Supply Outlook 2020: Still heavy activity at extra-long maturities

by Francesco Maria Di Bella (UniCredit Bank Milan) & Chiara Cremonesi (UniCredit Bank London)

- We expect gross EGB supply to amount to EUR 860bn in 2020, roughly EUR 30bn larger than this year. This increase will be a result of moderately higher redemptions and deficits and of a different funding mix compared to 2019, with issuance of domestic bonds somewhat larger than this year.
- A combination of low (even negative) yields and quantitative easing is likely to support demand for duration. We hence expect that issuance at the extra-long end will remain healthy, and possibly in line with that of 2019.
- Next year, inflation-linked bond issuance is likely to be in line with that of 2019. Due to abundant redemptions, especially from Italy, net supply is likely to be negative.

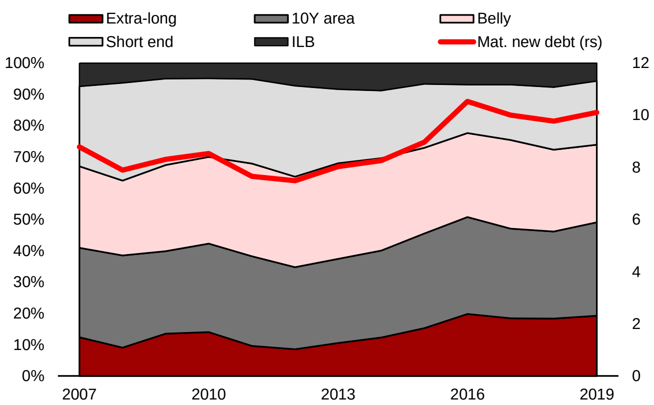
1. A lookback at EGB issuance in 2019

In 2019, primary market activity (including buybacks) in the eurozone has amounted to EUR 830bn, which is in line with 2018. Net supply (computed as the difference between supply and redemptions) amounted to EUR 150bn, around EUR 50bn lower than in 2018.

Compared to 2018, issuance at the 10Y area and longer has increased to 49% (from 46%), while there has been a decline in issuance of inflation linked bonds.

Overall, the maturity of new bonds has been around 10 years, which is the second highest level after 2016. The average maturity of the new debt Italy has issued has been around 9.5 years, the second longest duration after 2016 (10 years).

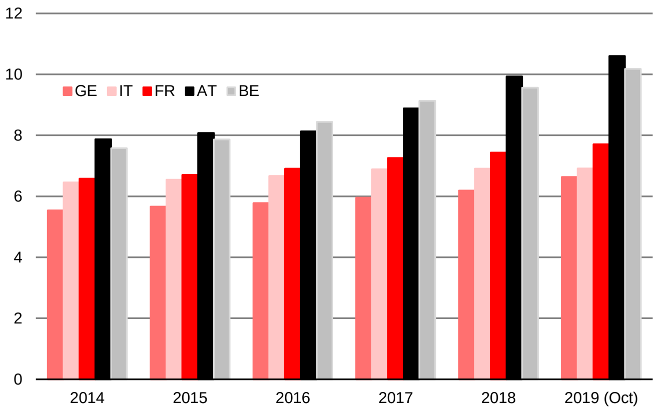
CHART 1: GROSS ISSUANCE OVER THE LAST FEW YEARS



Source: Bloomberg, eurozone debt agencies, UniCredit Research

Governments have been able to sell long-maturity bonds despite the fact that, in 2019, net QE purchases were almost zero, with the main contribution from the ECB being reinvestment of PSPP redemptions. That said, 2019 was when Bund yields reached record lows, with even the 30Y Bund yield moving into negative territory in August. The extremely low yield environment offered an incentive to both issuers and investors to move along the curve. Such behavior led to a lengthening of debt maturities across all eurozone countries. Therefore, 2019 saw a continuation of the trend of lengthening the debt maturity that QE kick-started in 2015 in most eurozone countries.

CHART 2: INCREASE IN DEBT RESIDUAL MATURITY ACROSS EUROZONE COUNTRIES



Average residual maturity of debt securities, years

Source: Haver, UniCredit Research

2. EGB redemptions to rise in 2020 by EUR 15bn

In 2020, domestic bond redemptions will amount to around EUR 695bn, EUR 15bn higher than in 2019. The largest increase will be observed in Germany, followed by Finland, while bond redemptions will be lower in Austria and in Spain.

Redemptions of international bonds will amount to EUR 12bn, roughly in line with 2019, and they will mostly come from Austria (EUR 5bn) and Italy (EUR 3bn).

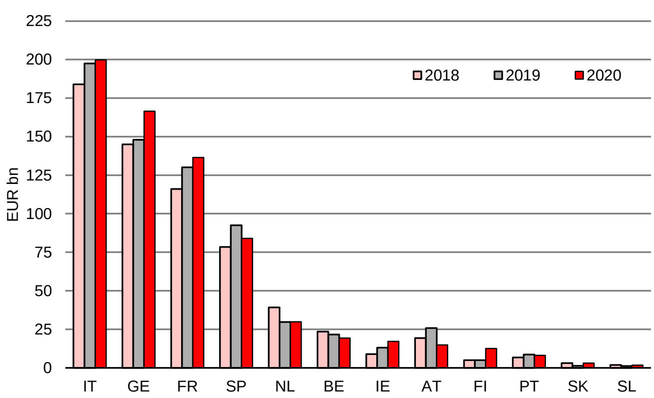
TABLE 1:
DOMESTIC BOND REDEMPTIONS WILL RISE BY EUR 15BN IN 2020

	2019	2020	Change
Austria	26	15	-11
Belgium	22	19	-2
Finland	5	13	8
France	130	136	6
Germany	148	166	18
Greece	4	0	-4
Ireland	13	17	4
Italy	198	200	2
The Netherlands	30	30	0
Portugal	8	8	0
Slovenia	1	2	0
Slovakia	1	3	2
Spain	92	84	-9
TOTAL	**678**	**693**	**15**

Source: Bloomberg, eurozone debt agencies, UniCredit Research

Chart 3 shows that for Germany and France the increase in redemptions in 2020 is a continuation of a trend started in 2018. Redemptions in Italy will stabilize at around the same level as 2019. Domestic redemptions in Spain will be EUR 10bn lower than in 2019. Domestic redemptions in Austria will be EUR 11bn lower than in 2019, but the decline will be partially offset by an increase in international redemptions (+EUR 4.5bn).

