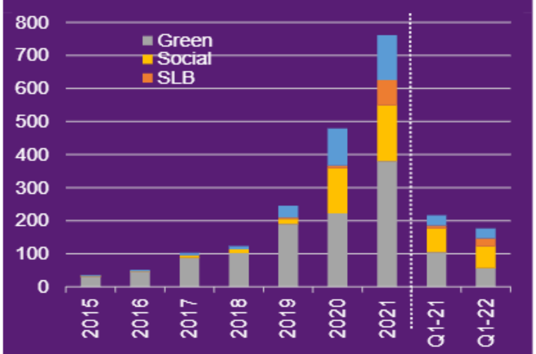
NATIXIS CORPORATE AND INVESTMENT BANKING

Green Bonds Review

April 2022

New issuance (€bn-eq) by type of ESG bonds



Sources : Bloomberg, Natixis

Table of contents

Thibaut Cuilliere
Tel. +33 1 58 55 80 56
thibaut.cuilliere@natixis.com

Radek Jan
Tel. +33 1 58 55 14 68
radek.jan@natixis.com

Samy Lakhdari
Tel. +33 1 58 55 24 45
samy.lakhdari@natixis.com

Bouchra Rhajbal
Tel. +33 1 58 55 79 93
bouchra.rhajbal@natixis.com

Jennifer Levy
Tel. +33 1 58 55 82 80
jennifer.levy@natixis.com

Cyril Regnat
Tel. +33 1 58 55 82 20
cyril.regnat@natixis.com

www.research.natixis.com

Q1-22: Market enters a more mature phase

New green & sustainable bonds issuance by currencies & sectors

- We consider green, social, sustainability and sustainability-linked bonds as "*green & sustainable*" (G&S) in the entire document.
- **For the first time in their history, G&S bonds recorded a significant YoY decline in new issuance in Q1-22**: indeed, **total G&S supply dropped by 18% vs Q1-21** (although almost in line with the overall primary market decline), is a sign that **central banks' normalization policies** and **the war in Ukraine** have not spared the Green bond dynamics.
- In a declining primary market overall in terms of volume, **some segments are still gaining traction**. The issuance volume in **sustainability-linked bonds** (SLBs) has **almost tripled** in Q1-22 vs Q1-21 at 24bn €-eq.
- The supply of European sovereign and covered bonds in GSS formats fell substantially in Q1-22. The lack of syndicated deal so far (only taps) largely explains this phenomenon for the former. Regarding the latter, financial issuers tend to frontload their annual funding plan in anticipation of ECB's tightening monetary policy, favouring then the size through Conventional covered bonds. In addition, issuers favored the senior unsecured format for their green issuances.

G&S bonds in primary markets

- The pricing differences between G&S bonds and their conventional peers are **much less pronounced** for some euro-denominated issuances and **in favour of the conventional format** (for the first time) in other cases.

Greenium: the recent trends

- **The Greenium has expanded by 1 bp in the € corporate market during Q1-22**. It increased when credit spreads widened during the central bank's normalization process earlier this year. **Green and sustainability bonds benefit from higher Greenium than social bonds and above all SLBs.**
- On the other hand, **Green sovereign bonds have been underperforming their conventional counterparts, while the former suffered from a large widening of bid/offer spreads YtD. Green covered bonds perform roughly the same way than conventional peers after launch.**

What's next?

- **We expect a sizeable increase in bonds issuance in Q2** as **Austria** will be launching its **first Green RAGB**, The Netherlands will reopen their DSL 1/40 for a €5Bn an amount in June and **Belgium** could follow up as well with **a new 15Y to 25Y Green OLO**. W keep in mind the **potential issuance of the first ever Green linker by the French Treasury**.

