

The European Credit Strategist

The Green revolution

Credit Analysis

It's NIRP "manias" again

New decade...but the same old bond "manias" in Europe. Year-to-date: IG credit inflows are annualizing \$170bn, IG issuance is up 25% versus last year, CCC-rated bond returns are annualizing 60%, and ECB QE is "going global" with Lagarde buying a much higher share of foreign bonds. Negative rates, coupled with improving EM growth dynamics, is keeping FOMO behaviour alive in Europe. The end of the credit rally, and the end of the credit cycle, is when central banks take financial repression away...

The #1 risk

A rates tantrum ("whiff" of inflation, or financial stability concerns driving hawkish CBs) would be challenging for credit. European companies have done a poor job in terming-out debt recently, instead letting their capital structures become *more* short-dated during the ECB QE era. In fact, it's been Reverse Yankees that have added the duration in Euro IG markets, not European issuers. A rates shock could lead to indigestion/refi concerns in sectors with lots of front-end debt (consumers, industrials and autos).

The decade of "climate", and the green revolution

This was the week where the world collectively came together in Davos to emphasize the enormity of the climate challenge ahead. Our comprehensive primers on climate change (see [here](#) and [here](#)) argue that this is the make-or-break decade for tackling it, and failure to do so may lead to irreversible damage to humanity, the environment and the economy. Global warming has yet to be restrained and greenhouse gas emissions continue to rise. Yet, curbing emissions, from here, will likely require markets, tax policy, technology, politicians and society to come together with a magic formula. Our Thematic team argue that efforts to achieve climate success will have profound implications for financial markets this decade.

Greening the CSPP?

In Europe, green "assets" have rallied this week, with the Davos backdrop likely playing its part. Moreover, high-grade green bonds rallied conspicuously, spurred-on by bullish ECB newsflow. Lagarde flagged that the ECB will look at available options to be more *intrusive* and *active*, in relation to the Corporate Sector Purchase Programme, and its ability to forge a climate change response. While CSPP is not specifically a "Green QE", we find evidence that the ECB have been actively buying green credit...if not favouring the sector already. Green spreads have clearly outperformed since CSPP2.0.

But if ECB credit buying was to, more formally, take on a "greener" tilt, we see it having some big relative value implications. Utility Bonds would probably get an even greater buying focus from the central bank. Conversely, autos, industrials and telecoms (to some extent) might see a weaker buying focus. Where are CSPP-eligible green bonds still wide for investors? Tech, transport and energy sectors look interesting here, we think.

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The Green revolution

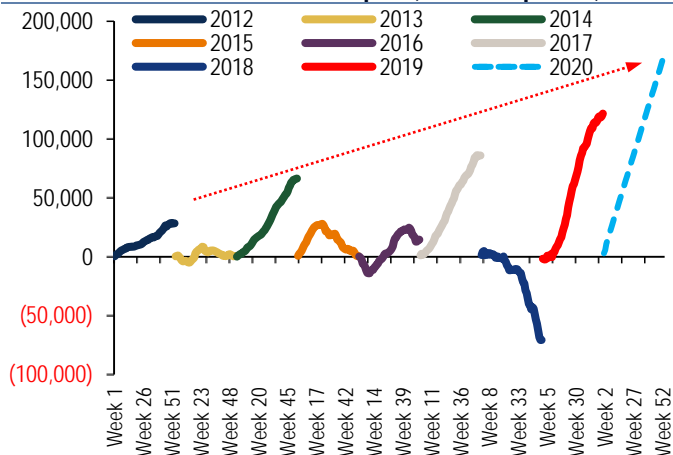
The 2010s ended with a bang...but not the sell-off type. In fact, markets surged last year, producing some of their best returns of the decade (long-end Italian government debt up ~20%, French equities the best since '99, Italian stock returns the highest since '98, etc). What helped markets save their best till last? The “white knight” for the ages: central banks.

The 2020s, so far, feel no different. In fact, the thirst for yield across markets seems as intense as ever. The reality is that financial repression (negative rates) has changed the game, and is forcing oodles of money up the “value chain”. Note in chart 1 that IG inflows are getting more powerful every year that negative rates lives on in Europe. Extrapolating YTD, 2020 is now on course to see a record **€170bn** of credit inflows.

In fact, Q1 '20 has all the hallmarks of a “mania” again:

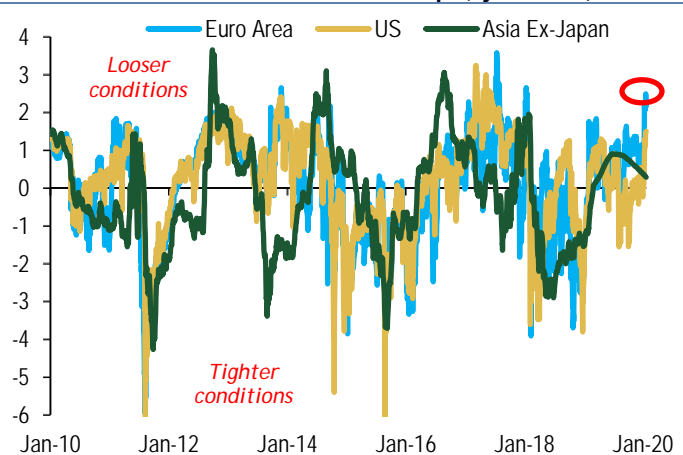
- Note Eurozone financial conditions have become super-loose this year (chart 2),
- Global central banks remain in rate cutting mode, with 4 cuts YTD (70 annualized), being driven this time by Emerging Markets (chart 3),
- The impact of ECB QE is percolating more globally, with Lagarde now buying a lot more bonds from foreign issuers, relative to QE1 (chart 4),

Chart 1: Euro IG inflows off to a torrid pace (2020 extrapolated)



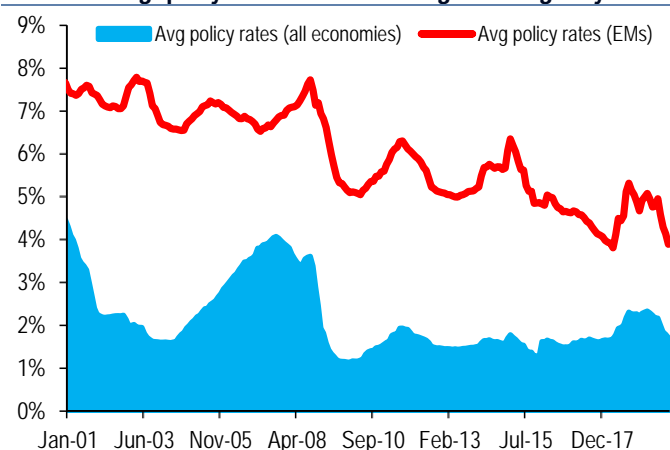
Source: BofA Global Research, EPFR Global, Eur mn. Cumulative flows every year, 2020 extrapolated.