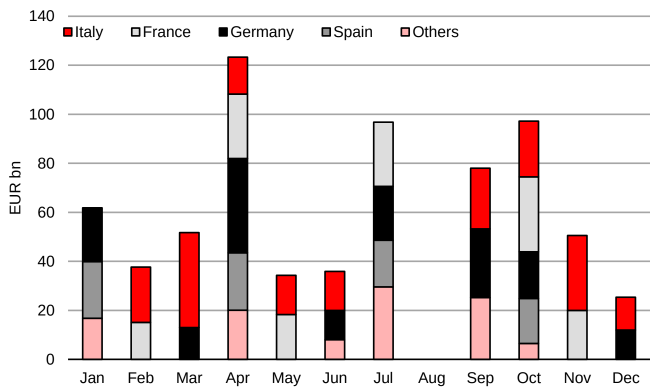
CHART 3: DOMESTIC REDEMPTIONS BY COUNTRY



Source: Bloomberg, eurozone debt agencies, UniCredit Research

Chart 4 shows these redemptions' distribution by month. In April, redemptions will exceed EUR 120bn, and they will be particularly abundant also in July and October. Due to a very liquidity-abundant April, the second quarter will be rather intense in terms of redemptions (EUR 190bn), while the first quarter will be lighter (EUR 150bn).

CHART 4:
DOMESTIC REDEMPTIONS BY COUNTRY AND BY MONTH

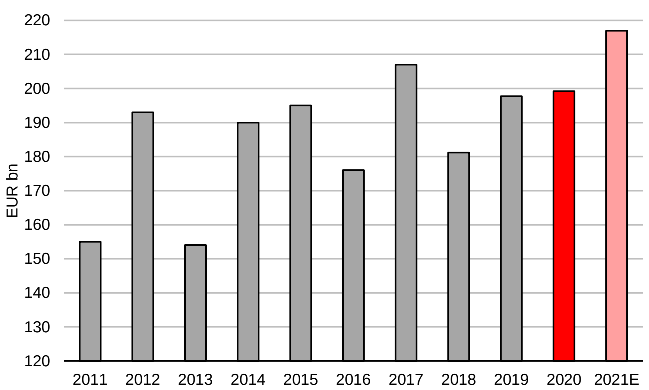


Source: Bloomberg, eurozone debt agencies, UniCredit Research

3. Italian redemptions in line with 2019

Next year, Italian redemptions of domestic bonds will amount to EUR 200bn, roughly in line with 2019. Redemptions will then increase in 2021, when they will be about EUR 20bn higher than in 2020.

CHART 5: DOMESTIC ITALIAN REDEMPTIONS



Source: Bloomberg, Italy's debt agency, UniCredit Research

A breakdown by instrument (Table 2) shows that, next year, there will be a decline in BTP redemptions, while CTZ redemptions will rise. In addition, there will be no BTPeis expiring, whereas at EUR 23bn, BTPi redemptions will be very abundant. This is the opposite of what was observed in 2019. Redemptions of international bonds will be in line with that of past years.

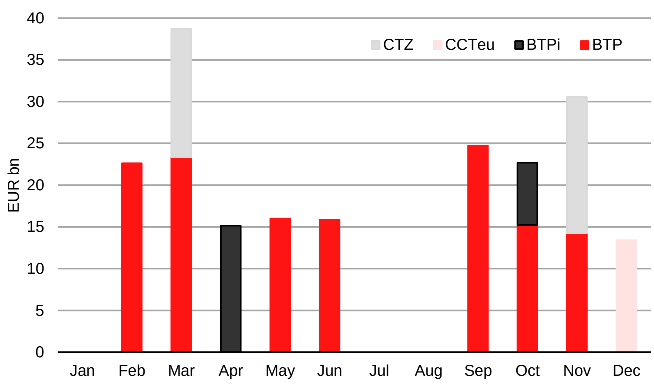
TABLE 2:
ITALIAN REDEMPTIONS

(EUR bn redemptions)	2018	2019	2020
BTP	125	143	132
BTPei	11	19	0
BTPi	0	0	23
CCTeu	22	12	13
CTZ	24	23	32
Total Domestic	**182**	**198**	**200**
International	3	4	3

Source: Bloomberg, Italian debt agency, UniCredit Research

Domestic bond redemptions will be evenly distributed across the year, although they will be rather low in 3Q20 (and concentrated in September). There will be no redemptions in January, July or August. For reference, in 2019, there were no redemptions in January, June or July. March will be the month with the largest amount of redemptions (nearly EUR 40bn), which will create a moderate incentive to front load issuance.

CHART 6:
ITALY'S DOMESTIC REDEMPTIONS BY MONTH AND CATEGORY

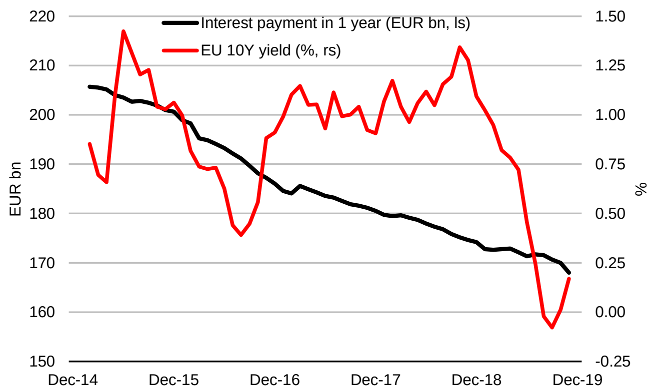


Source: Bloomberg, eurozone debt agencies, UniCredit Research

4. Coupon payment in the EMU is expected to amount to around EUR 165bn

Next year, coupon payments in the eurozone will amount to around EUR 165bn, which is roughly EUR 10bn lower than it was in 2019 (Chart 7). The decline in coupon payments, which has already been observed this year, is mainly due to a decrease in interest rates rather than to a reduction in debt. The decline in coupon payments will be more significant in France and Spain (EUR 3bn lower than in 2019).