Food-for-thought

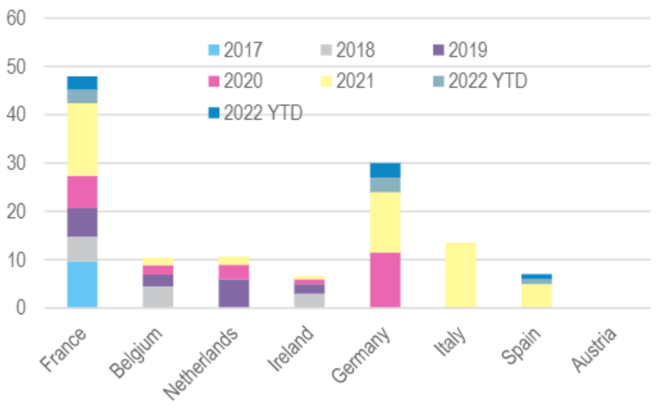
- Will the pricing differences between G&S and conventional format attenuate as the market becomes more mature?
- What does the acceleration in the energy transition mean for the supply from the EU in GSS format?

RESEARCH BY NATIXIS

Focus on Eurozone sovereign debt: towards a strong increase in green supply in Q2

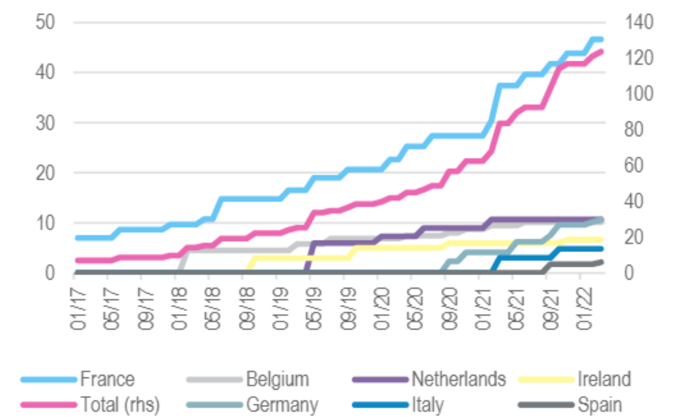
- The supply of European sovereign Green bonds during Q1 has been rather small compared to historical standards, with **only €6.8Bn offered versus €21Bn in Q1 2021** and €13.7Bn in Q4 2021. Of course, the lack of syndicated deal so far (we had only taps) explains this phenomenon, alongside the fact that the market is of course "maturing" as the number of newcomers decreases. Still, only 11% of the yearly Green issuance program (we expect €61Bn in 2022) has been done by the end of Q1 (vs. 42% one year ago) which means that **sovereigns are late and will have to increase their supply of Green bonds in the next two quarters**.
- France, Germany and Spain have been the sole sovereign issuers on a YTD basis with roughly €3Bn of Bund & OAT issued against €1Bn of SPGB 7/42. In terms of maturity, once again, all bonds were issued on the 10Y point and beyond, the longest bond being the Bund 8/50. The 3 issuers have been completed from 19% to 24% of their Green program while other European sovereigns are still in the starting blocks but are readying themselves for Q2, alongside the EU which issued €6Bn of a new 20Y Green bond (maturity April 2043).
- The EU has indeed raised €28.5Bn this year, of which €8.5Bn of Green bonds, or 30% of the total which is in line with the 33% target of the Institution. With €22,5Bn to go before the end of H1, the **EU should be issuing an additional €6-7Bn of Green bonds in Q2** (€12-13Bn in total), with at least a tap of the new EU Green 2043. In this context the next syndicated deal could be done either on June or July.
- Regarding the upcoming supply of sovereign Green bonds, we expect a **sizeable increase in bonds issuance in Q2** as Austria will be launching its **first Green RAGB**, The **Netherlands will reopen their DSL 1/40** for a €5Bn amount in June and **Belgium could follow up** as well with a new 15Y to 25Y Green OLO. Of course, we keep in mind the potential issuance of the first ever Green linker by the French Treasury as well but we are not sure it will be issued during Q2 as the **expected sovereign Green supply, without this deal, is likely to exceed €20Bn**. Making Q2 the biggest quarter ever in terms of Green € sovereigns supply.
- Regarding sovereign greeniums, Q1 and early Q2 have been nice revelators. In a market context characterized by a lower liquidity, higher volatilities and strong upside pressures on yield, the **bid-offer spread of Green bonds has been widening quite a lot**, as illustrated by the G4 chart below, while **Green bonds have been underperforming standard bonds**. We can imagine having the EU issuing billions of Green bonds makes any core or soft-core Green bonds less special, hence the progressive reduction of the premium on sovereign issues.