Chart 2: Loose financial conditions now in Europe (1yr Z-scores)



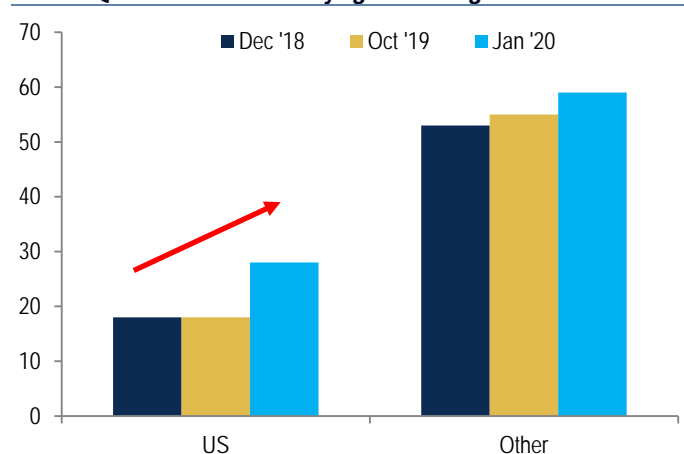
Source: BofA Global Research, Bloomberg Financial Conditions indices. Rolling 1yr Z-scores.

Chart 3: Average policy rates: EM's now leading the easing story



Source: BofA Global Research, Haver. Large sample of global central banks. GDP-weighted policy rates.

Chart 4: QE for the world: ECB buying more foreign issuers than before



Source: BofA Global Research, ECB. Number of bonds issued by non-Eurozone corps. held by ECB.

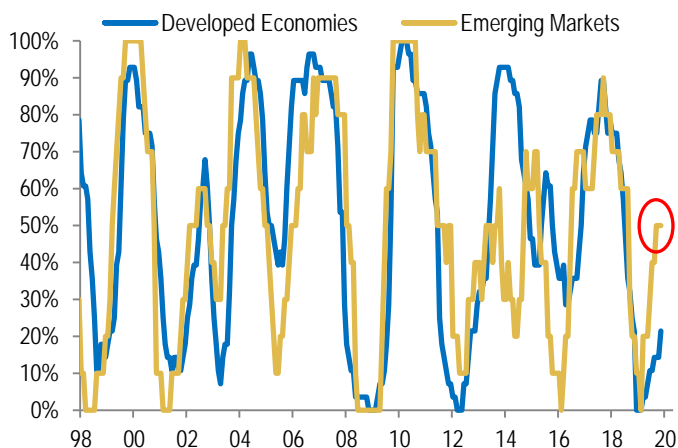


- And encouraging Emerging Market data points (note Bloomberg's EM data surprise index is jumping), bodes well for Euro credit too, given the extent to which European companies have expanded their EM sales exposure over the last decade.

And the hubris data points go on: high-grade supply in Europe is already up 25% YoY, CCC returns are already at 3% for January, and European equity vol flirted with an all-time low last Friday.

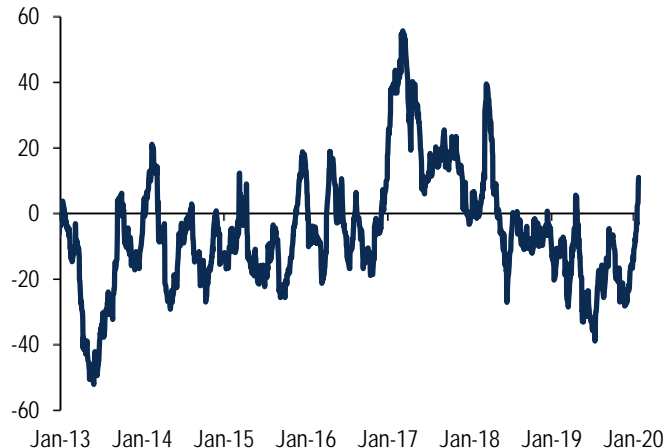
What ends the incessant bid for risk...? When financial repression is taken away. As our economists [highlight](#), the ECB strategy view is likely to be very noisy, and a source of hawkish headlines this year. But so far, markets read the ECB as bullish (note, European rates vol down materially this year). Yet, as we argue later, rates vol becomes a challenge for credit to navigate, given corporate debt markets are becoming front-loaded again.

Chart 5: % of OECD Lead Indicators posting +ve YoY growth: EMs up



Source: BofA Global Research, Bloomberg, OECD. Big sample of economies.

Chart 6: Data surprise indices bouncing for EMs now



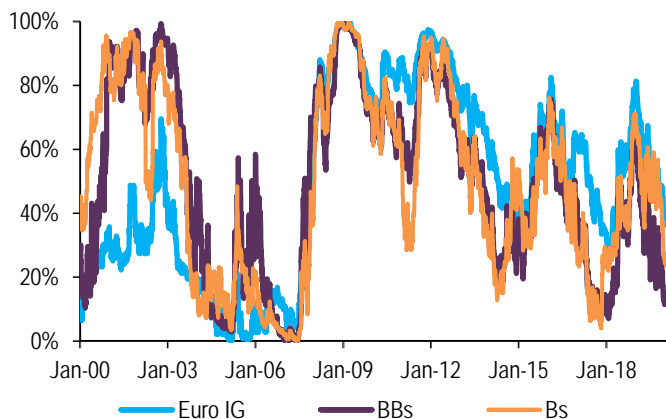
Source: BofA Global Research, Bloomberg, data surprise indices.

The Joy of Missing Out

Hubris, and the reach for yield, has left credit valuations in a tougher spot now. Year-to-date, most parts of the market have lurched tighter, albeit with beta sectors coming out on top (sub bank, corporate hybrids and single-Bs posting the best % tightening etc).