CHART 7:
COUPON INTEREST PAYMENT IN THE EUROZONE WILL DECLINE

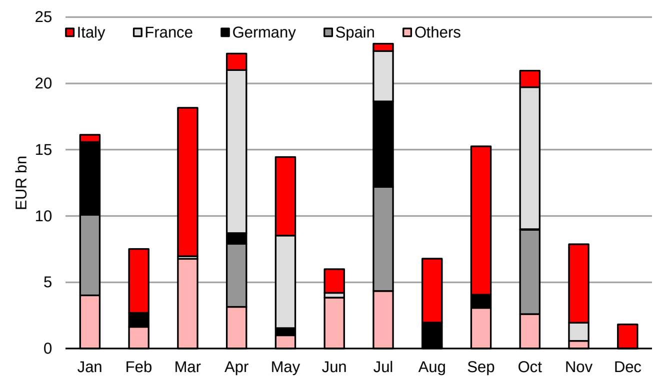


EU 10Y yield is computed as the GDP-weighted average yield in the eurozone.

Source: Bloomberg, ECB, UniCredit Research

Coupon payments will exceed EUR 20bn in April, July and October. Coupons from Italy will peak in the March-September cycle.

CHART 8: COUPON PAYMENTS BY COUNTRY AND MONTH



Source: Bloomberg, eurozone debt agencies, UniCredit Research

5. T-bill net issuance likely to remain neutral next year

No particular trends in the net issuance of T-bills have emerged over the last few years in the main countries in the eurozone.

TABLE 3: T-BILLS ARE EXPECTED TO PLAY A MARGINAL ROLE IN TERMS OF FUNDING SOURCES

	2018	2019	2020E
Italy	0.9	7.0	0.0
Germany	4.0	0.0	0.0
France	-13.6	4.0	10.0
Spain	-8.4	-1.0	0.0

Source: Bloomberg, eurozone debt agencies, UniCredit Research

For next year, we do not expect a sizeable change in issuance strategy; although developments in demand for short-term paper will be affected by the market impact of tiering and by any change in the tiering multiplier. France has already announced that it will increase its stock of T-bills, in line with 2019. Italy has enlarged its stock of BOTs in 2019. Next year BOTs issuance policy will depend on how domestic investors' appetite for short-maturities debt will be affected by tiering (note that Italy has very little amount of excess liquidity). Germany and Spain are likely to keep their stocks of T-bills unchanged compared to 2019.

6. Issuance in 2020

We expect funding needs in the euro area to increase in 2020 by around EUR 40bn compared to 2019 (from EUR 870bn to EUR 910bn). This is the result of an increase in domestic bond redemptions (EUR +15bn) and in the cash deficit (EUR +14bn) and an increase (by EUR 12bn) in other funding needs (e.g. repayment of IMF/European Stability Mechanism package, build up of cash balance).

We see the risks to our estimate of funding needs next year as broadly balanced.

Turning to funding sources, we expect EUR 860bn (out of EUR 910bn in financing needs) to be financed via the issuance of medium and long-term domestic bonds, around EUR 15-20bn to be financed via positive net supply of T-bills (mainly from France) and EUR 35bn to be financed via the issuance of other instruments (retail bonds, international bonds, etc.). Compared to 2019, we expect the contribution of net domestic bond issuance to increase (by around EUR 30bn).

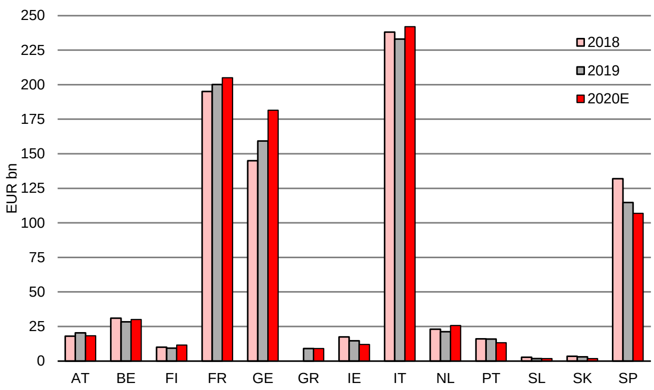
TABLE 4: FUNDING NEEDS AND SOURCES IN 2020

	Funding Needs				Funding Sources			
	Redemptions	Cash deficit	Others	Tot.	M/L Issuance	MM Net supply	Others	Tot
AT	19	0	0	20	18	0	2	20
BE	21	11	0	32	30	0	2	32
FI	15	3	0	18	12	6	1	18
FR	136	93	1	231	205	10	16	231
GE	166	15	0	181	181	0	0	181
GR*	0	-2	11	9	9	0	0	9
IE	17	-1	7	23	12	2	10	23
IT	203	44	0	247	242	0	5	247
NL	30	-4	0	26	26	0	0	26
PT	8	2	4	13	13	0	0	13
SL	2	0	0	2	2	0	0	2
SK	3	-1	0	2	2	0	0	2
SP	84	23	0	107	107	0	0	107
TOT	704	184	22	911	859	17	35	911

*Despite negative net funding needs, we expect Greece to issue an amount of domestic bonds in line with 2019, which would contribute towards the creation of a cash buffer.

Source: Bloomberg, eurozone debt agencies, UniCredit Research

CHART 9: GROSS DOMESTIC ISSUANCE IN THE EUROZONE



Source: Bloomberg, eurozone debt agencies, UniCredit Research

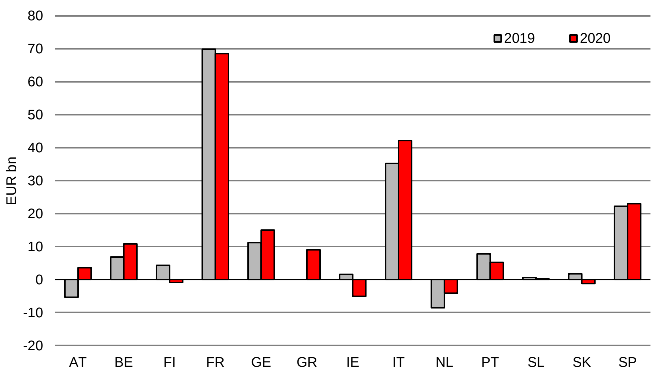
As shown by Chart 9, compared to 2019, gross issuance next year is likely to increase sizably in Germany (by EUR 22bn, mainly due to higher redemptions), and will go up moderately in France and in the Netherlands (EUR 5bn up), as well as in Italy (EUR 9bn).

