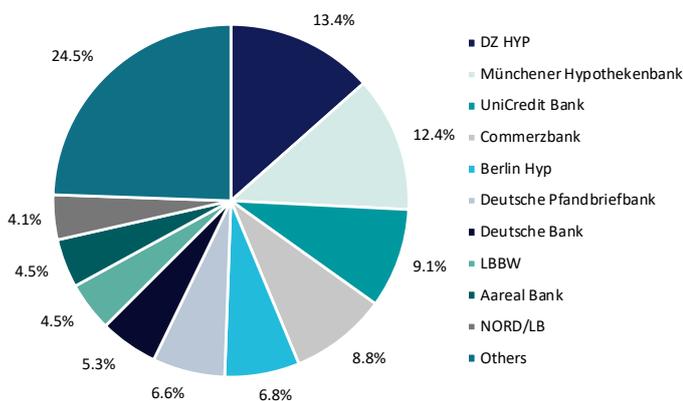
Ship Pfandbriefe remain a niche product

Ship Pfandbriefe are still a niche market within the German Pfandbrief market, with a volume of EUR 1.8bn (down by 14% q-o-q or EUR 300m). At present, only three institutions, namely Commerzbank, Hamburg Commercial Bank and NORD/LB have outstanding ship Pfandbriefe, of which Hamburg Commercial Bank accounts for around 89%.

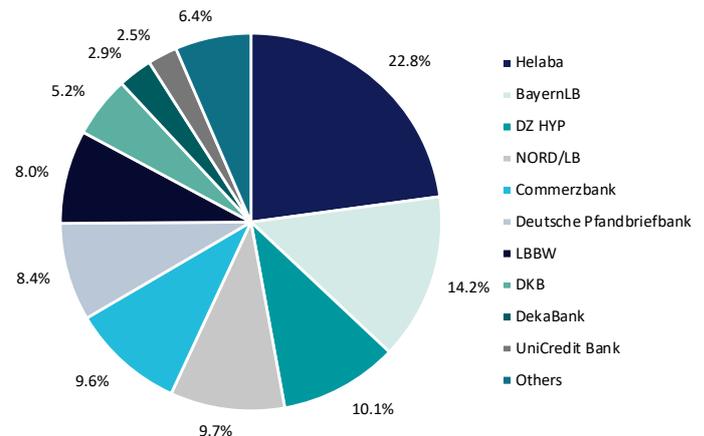
A look at the top 10: shifts arising from combined NORD/LB pools

There were absolutely no changes in the rankings of the three biggest mortgage Pfandbrief issuers. The biggest issuer in the mortgage-backed Pfandbrief sub-segment is therefore still DZ HYP, followed by Münchener Hypothekenbank and UniCredit Bank. The share of the volume outstanding attributable to "smaller" issuers stands at 24.5%. In the public Pfandbrief segment, Helaba, Bayern LB and DZ HYP are in the first three places. Through the combination of the cover pools, the outstanding Pfandbriefe of NORD/LB have climbed up the rankings based on a breakdown by size (mortgage Pfandbriefe: 10th; public Pfandbriefe: 4th).

Market share – mortgage Pfandbriefe



Market share – public Pfandbriefe



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

Conclusion

There was a further rise in the total volume of outstanding Pfandbriefe in Q3. As in earlier periods, the Pfandbrief reporting should be analysed taking into account unusual – though long-standing – influence factors. In this context, we have repeatedly drawn attention to the impact of monetary policy on issuance activity, which for a number of issuers is in evidence in the form of a higher weight of retained issues, to the detriment of public placements. This factor is not immediately apparent in the reported data; rather it has tended and still tends to manifest itself in the EUR benchmark segment. Apart from the availability of central bank liquidity, other factors also had an impact on the funding behaviour of issuers lately (including substantial deposits). For detailed information on the Pfandbrief market and on cover pool characteristics as per 30 September 2021, we would refer our readers once again to our recent study "[Transparency Regulations under Section 28 PfandBG Q3/2021](#)". For an overview of issuers active in the EUR benchmark and EUR sub-benchmark segment and their cover pools, we also refer our readers to our [NORD/LB Issuer Guide Covered Bonds](#).

SSA/Public Issuers

Beyond Bundeslaender: Auvergne-Rhône-Alpes Region (ARA)

Author: Dr Norman Rudschuck, CIAA

Auvergne-Rhône-Alpes region – an overview

The Auvergne-Rhône-Alpes region (hereafter "ARA") was created in 2016 from the merger of the Auvergne and Rhône-Alpes regions, and is now one of France's thirteen regions. Situated in the south-east of the country, the administrative centre of ARA is the regional capital, Lyon. ARA has 12 Départements and borders on Italy, Switzerland, and several French regions. It is home to over 8 million inhabitants or around 12% of the French population. The age structure of the region is younger than the French average; just under 30% of the population is aged under 24. The ARA region is one of the most densely populated regions of France with major cities such as Lyon, Grenoble, Saint-Étienne and Clermont-Ferrand. The landscape of the region can be described as varied, with urban areas, forests, as well as open meadows and Alpine country.

Noticeable impact of coronavirus pandemic

The impact of the coronavirus pandemic has also been felt in the ARA region. Based on official statistics available at present, the region's GDP contracted by 10.7% in the first three quarters of 2020 against the same previous-year period. Foreign trade was hit hard in 2020 with a year-on-year decline of 13.1% in exports and a 12.4% year-on-year decline in imports. The impact on tourism was moderate: only 51% of all the companies affected reported a fall in summer bookings; winter bookings were brought to an early end in March 2020 and sales revenue shrank by 16% against the previous year.

Regional government built around Les Républicans party in 2021 elections

Laurent Wauquiez (Les Républicans) won the French regional elections in 2021 and has therefore remained the region's president – an office he has occupied since 2016. Wauquiez is regarded as having a good network of contacts within his party and is on the right of his centre-right party. He is regarded as a strong critic of the EU, among other things through the publication of his book "Europe: il faut tout changer" (which translates as Europe: Everything has to Change) and his comments against the Schengen Agreement. The regional parliament consists of a conservative government and a strong left-wing opposition. Fringe parties on both sides have 34 out of the 204 seats (17%). The political power of the regional parliament is comparable to that of the German Bundeslaender; the duties of the regional parliament include education, infrastructure, economic development and environmental protection. On a national level, the central government and national parliament – which consists of two chambers – take precedence over the regional government. The two chambers, the national assembly and senate, function in a similar way to the British bicameral system. At local level, the structure is similar to the German system with *Départements* or local authorities, and similar to a District, *Communes* or municipalities. The division of tasks and legal options open to these regional authorities are similar to those in the German system.

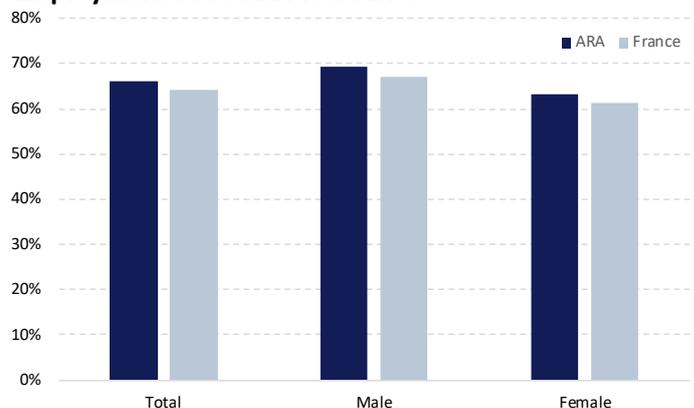
Strong, innovative industrial sector with European-focused foreign trade

The region is regarded as one of the most innovative and economically strong in France. This is illustrated mainly by high R&D expenditure, which accounted for around 14% of all R&D expenditure in France in 2020 at EUR 7bn. In 2019, 19% of all patent-protected innovations came from the region, remarkably 66% of all French patent applications in the semiconductor industry were rooted in the region. In addition, 14 out of 58 "pôles de compétitivité", or competitive clusters in English, are either located or have their head office in the region. Well-known companies with their headquarters or a production plant in the region are Michelin, Sanofi, IVECO and Evian. The region's infrastructure can be described as good, with access to motorways and expressways to the rest of France and to neighbouring countries Italy and Switzerland, international airports in Lyon, Clermont-Ferrand, Grenoble, etc. and a well-developed railway infrastructure with many high-speed routes. Because of its landlocked position, the ARA region does not have any sea ports. Nevertheless, it does have trade routes on the region's waterways with a freight volume of 2.6 million tonnes in 2019. The per capita GDP of ARA is the second-highest in France (as per 2018) at EUR 33,600, mainly driven by the manufacturing and construction sectors. Average household income in 2020 was around 4% above the national average at EUR 28,826 against EUR 27,780. Unemployment in 2020 was below the national average at 6.4% against 7.1%. At 63.2%, the percentage of women in employment is just under two percentage points higher than the French average. A total of 44.2% of all 25-54 year-olds in ARA have completed higher education - which is above the national average of 42.8%. The two biggest, non-French trading partners in the region are Germany and Italy, which jointly account for around 25% of all exports and imports respectively. It is striking that, although China is not among the five biggest export partners, it is the third biggest import partner (as per 2019). In 2017, there were more than 7,300 foreign firms operating in ARA, providing over 200,000 jobs, with the biggest foreign employers coming from the US, Germany, Switzerland, Sweden and the UK. In other words, there is no sign of any major dependence of the region on any one country. The tourism industry generated revenues of over EUR 21bn in 2019, which makes ARA the second biggest tourist region in France and the eighth largest region in Europe. The figures on tourism date from prior to the coronavirus pandemic.

Average income per job category in EUR



Employment ratio ARA vs. France



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

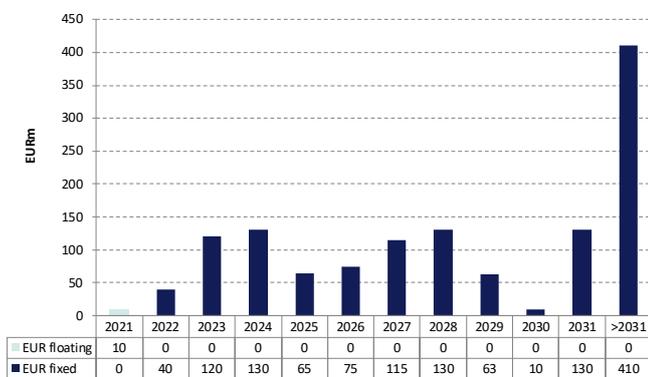
Strong efforts surrounding environmental protection

Auvergne-Rhône-Alpes Énergie Environnement (AURA-EE) was founded in 1987 as an environmental agency supported by the regional parliament. The institution is not state-backed and operates as a non-profit making organisation with over 70 members consisting of public institutions, other NGOs, energy companies, etc. Its activities are mostly limited to supporting local institutions and projects aimed at environmental protection. The focus is on eight areas of activity, including sustainable energy & climate planning, sustainable buildings and waste disposal, and the recycling industry. At EU level, the AURA-EE leads the EUSALP initiative (EU Strategy for the Alpine Region). In 2021, the ARA region issued green bonds amounting to EUR 100m for the first time aimed at financing environmental projects.