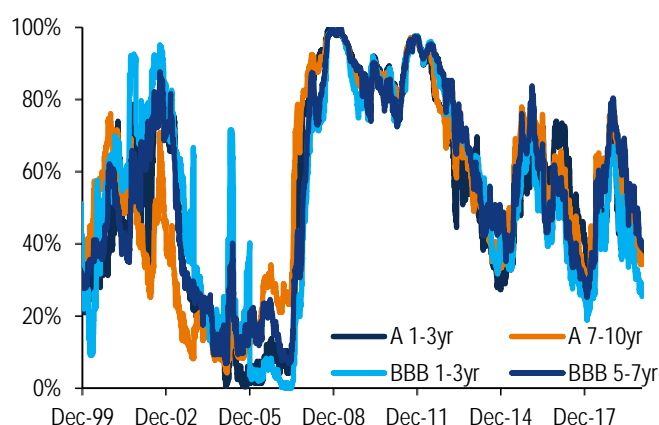
Yet, signs of fatigue are there, with the highest quality bonds conspicuously leaking wider over the last few days. What still has room to rally and what might be "hitting the wall" pretty soon?

Chart 7: Long term percentiles of € corporate bonds. BBs screening as very tight now.



Source: BofA Global Research, ICE Data Indices LLC.

Chart 8: Long term percentiles of € corporate bonds. Front-end BBBs look tight, more value in the belly.



Source: BofA Global Research, ICE Data Indices LLC.

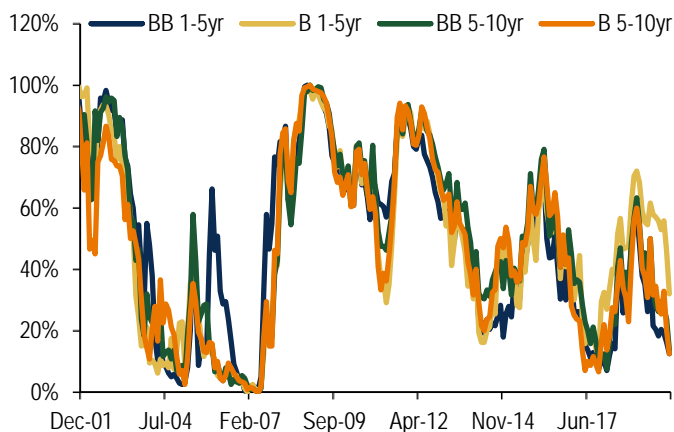
The charts above show the historical spread percentiles of parts of the Euro corporate bond market. Here, higher percentiles mean that spreads are historically wide, and lower percentiles mean that spreads are historically tight. We use a fixed window from 2000–today to calculate the percentiles over time.

Given that some parts of the broad market have seen big duration changes over the last few years, we further run the percentiles by fixed-maturity bucket (although the significant compositional changes of the European corporate bond market over time – debut issuers, Reverse Yankees, Senior Preferred/Non-Preferred etc – means that there are still caveats to this type of analysis).

What stands out?

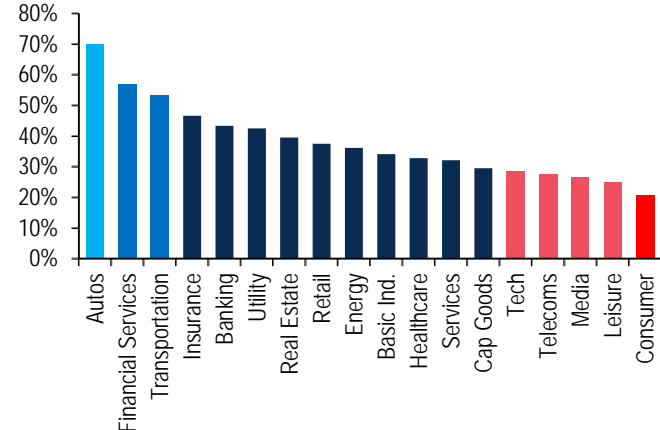
- BBs are looking very tight now...trading at their **14th percentile**. 1-5yr BB spreads are trading at their **13th percentile** historically. Value looks a bit more encouraging for single-Bs, though, where there is much better value at the front-end (1-5yr single-Bs at **33th percentile**).
- In IG, percentiles are broadly higher – although we suspect that this reflects how much compositional change the market has gone through since QE. The segment that screens as tight, however, is 1-3yr BBBs (now trading at **25th percentile**). Conversely, there is more room to rally in 5-7yr BBBs (**40th percentile**).

Chart 9: Long term percentiles of Euro HY (2000–today). Short-maturities very tight now



Source: BofA Global Research, ICE Data Indices LLC.

Chart 10: Current percentiles of Euro denominated corporate bond sectors (2000–today). Using 5-7yr maturity buckets (IG only)



Source: BofA Global Research, ICE Data Indices LLC.

- By IG sector – using just 5-7yr debt – note in chart 10 that consumers and TMT are all trading below their **30th percentiles** (reflective of their safety bid from either being short-duration sectors or being comprised of companies with stable cashflows). Conversely, spread percentiles for autos and transport are in the **50%+** range currently, a reflection of the recent trade war concerns.

The #1 risk

If it was monetary policy that got us here, it's monetary policy that can spoil it all. As our [Credit Survey](#) from December last year highlighted, *Inflation* remains the top underappreciated risk by investors. And while markets are basking in the thirst for yield currently, core inflation numbers in Europe have been creeping higher...Bloomberg's Supercore inflation index rose to 1.44% in December – the highest since July 2013.

For us, a “rates shock” would be a tough backdrop for Euro credit markets. Why?

Companies in Europe have not taken up the baton and termed-out their debt maturity profiles as quickly as other areas of the global fixed-income market. In fact, European companies seem to have been happy to let their debt stock become *more* front-loaded during the ECB CSPP era, rather than *less* front-loaded.

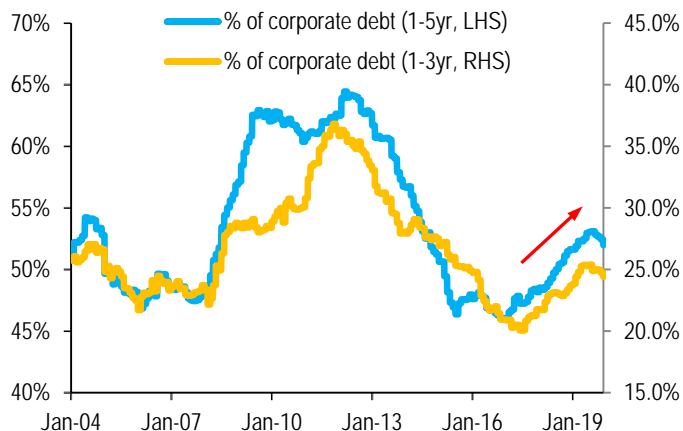


Chart 11 shows the percentage of the overall Euro IG corporate bond market made up of 1-3yr and 1-5yr debt. While the pattern is roughly the same for both, the picture is clear: **the percentage of front-end Euro credit has been growing of late.**

What's behind this? We suspect that European companies have been keen to lock-in as low as possible (or even negative) debt coupons to hold their interest costs down during last year's ongoing contraction in global trade. Therefore, there was a preference to issue short-dated debt, rather than long-dated bonds, despite the appealing economics.