In Italy, the increase in financing needs in 2020 vs. 2019 will be moderate (+EUR 7bn, EUR 2bn in redemptions and EUR 5bn in deficit), but we expect a slightly different funding mix compared to 2019, with T-bills net supply neutral and funding in other instruments (mainly dollar-denominated bonds) declining. In this context, we expect domestic M/L bond issuance net of buybacks to increase by EUR 9bn.

Conversely, gross issuance in Spain is likely to slow (EUR 8bn down) due to lower redemptions and in Portugal (EUR 3bn down) due to a lower deficit.

We expect net bond issuance to increase by almost EUR 20bn next year, with Austria, Italy, Germany and the Netherlands contributing to the increase and Finland, Ireland and Portugal partially offsetting their positive contribution.

CHART 10: NET DOMESTIC ISSUANCE IN THE EUROZONE

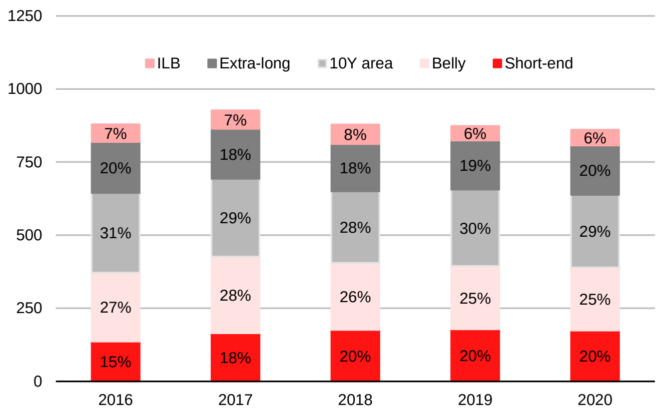


Source: Bloomberg, eurozone debt agencies, UniCredit Research

In terms of distribution by bucket of domestic issuance (see Chart 11) we expect little change compared to 2019: the portion of funding at the extra-long end might increase, but only marginally and the portion of funding at the 10Y might decline slightly to offset this increase. The important trend to highlight is that since the start of QE1, issuance at the extra-long end of the curve has remained sizeable as a portion of funding for Eurozone issuers and we do not expect this trend to change in 2020.

We expect Portugal, Finland and Austria to register an increase in the maturity of their issuance in 2020 compared to 2019, while Ireland and to a lesser extent Belgium, should experience a decline in maturity of their issuance, as they are unlikely to issue new 30Y benchmarks next year. Notably, we expect Germany to have a similar funding strategy, and hence a similar average maturity, as this year.

CHART 11:
DISTRIBUTION OF DOMESTIC BOND ISSUANCE BY BUCKETS



Source: Eurozone debt agencies, UniCredit Research

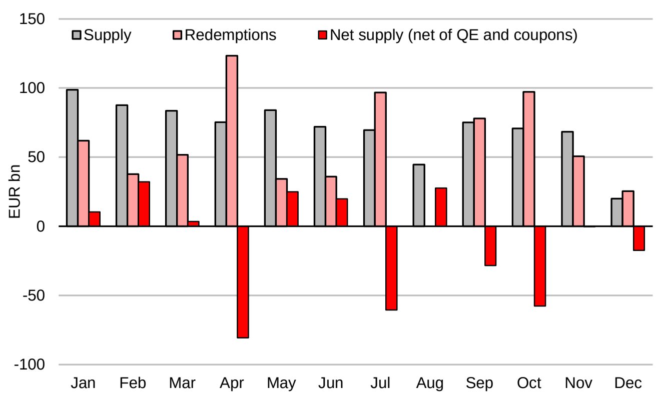
TABLE 5: MATURITY OF DOMESTIC BOND ISSUANCE BY COUNTRY: 2020 VS. 2019

	2019	2020	Change
AT	13.3	16.6	3.2
BE	16.1	14.8	-1.2
FI	10.2	13.8	3.6
FR	11.6	11.4	-0.2
GE	7.8	7.7	0.0
IE	18.0	12.1	-5.9
IT	9.5	9.6	0.1
NL	11.9	13.4	1.4
PT	10.5	14.3	3.8
SL	10.0	10.0	0.0
SK	12.5	13.6	1.1
SP	9.5	10.4	0.9

Source: Eurozone debt agencies, UniCredit Research

In terms of monthly distribution, based on what we have observed during the last three years, we expect the first quarter of 2020 to be the most intense. However, as shown in Chart 12, redemptions will support auctions, increasing market liquidity. Moreover, if one also includes coupons and the ECB's net purchases, liquidity conditions are likely to improve even more.

CHART 12: THE ECB'S NET PURCHASES ARE EXPECTED TO BOOST EGB LIQUIDITY

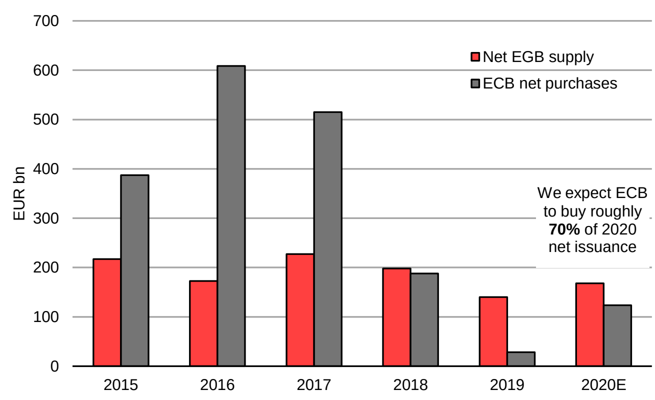


Source: Bloomberg, eurozone debt agencies, UniCredit Research

7. The impact of QE

Next year, the new round of QE will likely affect issuers decisions, especially with respect to the funding mix and the maturity of issuance.