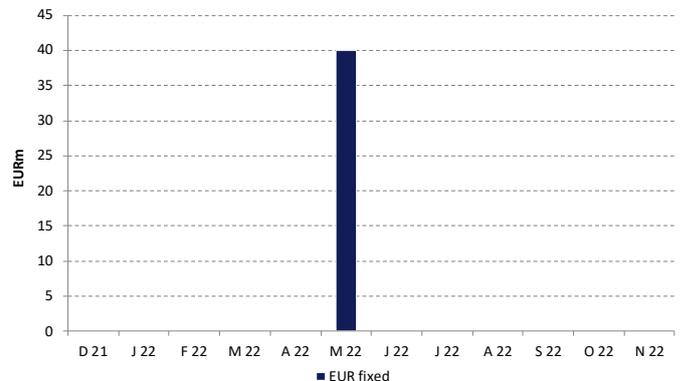
Stable rating in line with that of France

S&P rates the ARA region AA (stable), in line with France's rating. In the case of S&P, individual regions cannot be assigned a higher rating than that of the state. The rating is justified by a good handle on the budget, especially during the coronavirus crisis and strong industry in the region. Rating reports of previous years show a strong consistency in respect of S&P's assessment.

Bonds by currency and type



Bond maturities in the next 12 months



Source: Bloomberg, NORD/LB Markets Strategy & Floor Research; data as per 18.11.2021 eod

Bonds

The outstanding volume under ticker REGRHO amounts to EUR 1.3bn, split between 51 different bonds. A total of EUR 410m will not mature until after 2031. The share of EUR 10m under "floating" is almost negligible. In addition, there are two zero bonds and the rest therefore comes with a fixed coupon. There is no foreign-currency diversification. The ESG projects and underlying framework described make for an interesting dimension. The longest outstanding bond is an ESG bond which has only just been issued and was placed in mid-October (EUR 100m, 20y, OAT +21bp).

Summary

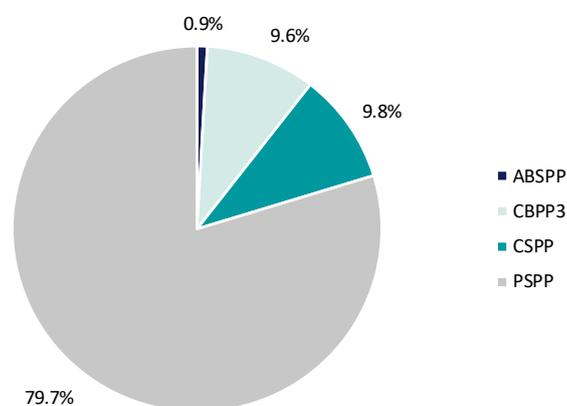
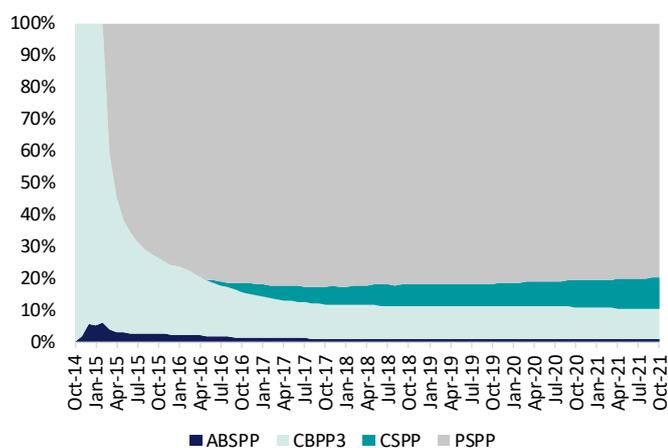
In summary, it is fair to say that the ARA region has a strong economy and has good links to Europe, not least through its size and situation. In many respects, the region ranks second in a French comparison, e.g. of per capita GDP, tourism and number of inhabitants. If anything, the region has come out of the coronavirus pandemic quite well compared with other regions.

ECB tracker

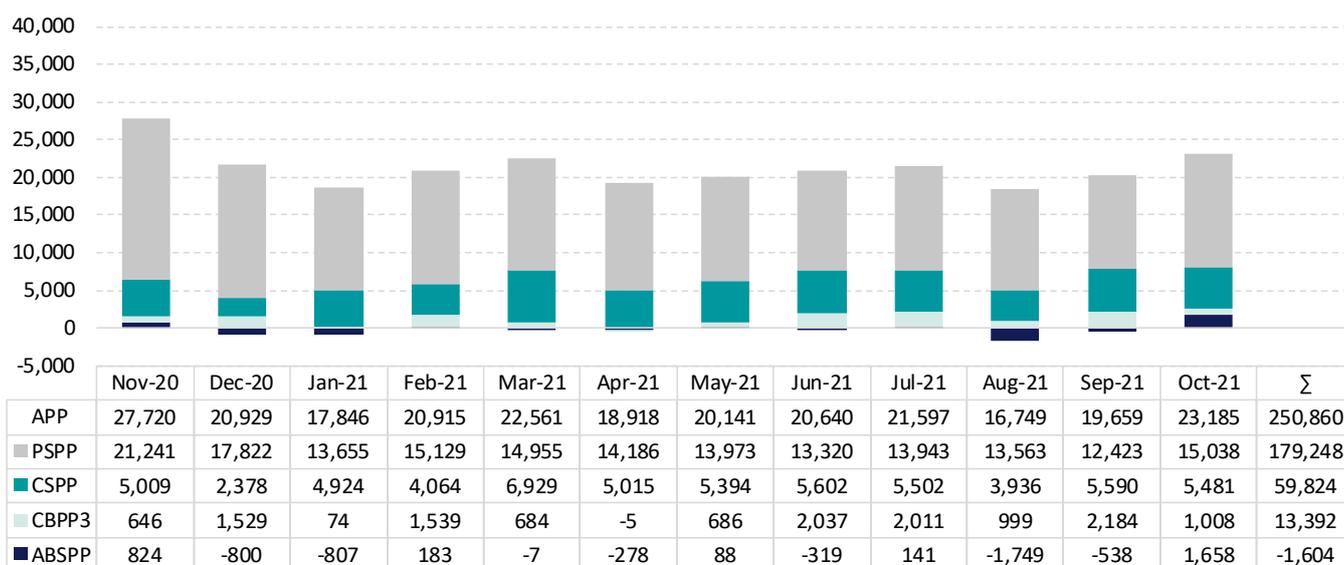
Asset Purchase Programme (APP)

	ABSPP	CBPP3	CSPP	PSPP	APP
Sep-21	26,013	296,590	296,403	2,449,278	3,068,284
Oct-21	27,671	297,598	301,885	2,464,316	3,091,470
Δ	+1,658	+1,008	+5,481	+15,038	+23,185

Portfolio structure

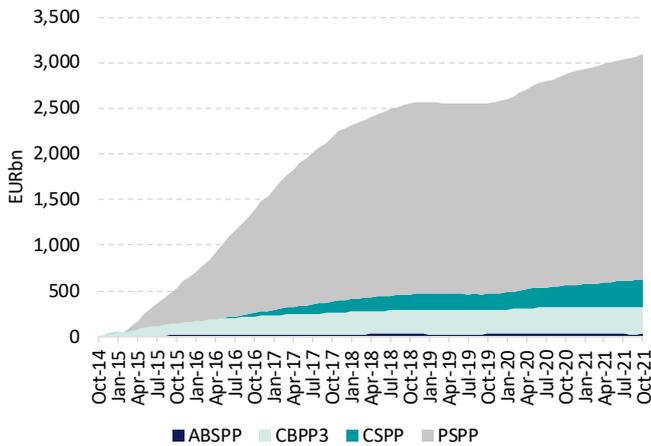


Monthly net purchases (in EURm)