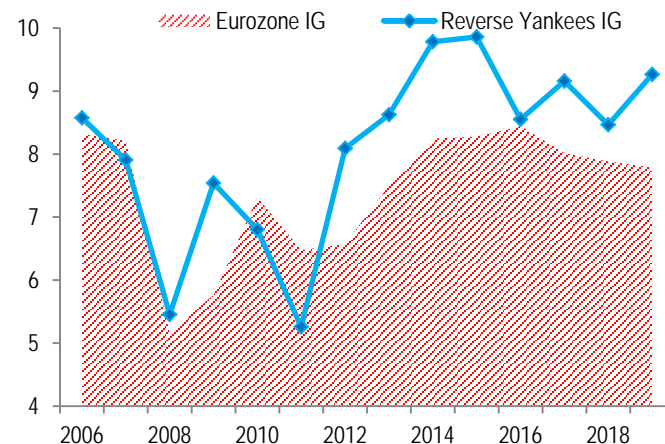
- In fact, chart 12 shows that it was Reverse Yankees that helped add duration to Euro credit market last year, not European issuers.

Chart 11: Percentage of front-end debt creeping higher in Euro credit



Source: BofA Global Research, ICE Data Indices LLC.

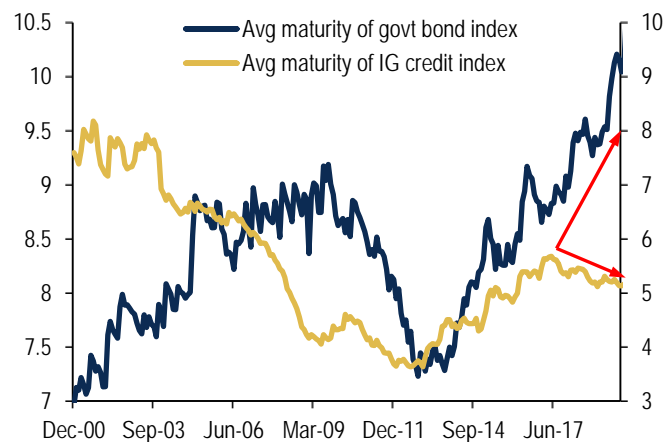
Chart 12: Average maturity of newly issued debt: Reverse Yankees have provided the duration in Euro credit, not European issuers



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg.

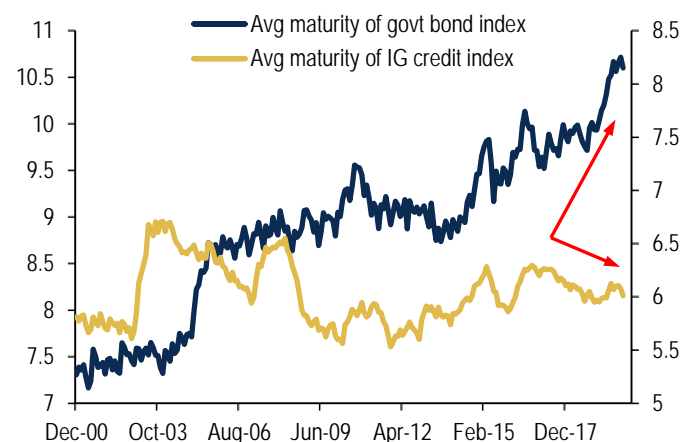
The charts below further show how at odds the capital markets behaviour of European companies has been, in relation to other parts of the fixed-income market. We show the progression in weighted-average maturities for government and corporate bonds indices (using ICE Data Indices), split by country.

Chart 13: Spanish government terming out debt, Spanish corporates not



Source: BofA Global Research, ICE Data Indices LLC. Spain govt avg bond index maturity (LHS)

Chart 14: French government terming out debt, French corporates not



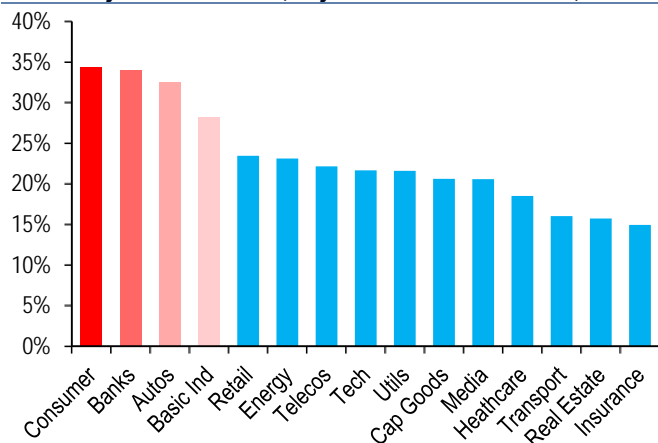
Source: BofA Global Research, ICE Data Indices LLC. France govt avg bond index maturity (LHS)

- For Spain, chart 13 shows that the average maturity of Spanish high-grade credit has *shrunk* from 5.4yrs to 5.1yrs since the start of '17, yet the average maturity of Spain's (fixed-rate) govt debt has *jumped* from 8.8yrs to over 10yrs now.
- The same developments hold for France (chart 14), where the weighted average maturity of government bond indices has *risen* conspicuously since mid-2018.

A rates shock, therefore, would likely weigh most on sectors with a high percentage of front-end debt, and where refinancing activity would likely need to be higher. Our economists have pointed out the more [hawkish](#) undertones of the ECB post this week.