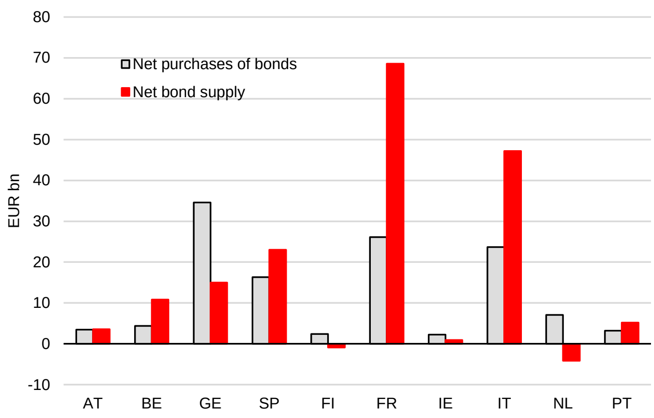
CHART 13: NET SUPPLY AND PSPP



Source: Bloomberg, eurozone debt agencies, UniCredit Research

The share of net issuance likely to be bought by the ECB next year is 70%. As usual, the distribution will vary from one jurisdiction to another. For example, QE purchases are likely to have a significant impact for Germany, Austria and the Netherlands where they will most likely exceed net issuance.

CHART 14:
NET DOMESTIC M/L BOND SUPPLY* AND PSPP BY COUNTRY



*Bond supply only includes government bonds, while it does not include agencies or states bonds issuance.

Source: Bloomberg, eurozone debt agencies, UniCredit Research

8. New 10Y and extra-long benchmarks

TABLE 6: NEW NOMINAL AND INFLATION LINKED EXTRA-LONG BONDS EXPECTED

Country	Issued in 2019	Expected in 2020
BE	30Y (OLO 1.7% Jun50)*	15Y*
FI	None	30Y*
FR	30Y (OAT 1.50% May50)*	15Y (possibly green bonds)*
	10Y OATei (OATei 0.10% Mar29)	10Y OATi
GE	30Y (Bund Aug50)	None
	None	15Y Bundei
IE	30Y (IRISH 1.50% May50)*	None
NL	20Y (DSL 0.50% Jan40)	30Y
PT	None	15Y*
SK	None	30Y*
SP	15Y (SPGB 1.85% Jul35)*	30Y*

*sale via a syndicated deal

Source: eurozone debt agencies, UniCredit Research

- We expect **Belgium** to sell a new 10Y OLO in January, along with a new 15Y OLO in the first half of next year.
- **Finland** is likely to sell a new 10Y benchmark. In addition, it might issue a new 30Y RFGB.
- We expect **France** to issue two new 10Y OATs, as it has done this year. Moreover, France will likely issue a new 15Y OAT, possibly a green bond. In addition, France will continue to tap extra-long OATs, such as the 30Y and the 50Y benchmark.
- After having issued its first 30Y Bund with a coupon set to 0%, we do not expect **Germany** to sell a new 30Y benchmark. In terms of other benchmarks, it will likely maintain the current setup by issuing four new Schatzs, two new Obls and two new 10Y Bunds. However, next year, along with the traditional lines, Germany is expected to launch green bonds with maturities of between five and ten years.
- **Ireland** is likely to sell a new 10Y benchmark at the beginning of next year and to tap existing extra-long benchmarks.
- We expect **the Netherlands** to issue a new 10Y DSL and a new 30Y DSL. Indeed, as stated in November, the Dutch treasury aims to extend debt maturity in the coming years.
- **Portugal** might exploit the particularly favorable environment (good support from ECB's QE2 and rating improvement) to lengthen debt maturity. In this respect, we expect Portugal to issue a new 15Y benchmark, along with a new 10Y PBG.
- **Slovakia** is likely to issue a new 30Y bond along with a new 10Y bond.
- We expect **Slovenia** to issue a new 10Y benchmark.
- In line with what it has done in the past, **Spain** will likely issue two new 10Y benchmarks. Moreover, we expect it to sell a new 30Y SPGB. In addition, Spain is likely to tap the current 15Y and 50Y benchmarks. If demand is abundant, Spain might decide to issue a new 50Y benchmark.

9. New benchmarks: focus on Italy and Austria

We expect **Italy** to issue one new line of CCTeu and two new lines of 3Y BTP, 5Y BTP, 7Y BTP, 10Y BTP and CTZ next year. 2019 has been an impressive year for the Italian treasury which has successfully conducted six syndicated deals: new 15Y, 30Y, 20Y, 10Y ILB, dollar-denominated bonds and tap of 50Y BTP. Next year, we expect Italy to issue a new 15Y BTP and a new 30Y BTP possibly in 1Q. In addition, a new 50Y BTP and a new extra-long BTPei are possible. Last but not least, the Italian Treasury has said that they aim at issuing more dollar-denominated bonds next year. To wrap up, based on our estimates, next year Italy will hold five syndicated deals, slightly less than those conducted this year. Importantly, the Italian Treasury has recently hinted that in 2H 2020 it will likely issue its first green bond.

TABLE 7: ITALY'S EXPECTED BENCHMARKS

Benchmark	Issued in 2019	Expected in 2020
3Y BTP	1Q19: BTP Jul22 3Q19: BTP Jan23	2 new lines (1Q20 and 3Q20)
5Y BTP	2Q19: BTP Jul24 4Q19: BTP Feb25	2 new lines (2Q20 and 4Q20)
7Y BTP	2Q19: BTP Jul26 4Q19: BTP Jan27	2 new lines (2Q20 and 4Q20)
10Y BTP	1Q19: BTP Aug29 3Q19: BTP Apr30	2 new lines (1Q20 and 3Q20)
15Y BTP	1Q19: BTP Mar35*	1 new line* (1Q20)
20Y BTP	2Q19: BTP Mar40*	Reopening of the current benchmark
30Y BTP	1Q19: BTP Sep49*	1 new line* (1Q20)
50Y BTP	3Q19: Reopening of BTP Mar67*	1 new line* (2H20)
CTZ	2Q19: CTZ Jun21 4Q19: CTZ Nov21	2 new lines (2Q20 and 4Q20)
CCTeu	1Q19: CCTeu Jan25	1 new line (1Q20)
BTPei	4Q19: BTPei May30*	15Y+ (1H20)*
BTPi	4Q19: BTPi Oct27	1 new line

*sale via a syndicated deal
Source: Bloomberg, eurozone debt agencies, UniCredit Research

In line with past years, **Austria** is likely to issue a new 10Y RAGB at the beginning of next year to replace RAGB 0.5% Feb29. In addition, we expect Austria to issue a new 30Y benchmark, which would replace RAGB 1.50% Feb47. Furthermore, Austria is likely to reopen other extra-long RAGBs.