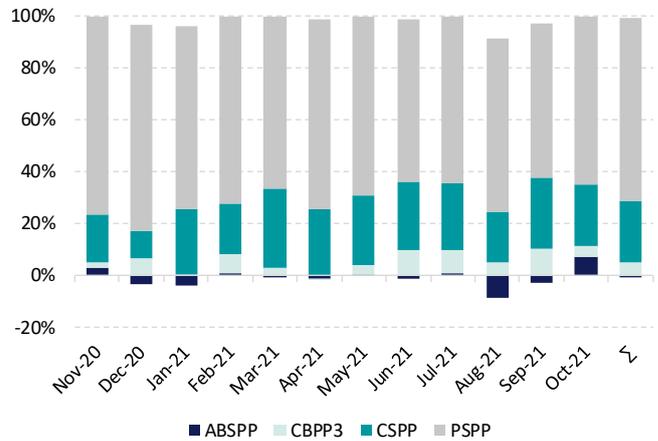


Source: ECB, NORD/LB Markets Strategy & Floor Research

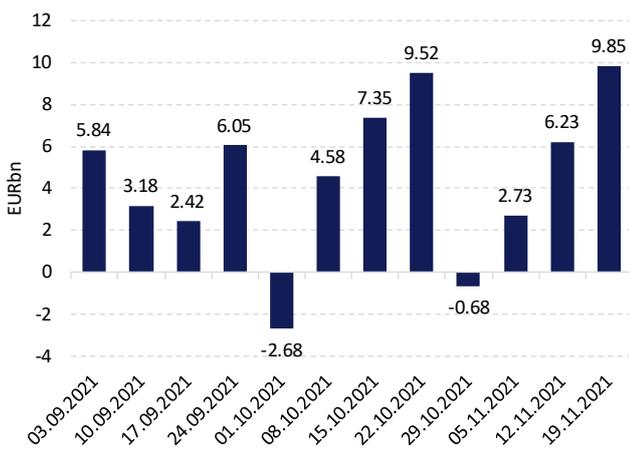
Portfolio development



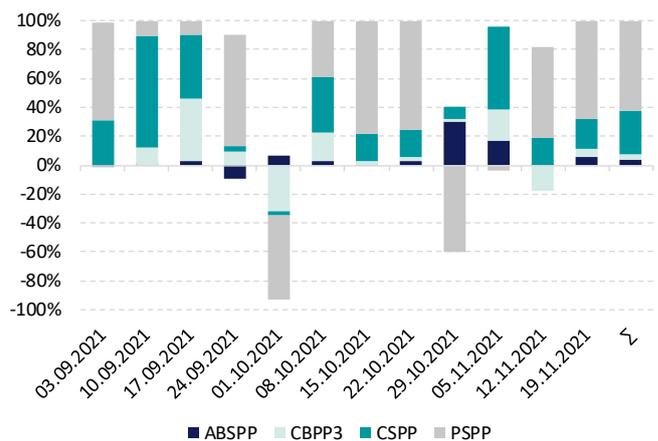
Distribution of monthly purchases



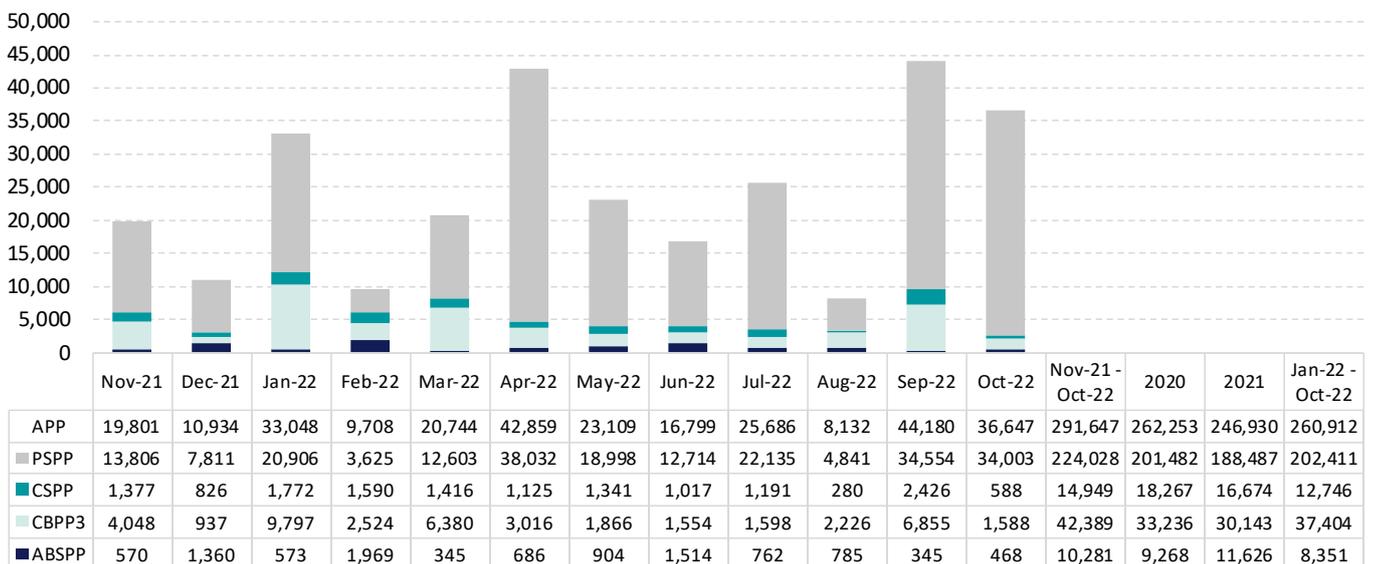
Weekly purchases



Distribution of weekly purchases



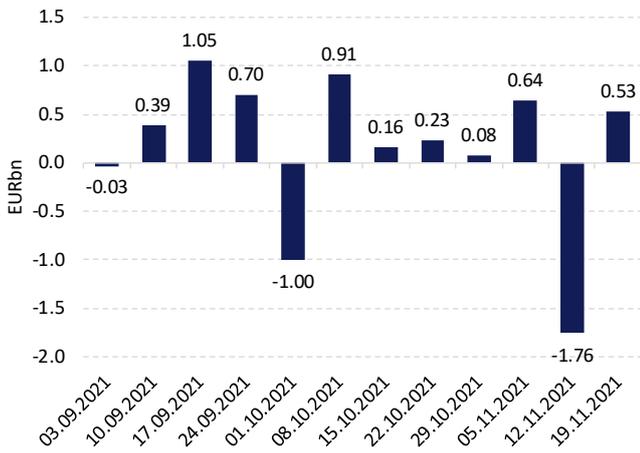
Expected monthly redemptions (in EURm)



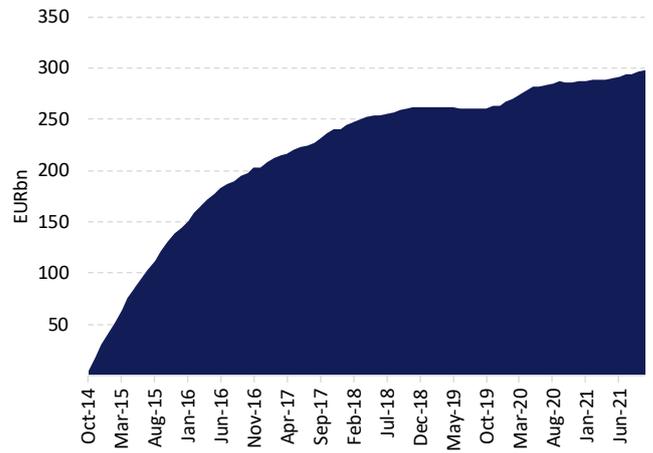
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Covered Bond Purchase Programme 3 (CBPP3)

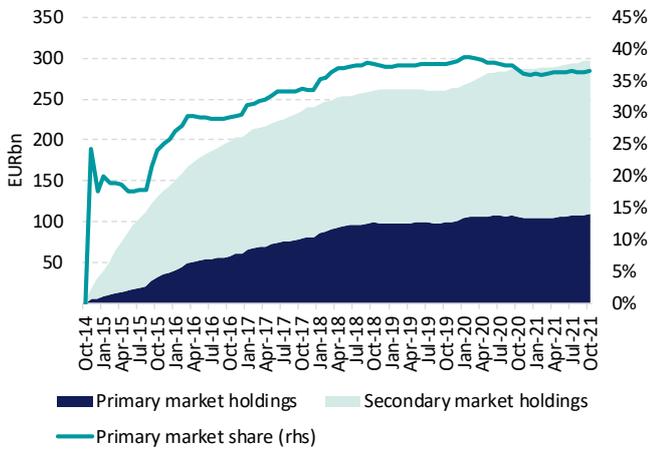
Weekly purchases



Development of CBPP3 volume



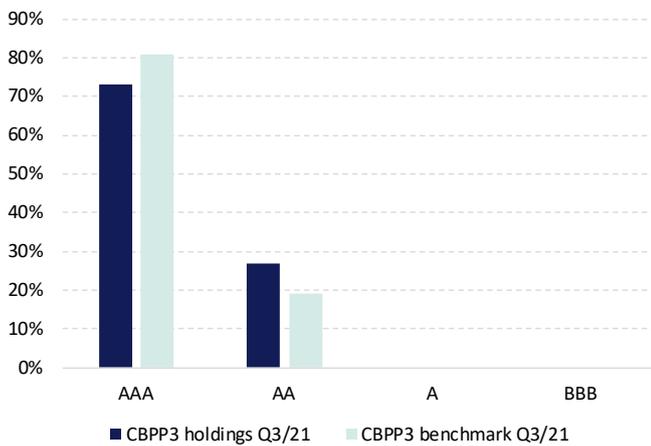
Primary and secondary market holdings



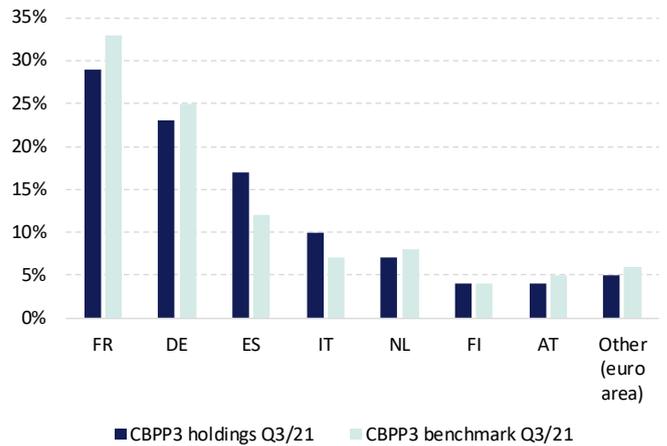
Change of primary and secondary market holdings



Distribution of CBPP3 by credit rating

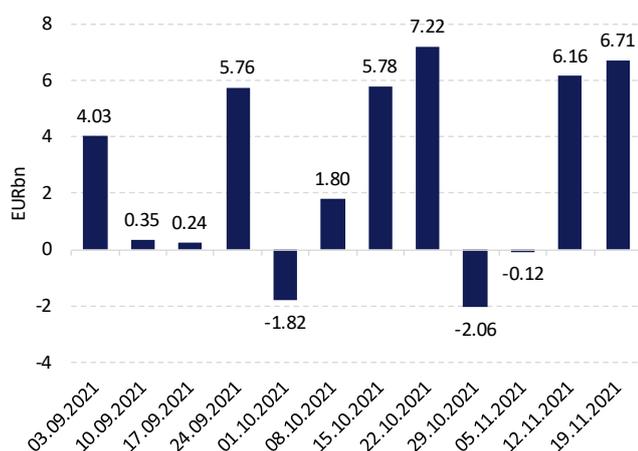


Distribution of CBPP3 by country of risk

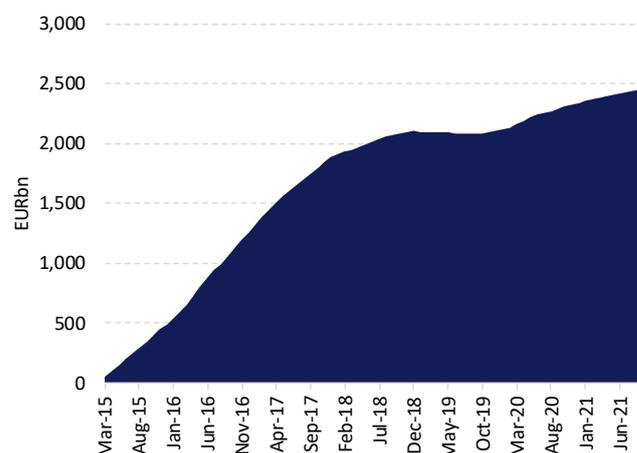


Public Sector Purchase Programme (PSPP)

Weekly purchases



Development of PSPP volume



Overall distribution of PSPP buying at month-end

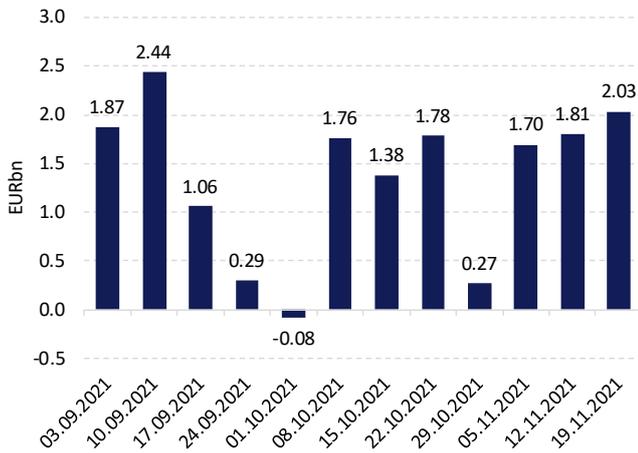
Jurisdiction	Adjusted distribution key ¹	Purchases (EURm)	Expected purchases (EURm) ²	Difference (EURm)	Avg. time to maturity ³ (in years)	Market average ³ (in years) ³	Difference (in years)
AT	2.7%	71,416	70,316	1,100	7.5	7.6	-0.1
BE	3.4%	89,945	87,525	2,420	8.0	10.2	-2.2
CY	0.2%	4,040	5,169	-1,129	9.9	8.8	1.1
DE	24.3%	623,378	633,307	-9,929	6.6	7.6	-1.0
EE	0.3%	406	6,767	-6,361	9.2	7.5	1.7
ES	11.0%	305,248	286,476	18,772	8.0	8.4	-0.4
FI	1.7%	40,185	44,129	-3,944	6.9	7.7	-0.8
FR	18.8%	507,890	490,673	17,217	7.2	8.1	-0.9
GR	0.0%	0	0	0	0.0	0.0	0.0
IE	1.6%	40,502	40,682	-180	8.5	10.1	-1.6
IT	15.7%	433,577	408,131	25,446	7.1	7.9	-0.8
LT	0.5%	5,345	13,904	-8,559	10.2	10.6	-0.4
LU	0.3%	3,777	7,914	-4,137	5.6	7.2	-1.7
LV	0.4%	3,191	9,361	-6,170	11.3	10.4	0.9
MT	0.1%	1,268	2,520	-1,252	9.5	9.2	0.3
NL	5.4%	124,615	140,791	-16,176	7.7	9.0	-1.4
PT	2.2%	49,790	56,228	-6,438	7.0	7.2	-0.2
SI	0.4%	10,091	11,568	-1,477	9.9	10.2	-0.3
SK	1.1%	16,781	27,513	-10,732	8.2	8.3	-0.1
SNAT	10.0%	271,856	260,330	11,526	7.7	8.9	-1.2
Total / Avg.	100.0%	2,603,303	2,603,303	0	7.3	8.2	-0.9

¹ Based on the ECB capital key, adjusted to include supras and the disqualification of Greece² Based on the adjusted distribution key³ Weighted average time to maturity of the bonds eligible for purchasing under the PSPP (semi-annual data, Q1/2021)