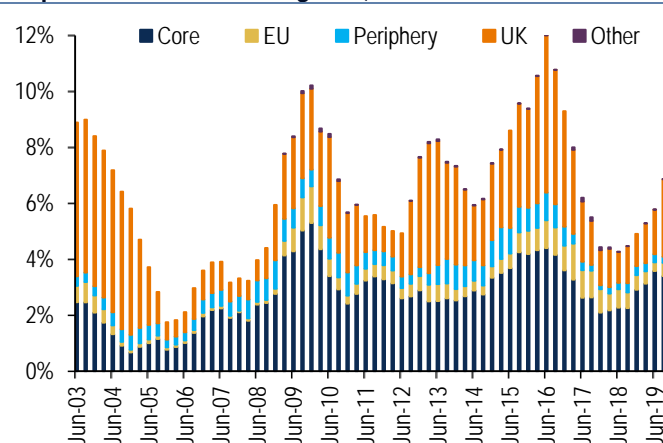
- Chart 15 shows high-grade sectors with the greatest proportion of 1-3yr debt. Note that on the non-financial side (banks do tend to issue short), consumers, autos and industrials have more than a quarter of their outstanding debt right at the front-end.

Chart 15: Some sectors still have over a quarter of their outstanding debt in very short maturities (1-3yr debt as a % of total debt).



Source: BofA Global Research, ICE Data Indices LLC.

Chart 16: Zombie companies creeping up again (share of European companies with interest coverage < 1x).



Source: BofA Global Research, Bloomberg. Share of Eurostoxx 600 with interest coverage ratio < 1, market cap weighted.

Likewise, a rates shock would also bring back focus on “zombie” companies in Europe, where interest coverage tends to be very low. Chart 16 shows that zombies are on the rise again in Europe – perhaps not surprising given that the economy has been hit by slower China growth and ongoing global trade fears.

- Interestingly, there are less zombies now in the periphery, relative to 2012/2013 etc. Many peripheral issuers have delevered and cleaned up balance sheets.
- Note, however, that **core countries** are currently experiencing a rise in “zombies”...as is the UK.

Greening the 2020s

Just as the overriding narrative for the 2010s was Quantitative Easing, the 2020s will bring a host of new challenges to shape financial markets. Climate change will be one of the big secular themes of this decade. Our [Thematic](#) and [ESG](#) teams highlight in their comprehensive primers that this is the “make-or-break” decade for tackling the climate challenge, and failure to do so may lead to irreversible damage to humanity, the environment and the economy.

This week’s meetings in Davos heightened the sense of emergency with respect to climate change. In fact, for the first time ever, the World Economic Forum’s Global Risk Report has *Extreme Weather* and *Climate Action Failure* as the #1 and #2 risks in terms of likelihood, and *Climate Action Failure* as the #1 risk in terms of impact.

Our Thematic analysts [note](#) that temperatures across the world are getting warmer. In fact, chart 17 shows that Global land-ocean temperatures have been increasing almost consistently, versus their long-term average, since the late 1970s (according to NASA). Our thematic team highlight that in the past 5yrs, many more regions globally have seen almost 2.0°C warming vs. pre-industrial levels, compared with the early 1990s.

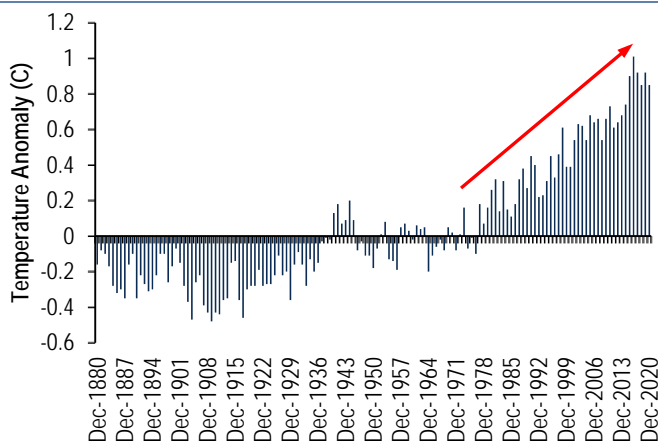
And according to the Met office, the last decade was the warmest on record.



Greenhouse gas (GHG) emissions – a significant contributor to global warming – continue to rise, as our commodity strategist Francisco Blanch points out. Chart 18 shows fossil fuel and GHG emissions of major world economies, using European Commission data. As can be seen, GHG emissions have yet to peak. Rising emissions from Emerging Economies – such as China, India – have been a large part of this (note that GHG emissions from the EU, for instance, have been falling in the post-GFC era).

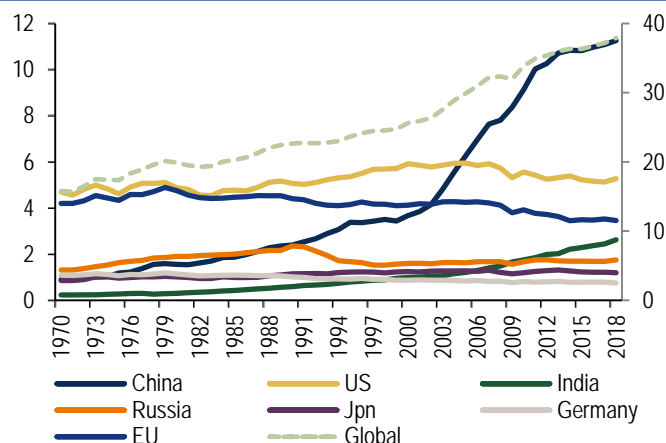
The latest European Commission data highlights that China, US, India, Russia, Japan and the EU, collectively, make up almost 68% of total GHG emissions.

Chart 17: Global Land-Ocean Temperature Index (Celsius).



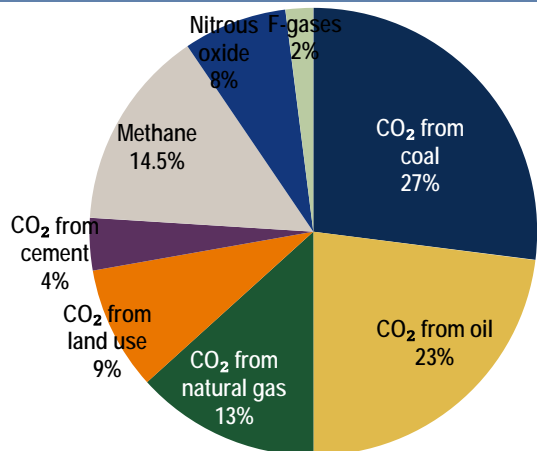
Source: NASA's Goddard Institute for Space Studies. Chart shows change in global surface temperature relative to 1951-1980 average temperatures. Annual mean.

Chart 18: Fossil CO2 and GHG emissions of world countries (CO2, Gt/year). Global index (RHS)



Source: European Commissions EDGARV5.0 Global Greenhouse Gas Emissions. Crippa, M., Oreggioni, G., Guizzardi, D., Muntean, M., Schaaf, E., Lo Vullo, E., Solazzo, E., Monforti-Ferrario, F., Olivier, J.G.J., Vignati, E., Fossil CO2 and GHG emissions of all world countries - 2019 Report, EUR 29849 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-11100-9, doi:10.2760/687800, JRC117610.