TABLE 8: AUSTRIA'S EXPECTED BENCHMARKS

Benchmark	Issued in 2019	Expected in 2020
5Y RAGB	3Q19: RAGB Jul24*	-
10Y RAGB	1Q19: RAGB 0.5% Feb29*	1 new line* (1Q20)
30Y RAGB	-	1 new line*

*sale via a syndicated deal
Source: Bloomberg, eurozone debt agencies, UniCredit Research

10. Net supply of inflation linked bonds (excluding BTP Italia) likely to turn negative

The current environment, characterized by low inflation and subdued inflation expectations, means that demand for inflation linked bonds is not particularly healthy. With regard to both European and domestic inflation linked bonds (i.e. BTP Italia and OATi), in 2019, eurozone issuers have sold around EUR 50bn worth, compared to EUR 60bn in 2018. Net supply has been almost neutral this year.

In 2020, inflation linked bond redemptions from Italy, France and Germany will amount to EUR 67bn, including BTP Italia, more than EUR 10bn higher than this year.

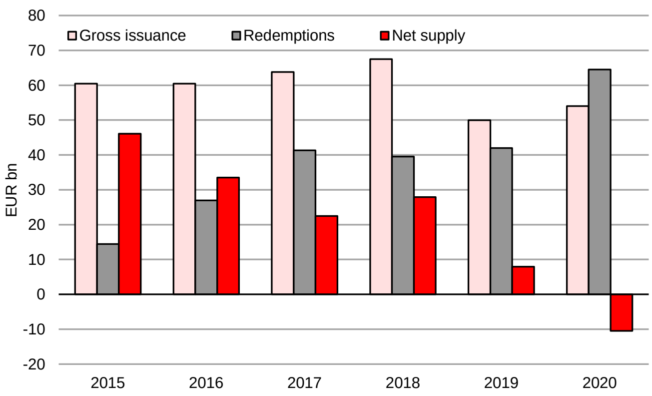
As we do not expect to observe particular improvement in inflation expectations, appetite for inflation linked bonds is unlikely to grow. Hence, for next year, we have penciled in a share of funding via Inflation linked bonds that is similar to that of 2019 (6%, or around EUR 55bn, including domestic inflation bonds).

In light of the abundant redemptions, net supply of inflation linked bonds is likely to be negative next year.

Looking at each subcategory the net supply will be positive for Spanish linkers, for OATis and for BTPeis. On the other hand, the net supply will be negative for Bundeis, OATeis and BTPis. In particular, focusing on BTP Italia, next year, more than EUR 20bn of BTP Italia will expire and we expect only EUR 8bn of issuance, resulting in strongly negative net supply of BTP Italia.

While negative net supply in ILBs would in theory be supportive of the asset class, as we argued, low inflation and inflation expectations do not make it a very appealing instrument for investors.

CHART 15: NET SUPPLY OF INFLATION LINKED BONDS IS LIKELY TO TURN NEGATIVE NEXT YEAR



Source: Bloomberg, eurozone debt agencies, UniCredit Research

In terms of new benchmarks, we expect Italy to sell a new BTPei with a maturity of 15-20Y. In addition, we expect that Italy will issue a new BTP Italia, likely with maturity similar to the BTP Italia sold this year. France is also likely to issue a new OATi, possibly with a 10-year tenor, that will be indexed to domestic inflation. We expect a new linker to also come from Germany, which might issue Bundei 0.50% Apr30 by selling a new 15Y benchmark.

Authors

Chiara Cremonesi, FI Strategist (UniCredit Bank, London)
+44 207 826-1771
chiara.cremonesi@unicredit.eu

Francesco Maria Di Bella, FI Strategist (UniCredit Bank, Milan)
+39 02 8862-0850
francescomaria.dibella@unicredit.eu

Editor

Dr. Luca Cazzulani, Deputy Head of FI Strategy (UniCredit Bank, Milan)
+39 02 8862-0640
luca.cazzulani@unicredit.eu