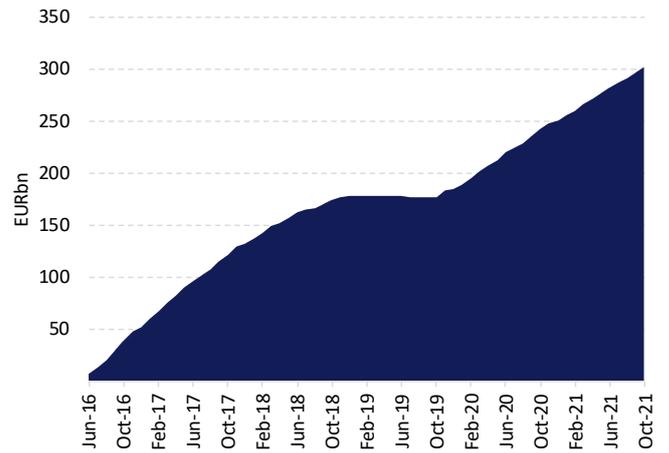
Source: ECB, NORD/LB Markets Strategy & Floor Research

Corporate Sector Purchase Programme (CSPP)

Weekly purchases

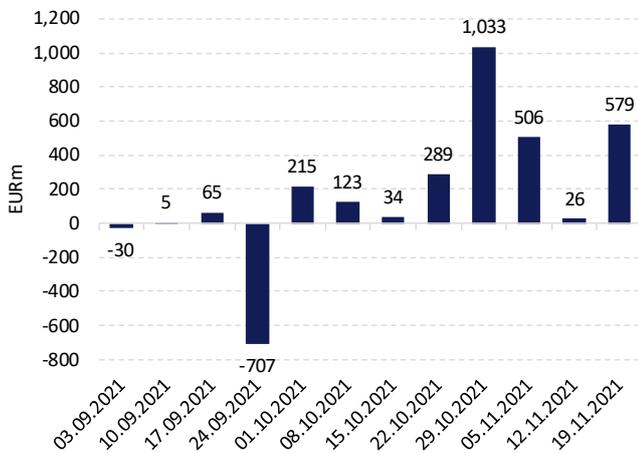


Development of CSPP volume

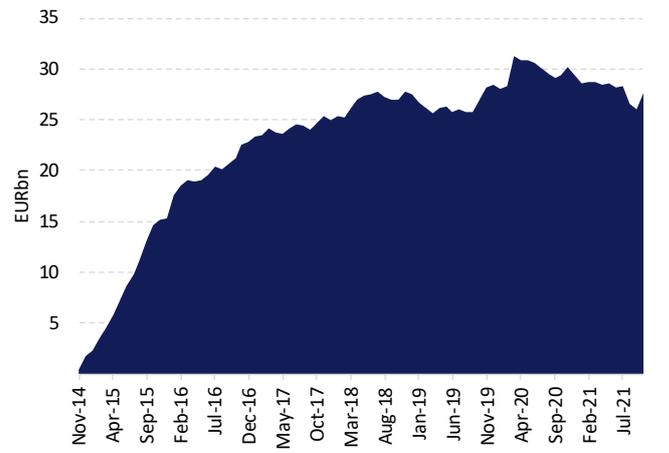


Asset-Backed Securities Purchase Programme (ABSPP)

Weekly purchases



Development of ABSPP volume



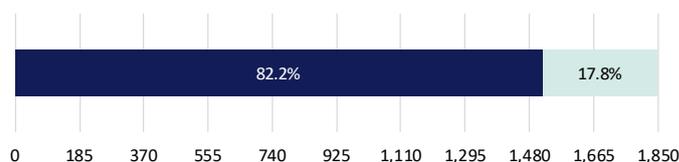
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Pandemic Emergency Purchase Programme (PEPP)

Holdings (in EURm)

	PEPP
Sep-21	1,412,291
Oct-21	1,480,146
Δ	+67,855

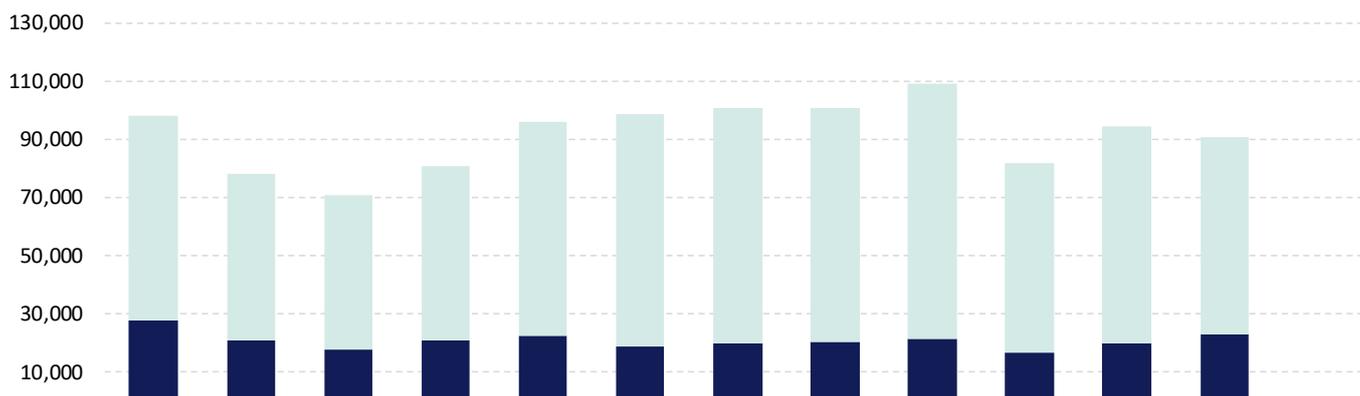
Volume already invested (in EURbn)



Estimated portfolio development

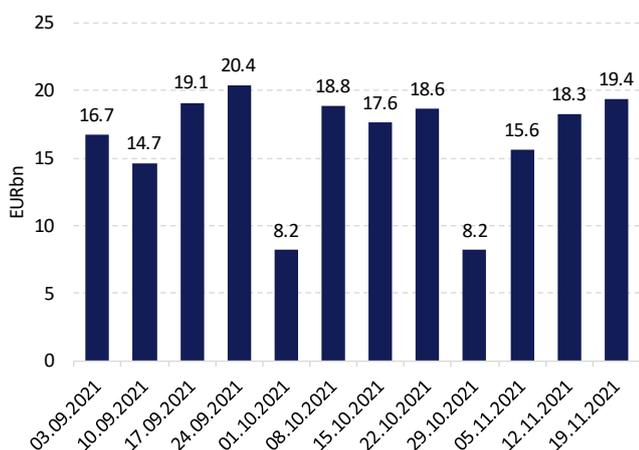
Assumed pace of purchases	Weekly net purchase volume	PEPP limit hit in ...
Average weekly net purchase volume so far	EUR 17.7bn	19 weeks (01.04.2022)

Monthly net purchases (in EURm)

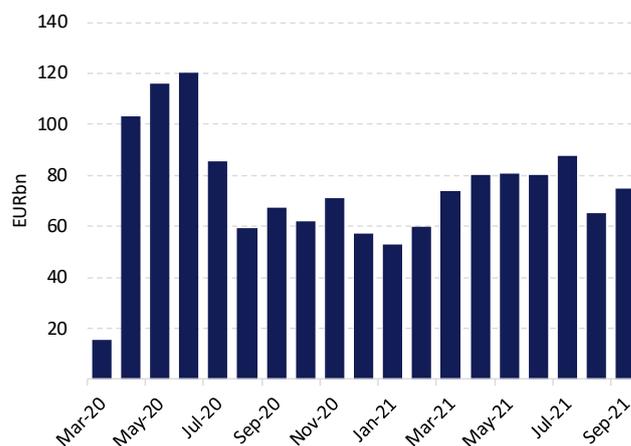


	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Σ
Σ	98,555	78,092	70,892	80,829	96,082	99,036	100,841	100,808	109,154	81,799	94,710	91,040	1,101,83
PEPP	70,835	57,163	53,046	59,914	73,521	80,118	80,700	80,168	87,557	65,050	75,051	67,855	850,978
APP	27,720	20,929	17,846	20,915	22,561	18,918	20,141	20,640	21,597	16,749	19,659	23,185	250,860

Weekly purchases



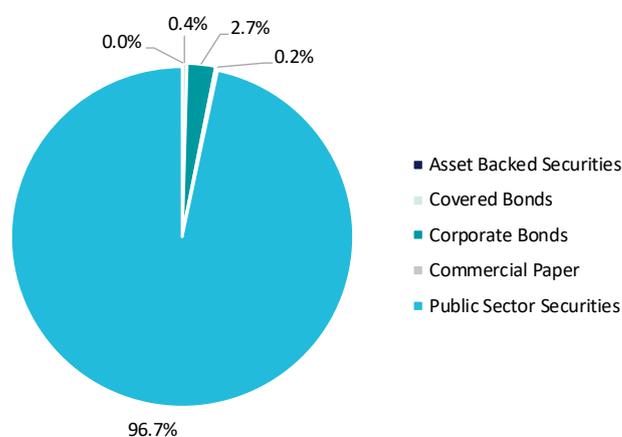
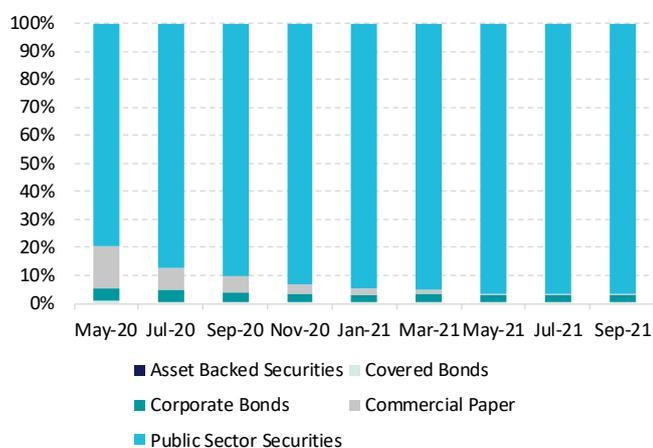
Development of PEPP volume



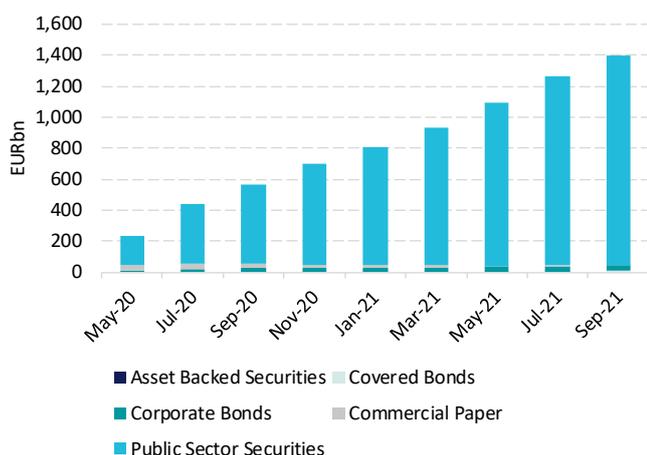
Holdings under the PEPP (in EURm)