Chart 19: 1. Global Greenhouse Gas Emissions Share, 2016 (Percent). Carbon Dioxide a significant share.



Source: IMF Fiscal Monitor June 2019. BofA Global Research.

Chart 20: EU renewables share prices jumping higher for 2020



Source: BofA Global Research, Bloomberg. MLD1EURN Index.

Francisco [argues](#) that curbing GHG emissions, from here, requires markets, tax policy, technology, politicians and society to come together with a magic formula. Decarbonization will likely require: (1) low natural gas prices and high oil, coal, and carbon emission prices; (2) advances in battery and CO2 removal technology, (3) a social transfer from richer to poorer countries, and (4) a major shift in consumer preferences into less carbon-intensive goods and services.

There is, therefore, much work to be done by economies this decade to topple the climate challenge.

A potentially “Greener” CSPP – seismic shocks?

With Davos the focus of last week, “green” assets conspicuously rallied. Chart 20, for instance, highlights how EU renewable stocks have moved sharply higher of late. And in corporate debt land, the moves in green bonds were also very noticeable, with spreads visibly outperforming their “brown” counterparts.

Yet, we think the ECB also injected an element of bullishness into the green bond market this week. In the latest BIS report (see *The Green Swan*, January 2020), the central bank Governor of France (François Villeroy de Galhau) highlights the likely fervent debate that the ECB will have – as part of their strategic review – regarding the interaction of climate change and the ECB’s mandate. He further argues that the ECB collateral framework should be adjusted to account for climate-related risks.

At Thursday’s ECB meeting, President Lagarde said that the ECB have taken and will continue to take steps in contributing to the fight against climate change, subject to their mandate. Moreover, Lagarde said that as part of the Bank’s strategy review, it will look at what options are available to be more *intrusive* and more *active*, in relation to the Corporate Sector Purchase Programme, and its ability to forge a climate change response.

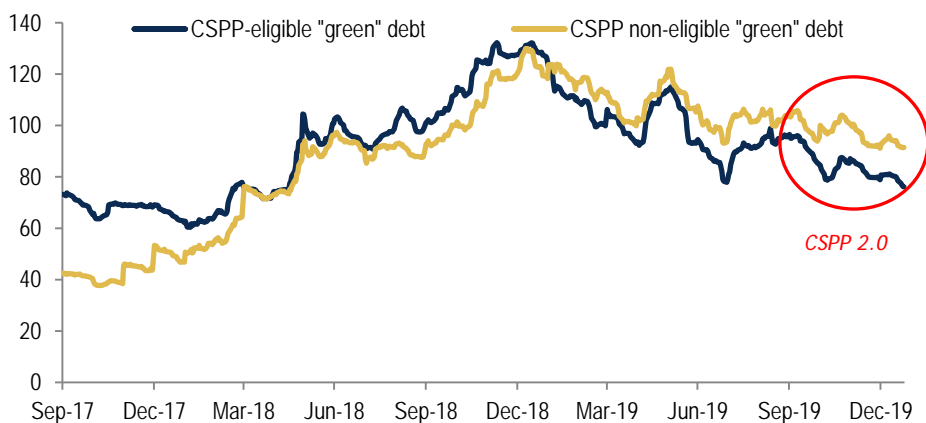
The chosen ones: have the ECB already been “Greening” CSPP?

Does this mean that a *Green CSPP* beacons for the credit market? As Villeroy de Galhau rightly points out, a move straight into a *Green QE* might be too “emotional” a response given the size of the green corporate bond market in Europe, at present.

- As the appendix charts show, Euro-denominated green IG credit amounts to just €110bn, or just 4.5% of the total Euro IG market. That said, the market almost doubled in size in 2019.
- Recall, that the size of the CSPP-eligible IG universe would drop from €855bn currently, to around only €50bn, if the ECB only did pure Green CSPP...a number far too small, we think.

That said, we wonder whether the ECB may already be doing their part in supporting the investment-grade green credit market. Chart 21 shows that (eligible) green IG debt has outperformed since the start of CSPP2.0, in November last year.

Chart 21: The chosen ones? Green IG credit has outperformed since CSPP2.0 began (OAS)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg.

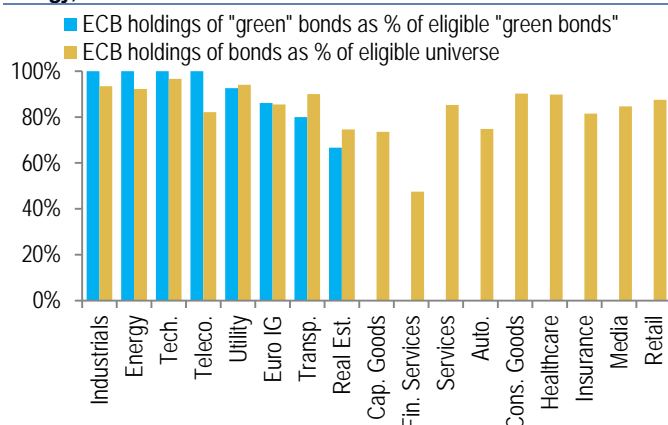


Moreover, in the charts below, we show that the ECB, to date, has indeed been purchasing Green bonds that fit the CSPP-eligibility criteria.

- Out of the 1286 corporate bonds currently held by the ECB, 67 are green (according to Bloomberg's classification). Chart 25 and chart 26 in the appendix highlight the evolution of the central bank's holdings of green bonds since ending CSPP1 in Dec '18. The ECB has added 11 green bonds¹ to its balance sheet throughout CSPP2, of which 7 were issued by utility companies. Note that two Reverse Yankee green bonds – issued by *Digital Dutch Finco BV (DLR)* – were [purchased](#) by the ECB in 2020.
- Moreover, we find that **100% of eligible bonds in industrials, energy, telecoms and tech**, which are also defined as green, have been purchased by the ECB. And the ratio for **utilities** is 94%.