Previous editions of Rates Perspectives

» Estimating and discussing the term premium on German bonds - 4 November 2019
» BTPs caught between macro fundamentals and appetite for carry trades - 2 October 2019
» ILBs pay higher Z-spreads than nominal bonds: We discuss the main drivers - 11 September 2019
» ECB´s QE 2: Number crunching and trade ideas - 24 July 2019
» BTPi breakeven curve: Too flat and too low - 10 July 2019
» Spain: Still a periphery country, judging from its foreign investors´ base - 17 June 2019
» SOFR and SONIA derivative markets: Small in size but growing - 24 May 2019
» Flows of eurozone investors into USTs: another factor keeping UST real yields low - 8 May 2019
» ECB tiering and money market rates: The devil is in the details - 16 April 2019
» Who are the foreign investors in Italian government debt? A breakdown by geography and institution - 3 April 2019
» Bund-swap has lagged Schatz in cheapening: why we expect a correction - 18 March 2019
» Keeping in place the Fed´s current monetary policy framework will likely benefit USTs - 4 March 2019
» Euribor und ESTER: Wo stehen wir, wohin gehen wir - 19 February 2019
» Euribor and ESTER: Where we stand, where we´re going - 15 February 2019
» Our scorecard for EMU countries: A useful tool for detecting misalignments in EGBs valuations - 30 January 2019
» Six years after the introduction of CACs in the eurozone: Analyzing the effect on pricing - 10 January 2019
» Supply Outlook 2019: primary market activity to gradually shift to shorter maturities - 6 December 2018
» Scarcity of Bunds to keep real yields low - 29 October 2018
» Measuring rating expectations for BTPs - 4 October 2018
» Scarcity of Bunds (and safe eurozone paper) will remain an issue in 2019 - 17 September 2018
» CCTs: a good buying opportunity on a medium-term horizon - 30 July 2018
» ECB QE reinvestments: maturity matters - 18 July 2018
» ECB forward guidance: we like 5/30Y flatteners and sovereign credit-risk exposure - 2 July 2018
» Investing in USTs: to hedge or not to hedge? - 18 June 2018
» Who holds the BTPs? Dissecting Italian public debt investor base - 5 June 2018
» Italy funding, progress, cost and outlook: as good as it gets - 17 May 2018
» A model for POLGB yields - 3 May 2018
» 10Y BTP-SPGB spread: wide compared to fundamentals but convergence to fair value is tricky - 19 April 2018
» T-LTRO II early repayments: why we are not concerned - 5 April 2018
» US 10Y fair value model part II: breakeven inflation - 22 March 2018
» Upside risks to the US term premium - 8 March 2018
» US real yields are in line with our fair-value model - 26 February 2018
» Foreign ownership of EM local currency debt: trends, indices and effects on FX and yields - 8 February 2018
» EUR-USD cross currency: no normalization in sight - 25 January 2018
» Italy´s 2018 funding: how to trade it - 11 January 2018
» We prefer credit to duration risk, especially at the longer maturities - 7 December 2017
» CEE rates are unlikely to spike in 2018 - 23 November 2017
» UST market: will foreign investors come to the rescue? - 9 November 2017
» Utilizing typical Bund futures trading patterns around major events - 25 October 2017
» Real natural rate (r*) estimates suggest that 10Y real Bund yields and swap rates trade at ´absurdly´ low levels - 12 October 2017
» The empirical trade-off between rating and credit spreads - 28 September 2017
» PSPP reinvestment will pick up next year, partly offsetting tapering - 14 September 2017
» European bond markets: macro revision trend remains a key ingredient for timing purposes - 1 September 2017
» The ´T-word´: lessons from the US experience - 20 July 2017
» 10/30Y spreads the two sides of the Atlantic: play it tactically - 7 July 2017
» Inflation-linked bonds: striking the right balance between inflation projections and current ILB valuations - 23 June 2017
» A hit-and-run bond-market approach that is based on economic-surprise indices - 13 June 2017
» Even with tapering, QE will buy most of next year net supply - 26 May 2017
» ECB´s QE: Is scarcity of German paper for real? - 16 May 2017
» The best way to track ECB rate-hike expectations - 27 April 2017

Legal Notices

Glossary

A comprehensive glossary for many of the terms used in the report is available on our website: link

Disclaimer

Our recommendations are based on information obtained from or are based upon public information sources that we consider to be reliable, but for the completeness and accuracy of which we assume no liability. All information, estimates, opinions, projections and forecasts included in this report represent the independent judgment of the analysts as of the date of the issue unless stated otherwise. We reserve the right to modify the views expressed herein at any time without notice. Moreover, we reserve the right not to update this information or to discontinue it altogether without notice. This report may contain links to websites of third parties, the content of which is not controlled by UniCredit Bank. No liability is assumed for the content of these third-party websites.

This report is for information purposes only and (i) does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any financial, money market or investment instrument or any security, (ii) is neither intended as such an offer for sale or subscription of or solicitation of an offer to buy or subscribe for any financial, money market or investment instrument or any security nor (iii) as marketing material within the meaning of applicable prospectus law . The investment possibilities discussed in this report may not be suitable for certain investors depending on their specific investment objectives and time horizon or in the context of their overall financial situation. The investments discussed may fluctuate in price or value. Investors may get back less than they invested. Fluctuations in exchange rates may have an adverse effect on the value of investments. Furthermore, past performance is not necessarily indicative of future results. In particular, the risks associated with an investment in the financial, money market or investment instrument or security under discussion are not explained in their entirety.

This information is given without any warranty on an "as is" basis and should not be regarded as a substitute for obtaining individual advice. Investors must make their own determination of the appropriateness of an investment in any instruments referred to herein based on the merits and risks involved, their own investment strategy and their legal, fiscal and financial position. As this document does not qualify as an investment recommendation or as a direct investment recommendation, neither this document nor any part of it shall form the basis of, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever. Investors are urged to contact their bank's investment advisor for individual explanations and advice.

Neither UniCredit Bank AG, UniCredit Bank AG London Branch, UniCredit Bank AG Milan Branch, UniCredit Bank AG Vienna Branch, UniCredit Bank Austria AG, UniCredit Bulbank, Zagrebačka banka d.d., UniCredit Bank Czech Republic and Slovakia, ZAO UniCredit Bank Russia, UniCredit Bank Czech Republic and Slovakia Slovakia Branch, UniCredit Bank Romania, UniCredit Bank AG New York Branch nor any of their respective directors, officers or employees nor any other person accepts any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection therewith.

This report is being distributed by electronic and ordinary mail to professional investors, who are expected to make their own investment decisions without undue reliance on this publication, and may not be redistributed, reproduced or published in whole or in part for any purpose.

This report was completed and first published on 10 December 2019 at 10:28.

Responsibility for the content of this publication lies with:

UniCredit Group and its subsidiaries are subject to regulation by the European Central Bank

a) UniCredit Bank AG (UniCredit Bank, Munich or Frankfurt), Arabellastraße 12, 81925 Munich, Germany, (also responsible for the distribution pursuant to §34b WpHG). Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany.

b) UniCredit Bank AG London Branch (UniCredit Bank, London), Moor House, 120 London Wall, London EC2Y 5ET, United Kingdom. Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany and subject to limited regulation by the Financial Conduct Authority, 12 Endeavour Square, London E20 1JN, United Kingdom and Prudential Regulation Authority 20 Moorgate, London, EC2R 6DA, United Kingdom. Further details regarding our regulatory status are available on request.

c) UniCredit Bank AG Milan Branch (UniCredit Bank, Milan), Piazza Gae Aulenti, 4 - Torre C, 20154 Milan, Italy, duly authorized by the Bank of Italy to provide investment services.