	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

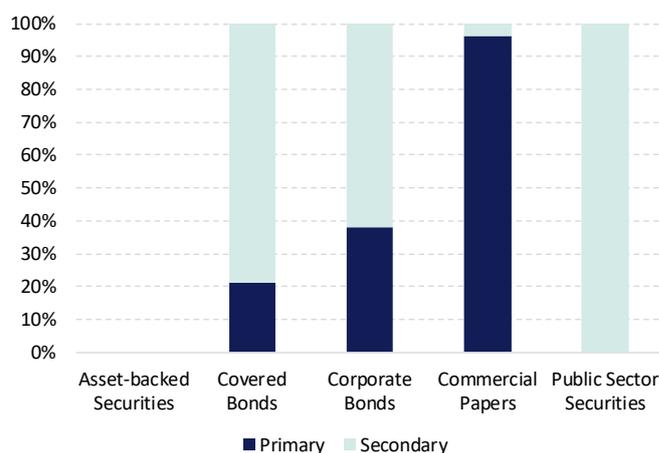
Portfolio structure



Portfolio development



Share of primary and secondary market holdings



Breakdown of private sector securities under the PEPP

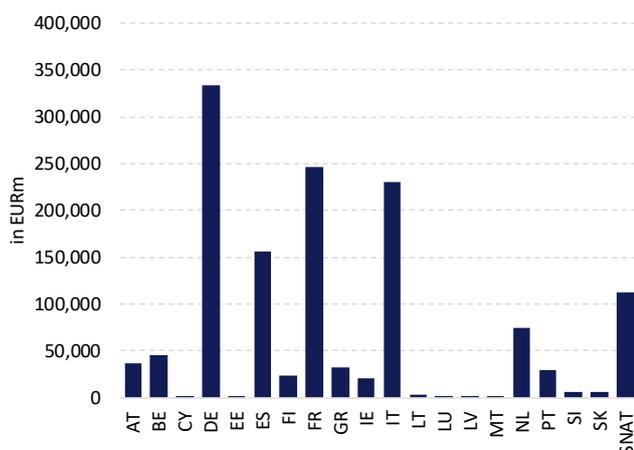
Sep-21	Asset-backed securities		Covered bonds		Corporate bonds		Commercial paper	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Holdings in EURm	0	0	1,298	4,781	14,113	23,026	3,191	123
Share	0.0%	0.0%	21.4%	78.7%	38.0%	62.0%	96.3%	3.7%

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

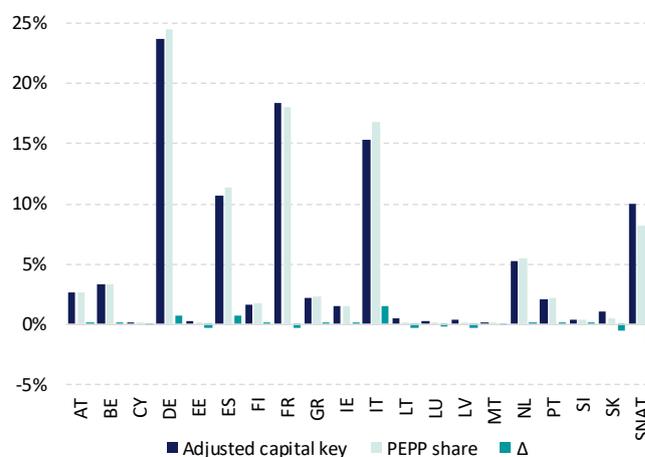
Breakdown of public sector securities under the PEPP

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 key³ Weighted average time to maturity of the bonds eligible for purchasing under the PEPP

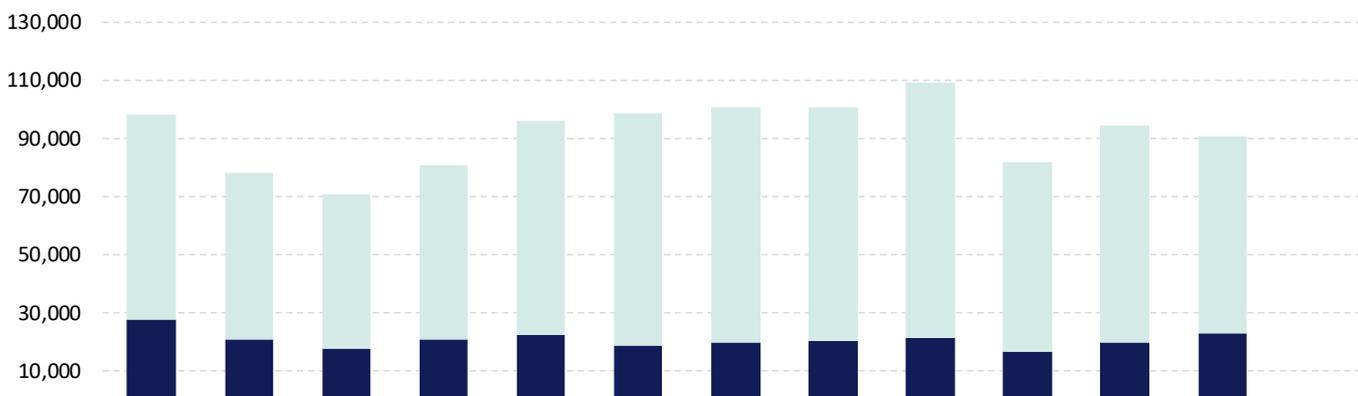
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Aggregated purchase activity under APP and PEPP

Holdings (in EURm)

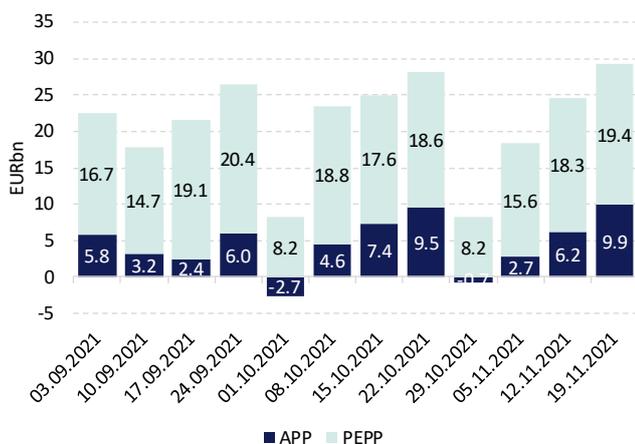
	APP	PEPP	APP & PEPP
Sep-21	3,068,284	1,412,291	4,480,575
Oct-21	3,091,470	1,480,146	4,571,616
Δ	+23,185	+67,855	+91,040

Monthly net purchases (in EURm)

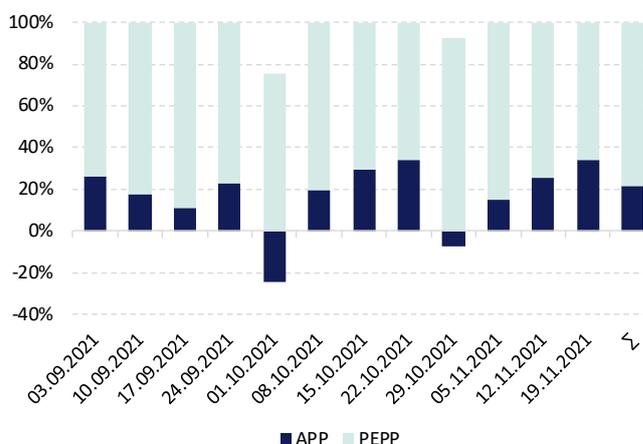


	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Σ
Σ	98,555	78,092	70,892	80,829	96,082	99,036	100,841	100,808	109,154	81,799	94,710	91,040	1,101,83
PEPP	70,835	57,163	53,046	59,914	73,521	80,118	80,700	80,168	87,557	65,050	75,051	67,855	850,978
APP	27,720	20,929	17,846	20,915	22,561	18,918	20,141	20,640	21,597	16,749	19,659	23,185	250,860

Weekly purchases



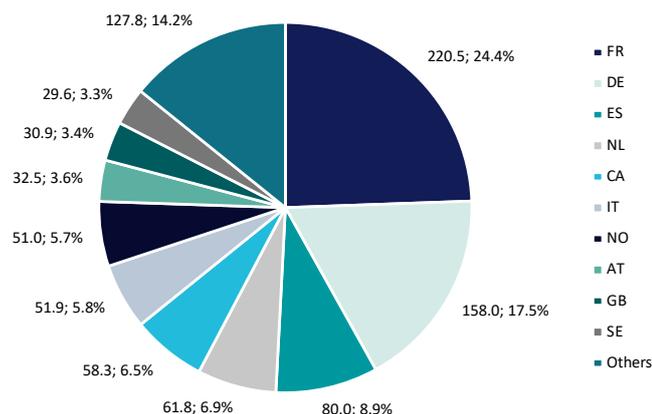
Distribution of weekly purchases



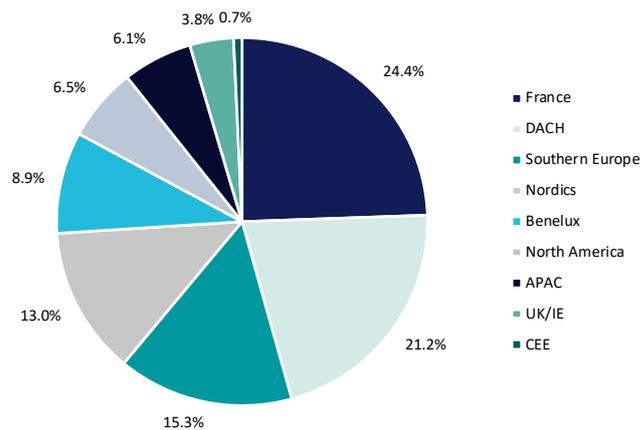
Source: ECB, Bloomberg, NORD/LB Markets Strategy & Floor Research

Charts & Figures Covered Bonds

EUR benchmark volume by country (in EURbn)



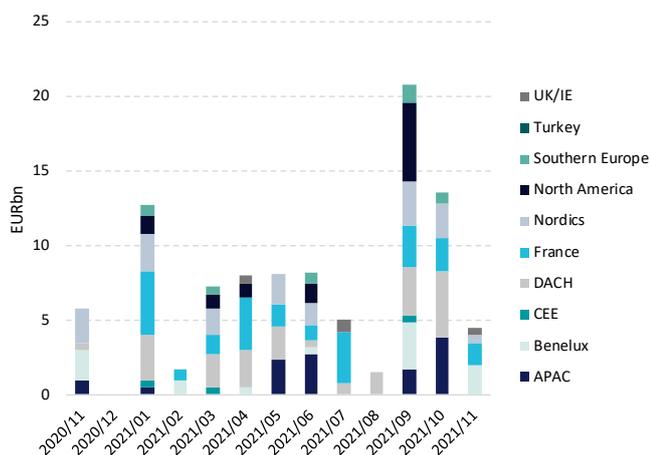
EUR benchmark volume by region (in EURbn)



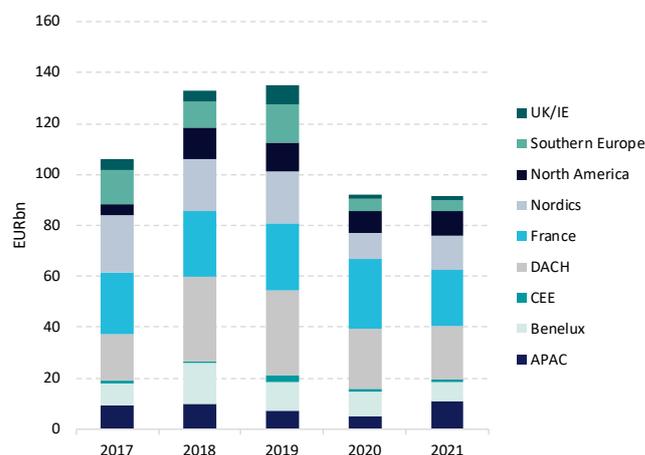
Top-10 jurisdictions

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	220.5	209	11	0.94	10.1	5.5	0.94
2	DE	158.0	233	16	0.61	8.4	4.6	0.42
3	ES	80.0	65	4	1.13	11.6	3.7	1.80
4	NL	61.8	64	0	0.91	11.6	7.6	0.80
5	CA	58.3	51	0	1.11	6.1	3.2	0.22
6	IT	51.9	61	1	0.82	9.0	4.0	1.30
7	NO	51.0	58	9	0.88	7.3	4.0	0.37
8	AT	32.5	60	2	0.54	9.9	6.3	0.60
9	GB	30.9	37	1	0.86	8.5	3.7	0.91
10	SE	29.6	36	0	0.82	7.6	3.6	0.41