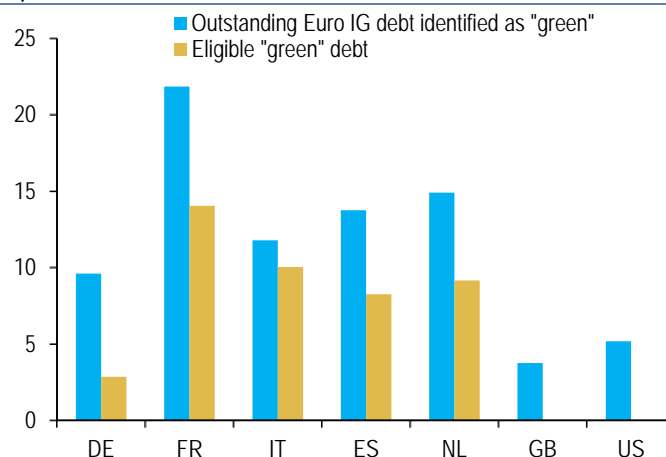
In this respect, perhaps the subtle message for markets is that the ECB have already been “greening” their asset purchases for a while now.

Chart 22: The ECB has thus far bought all green bonds in the industrials, energy, telecoms and tech sectors.



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Proportion of bonds in ER00 which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

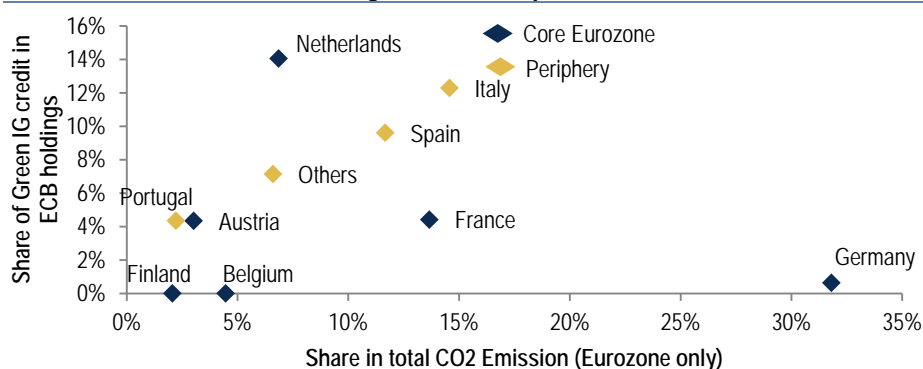
Chart 23: France leads the way on Green corporate bond issuance. (Eur bn)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Outstanding debt in ER00 which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

And chart 24 shows that the ECB's holdings of peripheral corporate bonds seem to be fairly in-line, currently, with countries' respective carbon dioxide emissions.

Chart 24: CO2 emissions vs. ECB holdings of Green IG corporate bonds



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg.

¹ See Table 1 in appendix for list of green bonds purchased by the ECB under CSPP2.0

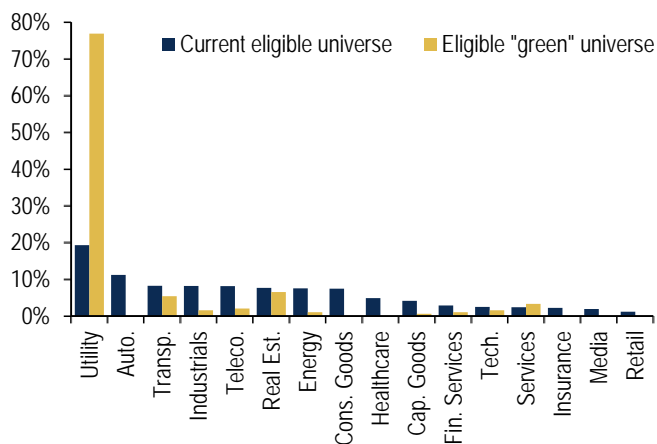
The relative value winners...and potential losers?

As the ECB's strategic review kicks-off, we thus think heightened newsflow around climate change and monetary policy will be supportive of high-grade green bond spreads.

But we see other nuances to relative value too, and winners and losers. Chart 25 shows the difference between the current CSPP-eligible universe, and one that is purely green bonds only. Here we show the eligible universe in percentage contributions across sectors.

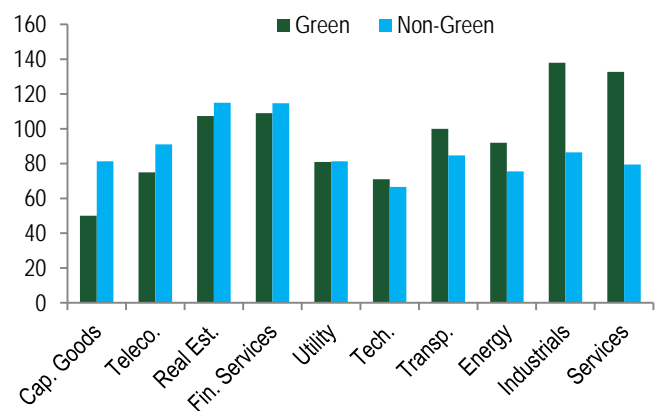
- In a green-only CSPP, note that **utility bonds** would probably get an even greater buying focus from the ECB. This is because they would make up almost 80% of a green-only eligible universe.
- Conversely, **autos**, **industrials** and **telecoms** (to some extent) might see a weaker buying focus from the ECB.

Chart 25: Breakdown by sector: current CSPP-eligible universe vs. a potential Green-only CSPP universe (% weights)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Is considered "green" a bond which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

Chart 26: CSPP-eligible relative value: Green vs non-green (OAS)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Is considered "green" a bond which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

Across the CSPP-eligible universe, where are IG green bonds still looking on the cheap side for credit investors? Chart 26 compares the average spread of green and non-green CSPP-eligible debt, by sector (although note that this analysis is skewed by the relatively small number of green bonds). Here we focus on senior non-financial debt only.

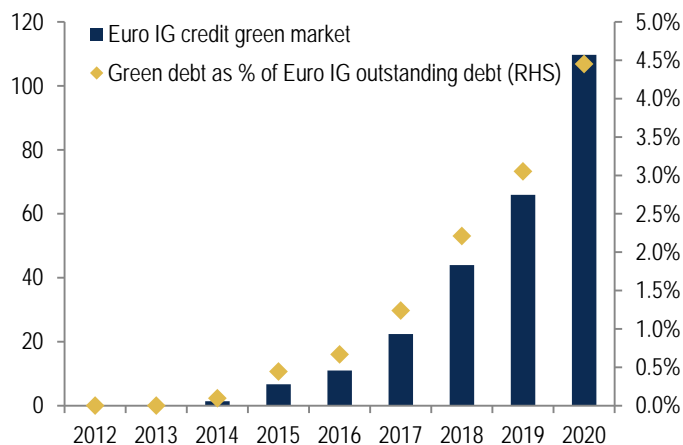
We find that there are still pockets of interesting value for investors:

- Currently, CSPP-eligible green bonds look wider than their non-green (eligible) counterparts in the **tech**, **transport**, and **energy** sectors.
- Industrial green bonds also look wide, although we note the point made above that there are too few green industrial bonds.
- **Cap goods** and **telecom** green bonds look on the tight side now.
- And we see no obvious green/non-green relative value in **utilities**, at present.