Regulatory authority: “Bank of Italy”, Via Nazionale 91, 00184 Roma, Italy and Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany.

d) UniCredit Bank AG Vienna Branch (UniCredit Bank, Vienna), Rothschildplatz 1, 1020 Vienna, Austria. Regulatory authority: Finanzmarktaufsichtsbehörde (FMA), Otto-Wagner-Platz 5, 1090 Vienna, Austria and subject to limited regulation by the “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany. Details about the extent of our regulation by the Bundesanstalt für Finanzdienstleistungsaufsicht are available from us on request.

e) UniCredit Bank Austria AG (Bank Austria), Rothschildplatz 1, 1020 Vienna, Austria. Regulatory authority: Finanzmarktaufsichtsbehörde (FMA), Otto-Wagner-Platz 5, 1090 Vienna, Austria

f) UniCredit Bulbank, Sveta Nedelya Sq. 7, BG-1000 Sofia, Bulgaria. Regulatory authority: Financial Supervision Commission (FSC), 16 Budapeshta str., 1000 Sofia, Bulgaria

g) Zagrebačka banka d.d., Trg bana Josipa Jelačića 10, HR-10000 Zagreb, Croatia. Regulatory authority: Croatian Agency for Supervision of Financial Services, Franje Račkoga 6, 10000 Zagreb, Croatia

h) UniCredit Bank Czech Republic and Slovakia, Želetavská 1525/1, 140 92 Praga 4, Czech Republic. Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praga 1, Czech Republic

i) ZAO UniCredit Bank Russia (UniCredit Russia), Prechistenskaya nab. 9, RF-119034 Moscow, Russia. Regulatory authority: Federal Service on Financial Markets, 9 Leninsky prospekt, Moscow 119991, Russia

j) UniCredit Bank Czech Republic and Slovakia, Slovakia Branch, Šancova 1/A, SK-813 33 Bratislava, Slovakia. Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praha 1, Czech Republic and subject to limited regulation by the National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia. Regulatory authority: National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia

k) UniCredit Bank Romania, Bucharest 1F Expozitiei Boulevard, 012101 Bucharest 1, Romania. Regulatory authority: National Bank of Romania, 25 Lipscani Street, 030031, 3rd District, Bucharest, Romania

l) UniCredit Bank AG New York Branch (UniCredit Bank, New York), 150 East 42nd Street, New York, NY 10017. Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany and New York State Department of Financial Services, One State Street, New York, NY 10004-1511

Further details regarding our regulatory status are available on request.

ANALYST DECLARATION

The analyst’s remuneration has not been, and will not be, geared to the recommendations or views expressed in this report, neither directly nor indirectly.

All of the views expressed accurately reflect the analyst’s views, which have not been influenced by considerations of UniCredit Bank’s business or client relationships.

POTENTIAL CONFLICTS OF INTERESTS

You will find a list of keys for company specific regulatory disclosures on our website https://www.unicreditresearch.eu/index.php?id=disclaimer.

RECOMMENDATIONS, RATINGS AND EVALUATION METHODOLOGY

You will find the history of rating regarding recommendation changes as well as an overview of the breakdown in absolute and relative terms of our investment ratings, and a note on the evaluation basis for interest-bearing securities on our website https://www.unicreditresearch.eu/index.php?id=disclaimer and https://www.unicreditresearch.eu/index.php?id=legalnotices.

ADDITIONAL REQUIRED DISCLOSURES UNDER THE LAWS AND REGULATIONS OF JURISDICTIONS INDICATED

You will find a list of further additional required disclosures under the laws and regulations of the jurisdictions indicated on our website https://www.unicreditresearch.eu/index.php?id=disclaimer.

E 19/3

UniCredit Research*

Strategy Research

Erik F. Nielsen
Group Chief Economist
Global Head of CIB Research
+44 207 826-1765
erik.nielsen@unicredit.eu

Dr. Ingo Heimig
Head of Research Operations
& Regulatory Controls
+49 89 378-13952
ingo.heimig@unicredit.de

FI Strategy Research

Michael Rottmann
Head
+49 89 378-15121
michael.rottmann1@unicredit.de

Dr. Luca Cazzulani
Deputy Head
+39 02 8862-0640
luca.cazzulani@unicredit.eu

Francesco Maria Di Bella
FI Strategist
+39 02 8862-0850
francescomaria.dibella@unicredit.eu

Chiara Cremonesi
FI Strategist
+44 207 826-1771
chiara.cremonesi@unicredit.eu

Kornelius Purps
FI Strategist
+49 89 378-12753
kornelius.purps@unicredit.de

FX Strategy Research

Roberto Mialich
FX Strategist
+39 02 8862-0658
roberto.mialich@unicredit.eu

Credit Strategy Research

Holger Kapitza
Credit & High Yield Strategy
+49 89 378-28745
holger.kapitza@unicredit.de

Dr. Stefan Kolek
EEMEA Corporate Credits & Strategy
+49 89 378-12495
stefan.kolek@unicredit.de

Equity Strategy Research

Christian Stocker, CEFA
Lead Equity Sector Strategist
+49 89 378-18603
christian.stocker@unicredit.de

Cross Asset Strategy Research

Elia Lattuga
Deputy Head of Strategy Research
Cross Asset Strategist
+44 207 826-1642
elia.lattuga@unicredit.eu

UniCredit Research, Corporate & Investment Banking, UniCredit Bank AG, Am Eisbach 4, D-80538 Munich, globalresearch@unicredit.de
Bloomberg: UCCR, Internet: www.unicreditresearch.eu

SR 19/5

*UniCredit Research is the joint research department of UniCredit Bank AG (UniCredit Bank, Munich or Frankfurt), UniCredit Bank AG London Branch (UniCredit Bank, London), UniCredit Bank AG Milan Branch (UniCredit Bank, Milan), UniCredit Bank AG Vienna Branch (UniCredit Bank, Vienna), UniCredit Bank Austria AG (Bank Austria), UniCredit Bulbank, Zagrebačka banka d.d., UniCredit Bank Czech Republic and Slovakia, ZAO UniCredit Bank Russia (UniCredit Russia), UniCredit Bank Romania.