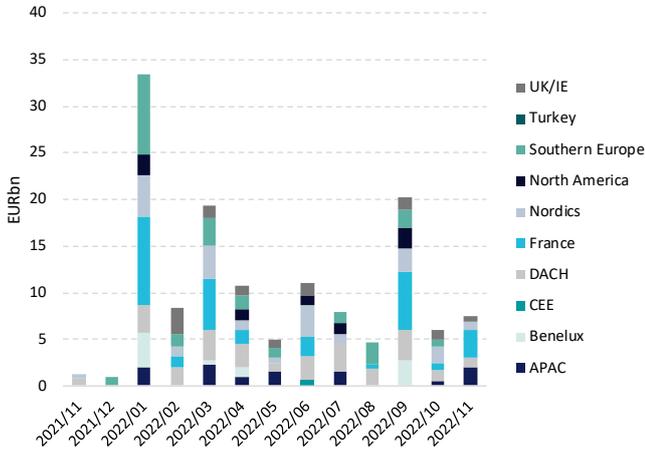
EUR benchmark issue volume by month



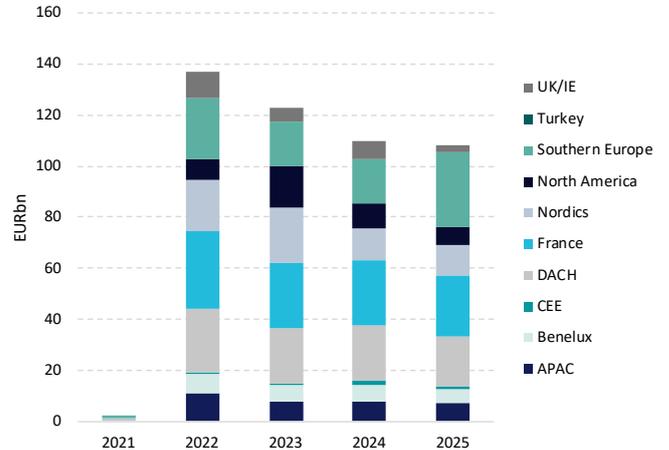
EUR benchmark issue volume by year



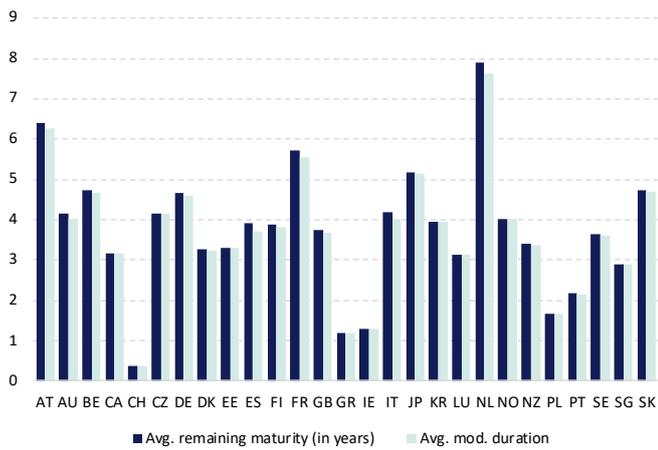
EUR benchmark maturities by month



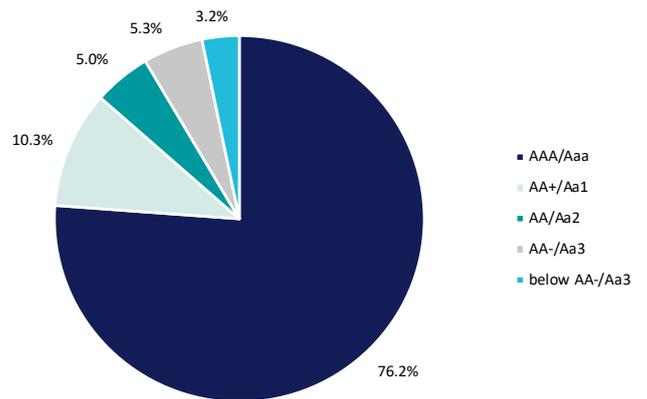
EUR benchmark maturities by year



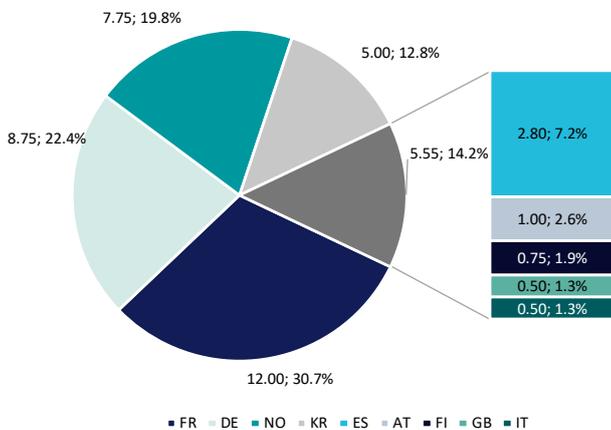
Modified duration and time to maturity by country



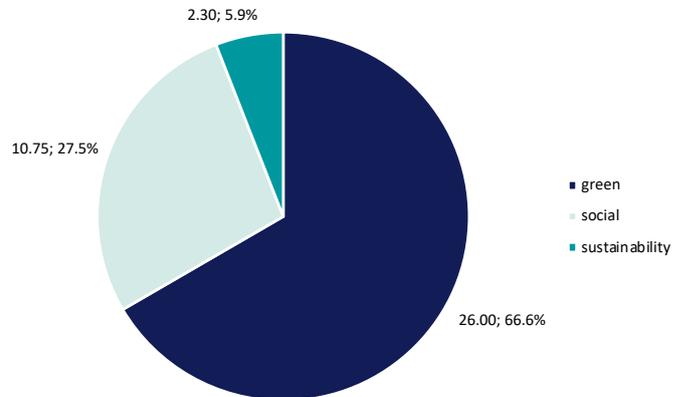
Rating distribution (volume weighted)



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

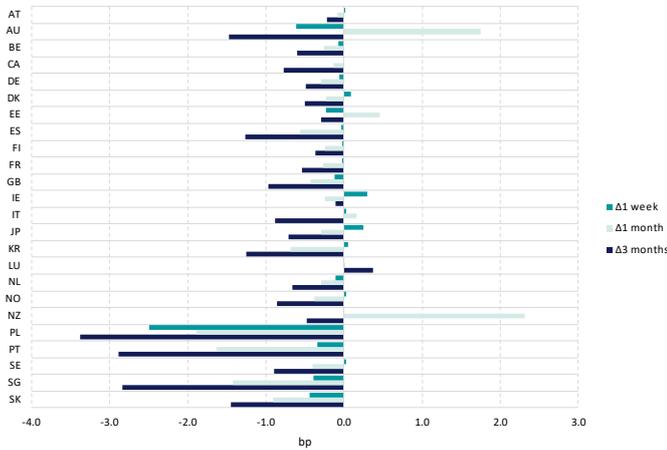


EUR benchmark volume (ESG) by type (in EURbn)

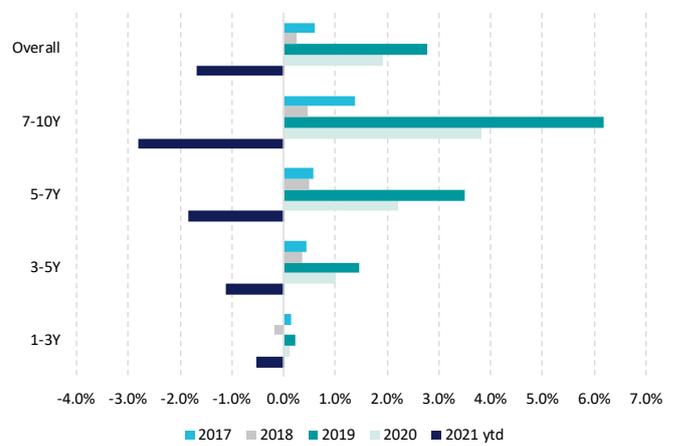


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research

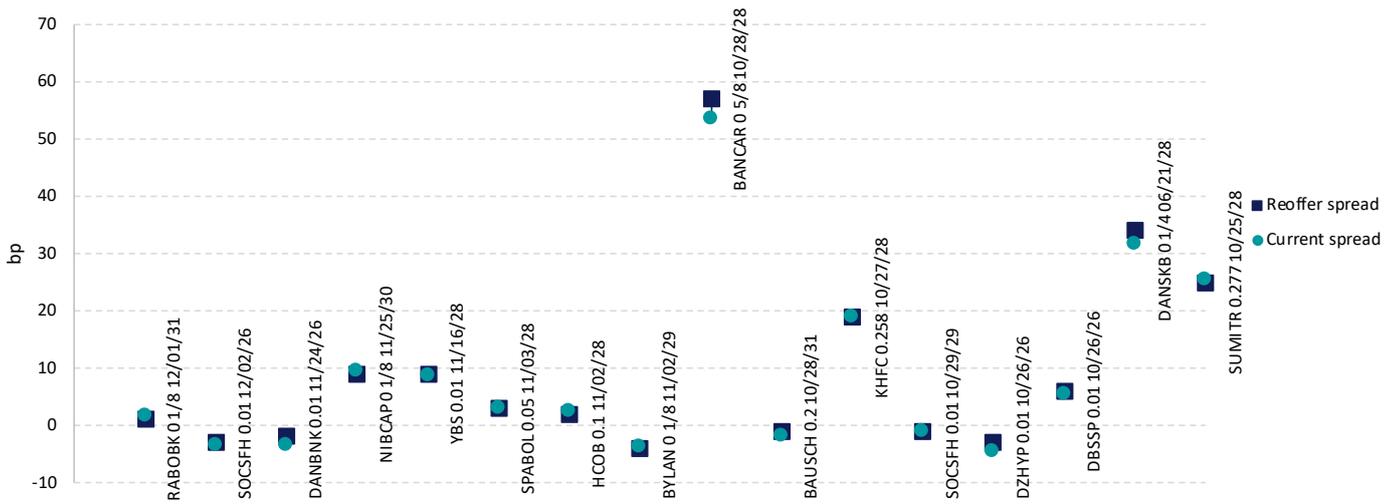
Spread development by country



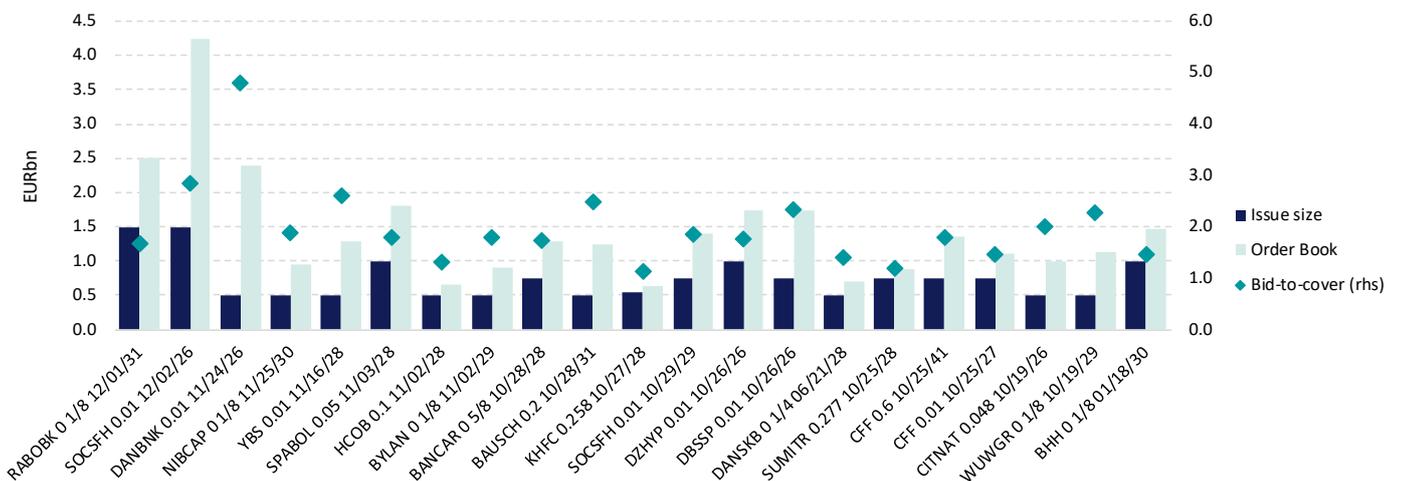
Covered bond performance (Total return)