Appendix

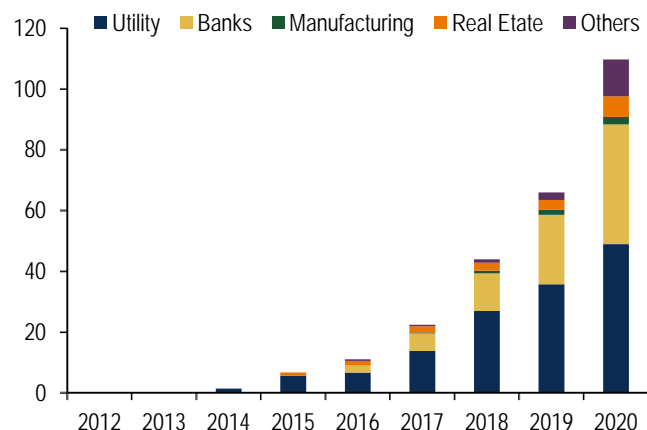
Charts 26 and 27 show the current composition of the Euro IG Green bond market and recent growth.

Chart 27: Euro IG Green bonds (ER00 index Eur bn.)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg.

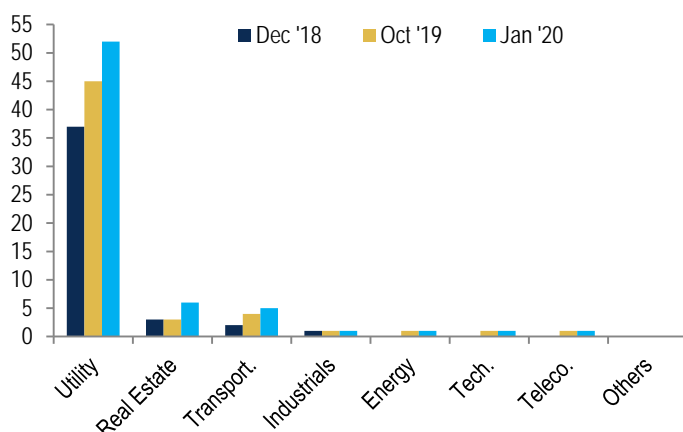
Chart 28: Euro IG Green bonds (ER00 index, Eur bn.)



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg.

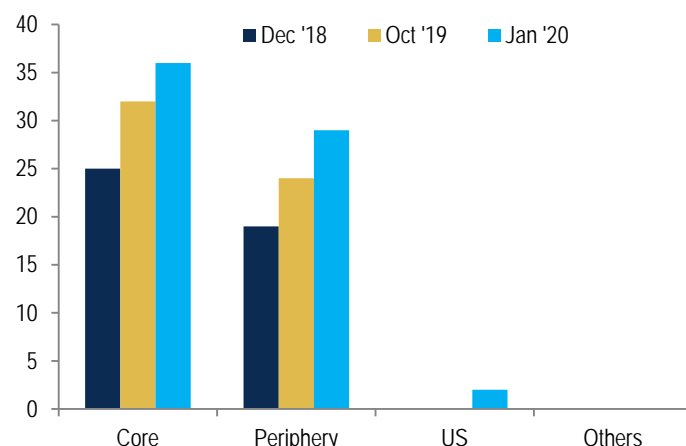
Charts 28 and 29 focus on the ECB holdings of Green IG corporate bonds.

Chart 29: ECB holdings of green bonds, by sector.



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Is considered "green" a bond which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

Chart 30: ECB holdings of green bonds, by country.



Source: BofA Global Research, ICE Data Indices LLC, Bloomberg, ECB. Is considered "green" a bond which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

The table below, highlights the Green bonds held by the ECB.

Table 1: All 11 green bonds purchased by ECB under CSPP2.0 (1/11/2019 – 15/01/2020)

ISIN	Description	Ticker	Composite Rating	Parent Domicile	Issuer Residence	Sector	Face Value (€ Mn)	Maturity	Issue Date
FR0013462728	Ceetrus Sa	CEETRU	BBB3	FR	FR	Real Estate	300	26/11/2026	26/11/2019
XS2079678400	Steding Holding NV	STEDIN	A3	NL	NL	Utility	500	14/11/2029	14/11/2019
FR0013455813	Engie	ENGIFP	A3	FR	FR	Utility	900	24/10/2030	24/10/2019
XS2026171079	Ferrovie dello Stato Italiane S.p.A.	FERROV	BBB2	IT	IT	Transportation	700	09/07/2026	09/07/2019
XS2065601937	Iren SpA	IREIM	BBB2	IT	IT	Utility	500	14/10/2029	14/10/2019
FR0013428489	Engie	ENGIFP	A3	FR	FR	Utility	750	21/06/2027	21/06/2019
XS2026150313	A2A Spa	AEMSPA	BBB2	IT	IT	Utility	400	16/07/2029	16/07/2019
XS1981060624	ERG Spa	ERGIM	BBB3	IT	IT	Utility	500	11/04/2025	11/04/2019
XS2100663579	Digital Dutch Finco BV	DLR	BBB2	US	NL	Real Estate	650	15/07/2025	17/01/2020
XS2100664114	Digital Dutch Finco BV	DLR	BBB2	US	NL	Real Estate	750	15/03/2030	17/01/2020
XS2103014291	E.ON SE	EOANGR	BBB2	DE	DE	Utility	1000	29/09/2027	16/01/2020

Table 1: All 11 green bonds purchased by ECB under CSPP2.0 (1/11/2019 – 15/01/2020)

ISIN	Description	Ticker	Composite Rating	Parent Domicile	Issuer Residence	Sector	Face Value (€ Mn)	Maturity	Issue Date
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Source: BofA Global Research, ECB. Green bonds purchased between 01/11/2019 and 15/01/2020. Is considered "green" a bond which meets the "green bond" criteria as defined by Bloomberg's field "GREEN_BOND_LOAN_INDICATOR".

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
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