Spread development (last 15 issues)

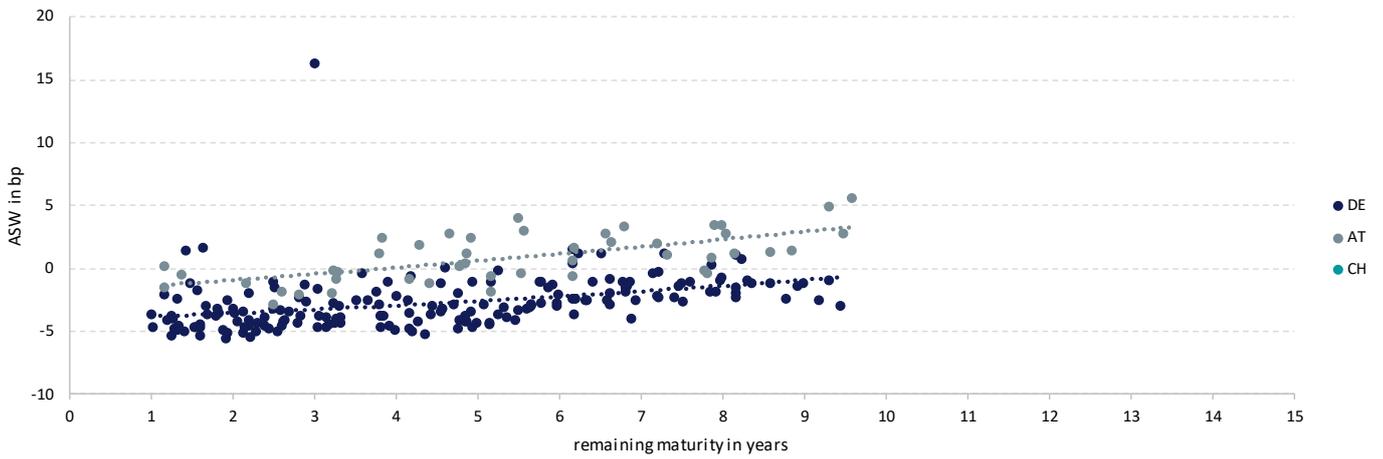


Order books (last 15 issues)

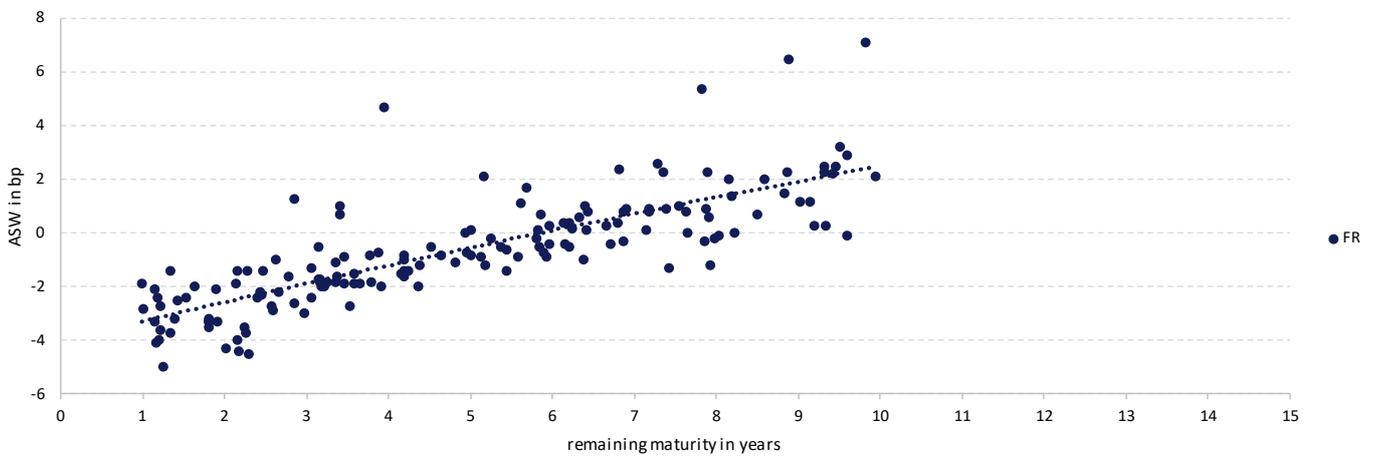


Spread overview¹

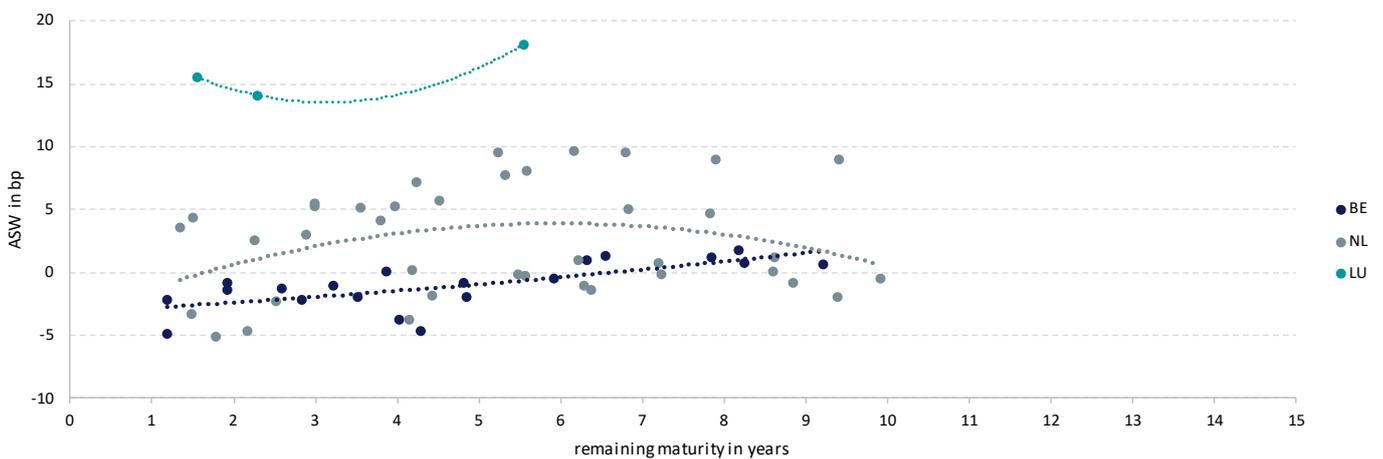
DACH 



France 

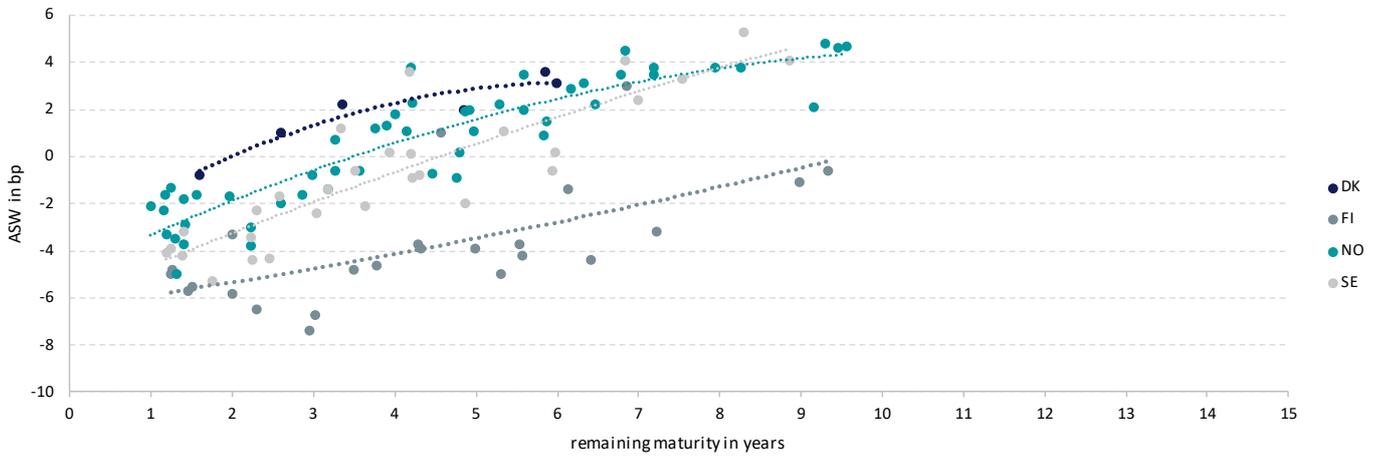


Benelux 

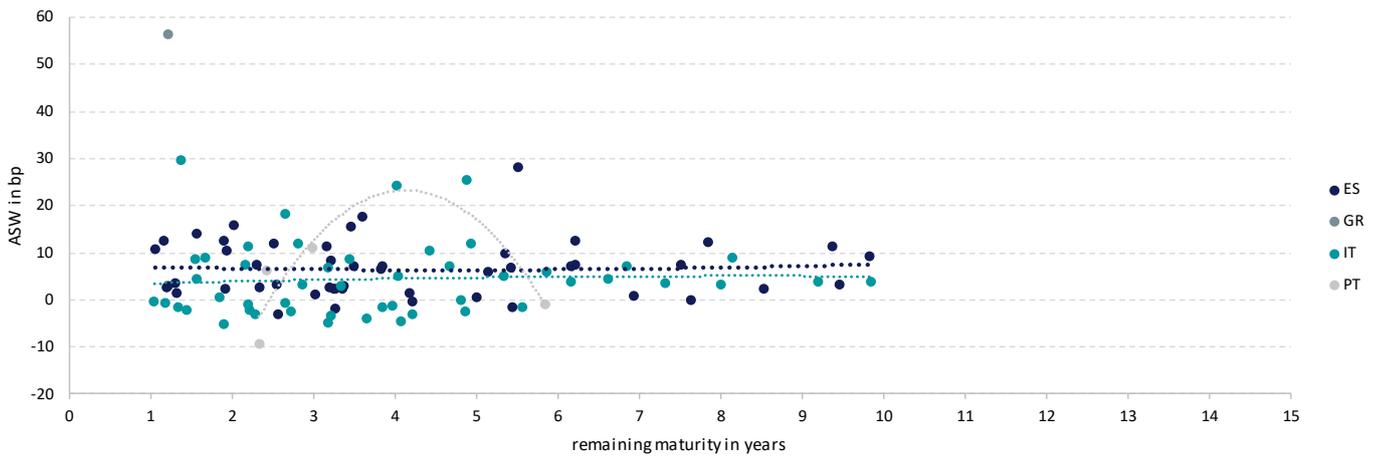


Source: Market data, Bloomberg, NORD/LB Markets Strategy & Floor Research ¹Time to maturity 1 ≤ y ≤ 15

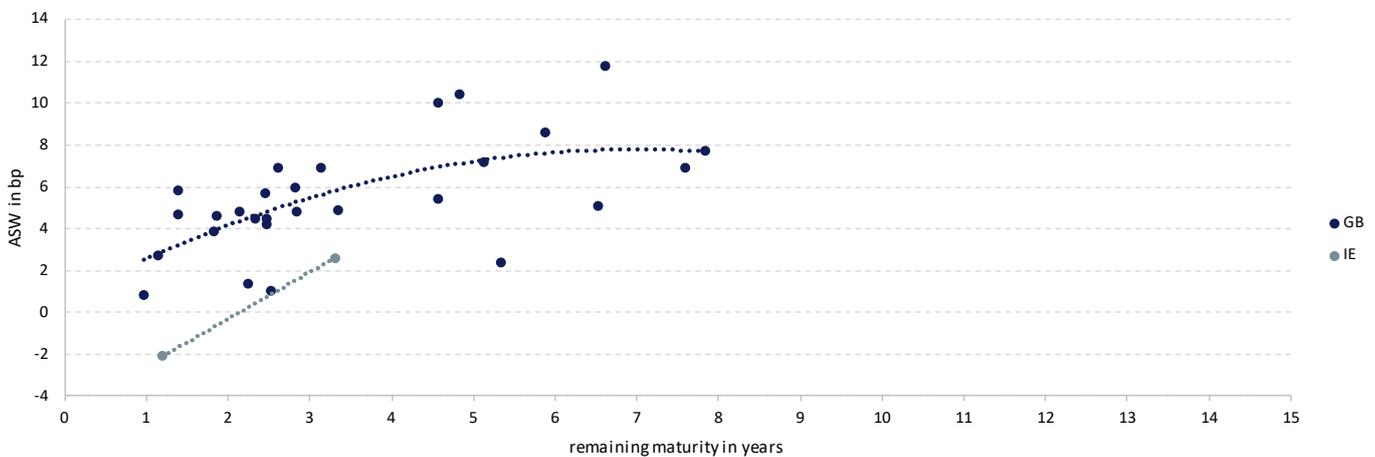
Nordics 🇩🇰 🇫🇮 🇳🇴 🇸🇪



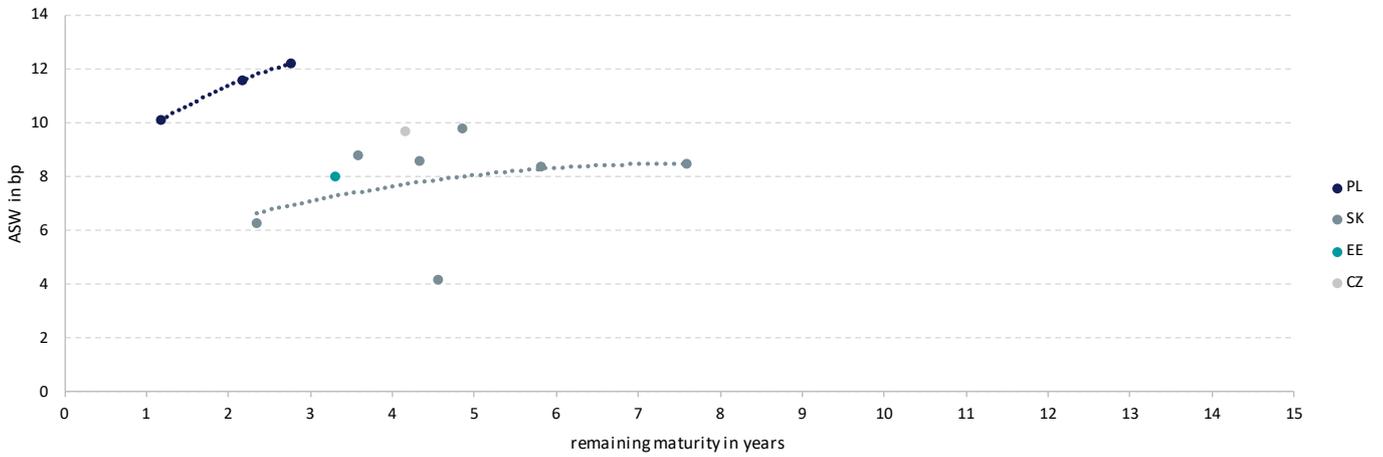
Southern Europe 🇪🇸 🇬🇷 🇮🇹 🇵🇹



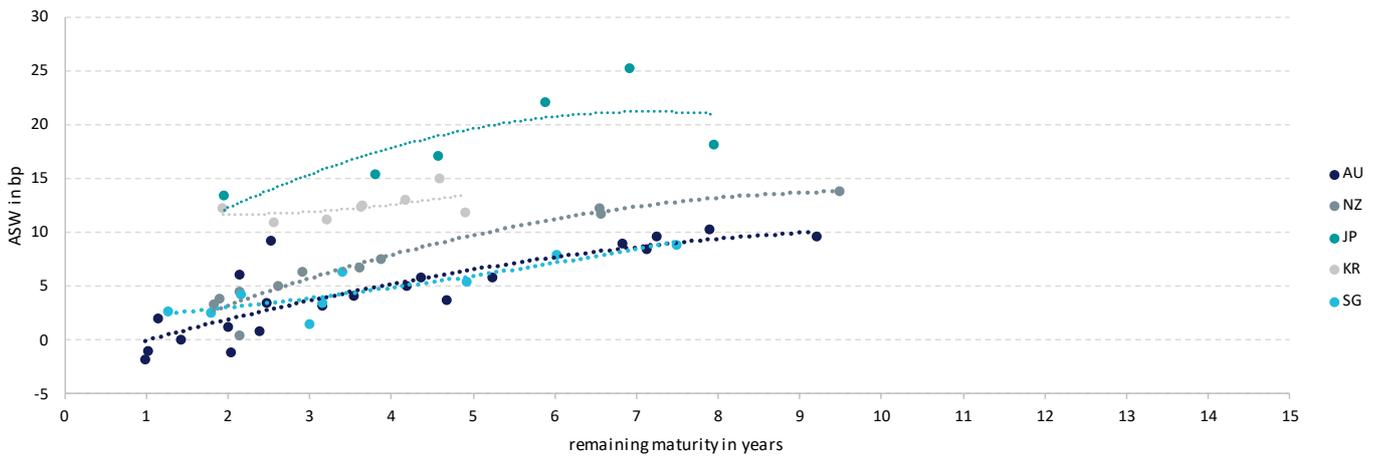
UK/IE 🇬🇧 🇮🇪



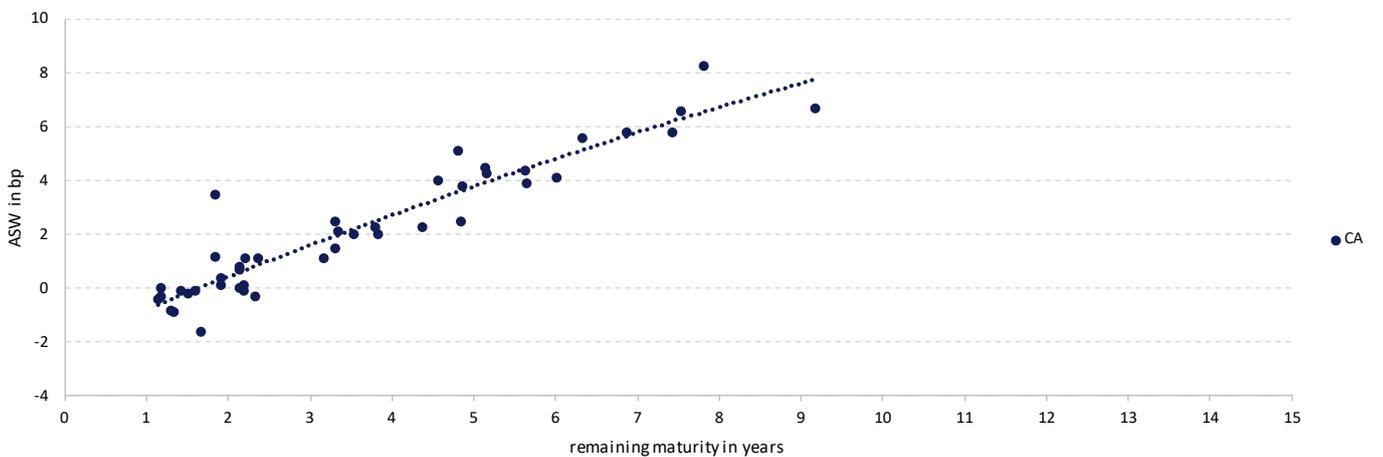
CEE 



APAC 



North America 



Appendix

Overview of latest Covered Bond & SSA View editions

Publication	Topics
36/2021 ♦ 17 November	<ul style="list-style-type: none"> Primary market forecast 2022: time for a comeback? Development of the German property market Beyond Bundeslaender: Spotlight on Belgian regions
35/2021 ♦ 10 November	<ul style="list-style-type: none"> PEPP approaching notional end – will the APP be pepped up? Spain’s major move – will the amended covered bond legislation breathe new life into the market?
34/2021 ♦ 03 November	<ul style="list-style-type: none"> Repayment structures on the covered bond market: EU harmonisation is already leaving its mark Beyond Bundeslaender: Spanish regions in the spotlight
33/2021 ♦ 27 October	<ul style="list-style-type: none"> Insurance firms as covered bond investors: A look at Solvency II and EIOPA statistics The Scope rating approach
32/2021 ♦ 20 October	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Covered bond primary market: a September to remember Announcement: Issuer Guide German Laender 2021
30/2021 ♦ 15 September	<ul style="list-style-type: none"> Transparency requirements § 28 PfandBG Q2 2021 Fitch: rating approach covered bonds Update: Joint Laender (Ticker: LANDER)
29/2021 ♦ 08 September	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> NORD/LB Issuer Guide Covered Bonds 2021: A constant during turbulent times Beyond Bundeslaender: Madeira and the Azores
26/2021 ♦ 21 July	<ul style="list-style-type: none"> Summer break just around the corner – a glance at covered bonds in USD and GBP
25/2021 ♦ 14 July	<ul style="list-style-type: none"> New ECB strategy – communication remains the be-all and end-all ECB preview: the first meeting under the “new” regime
24/2021 ♦ 07 July	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Return of the Australian covered bond market: National Australia Bank issues first EUR benchmark since 201)
22/2021 ♦ 23 June	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> ICMA Green and Social Bond Principles: 2021 update The covered bond universe of Moody’s: an overview Covered bonds vs. senior unsecured bonds

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

Origination & Syndicate

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

Treasury

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

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

Sales Wholesale Customers

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

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 Finanzdienstleistungsaufsicht; 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: 24 November 2021 08:53h (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
-------------------	------	----------------	-----------	-------