G1: Current Eurozone greenbond market



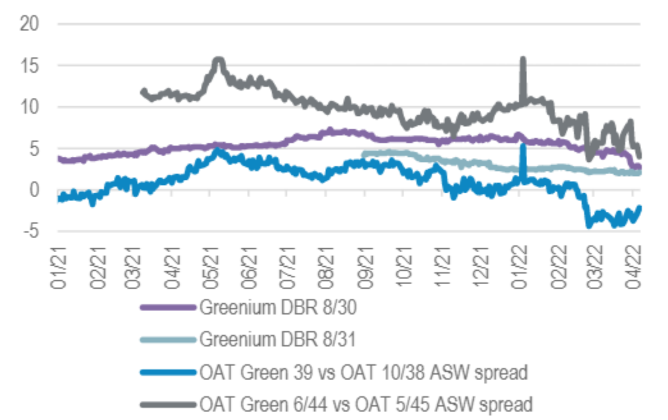
Source: Natixis

G2: Evolution of the outstanding of eurozone green bonds



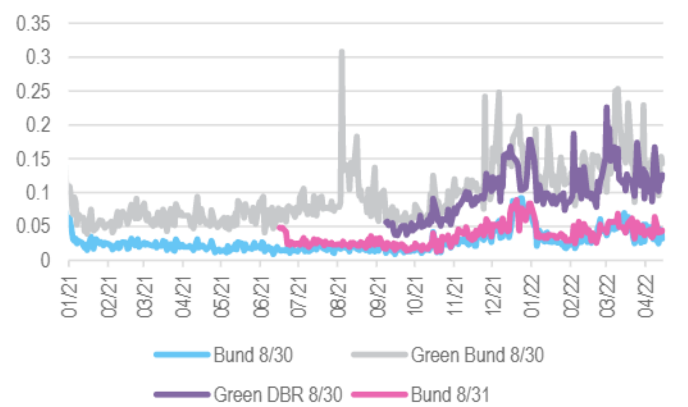
Source: Natixis

G3: Euro sovereigns greenium



Source: Natixis

G4: Green bond issuance in percentage of total EZ issuances

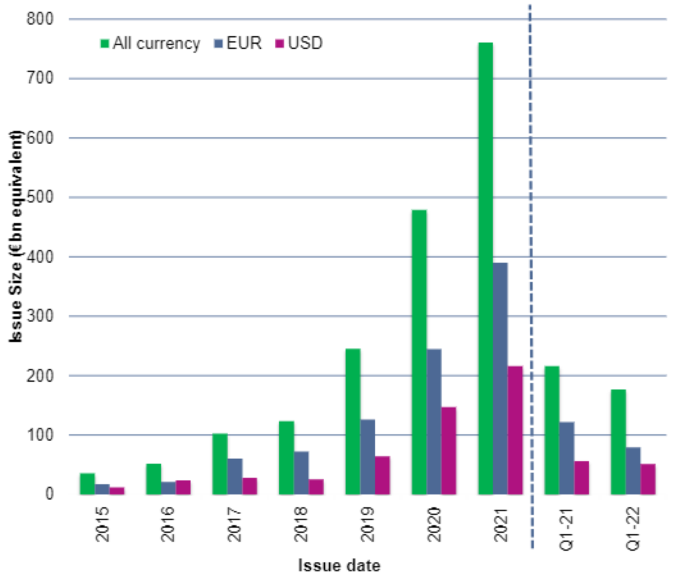


Sources: Bloomberg, Natixis

G&S bonds: trends in new issuance and outstanding

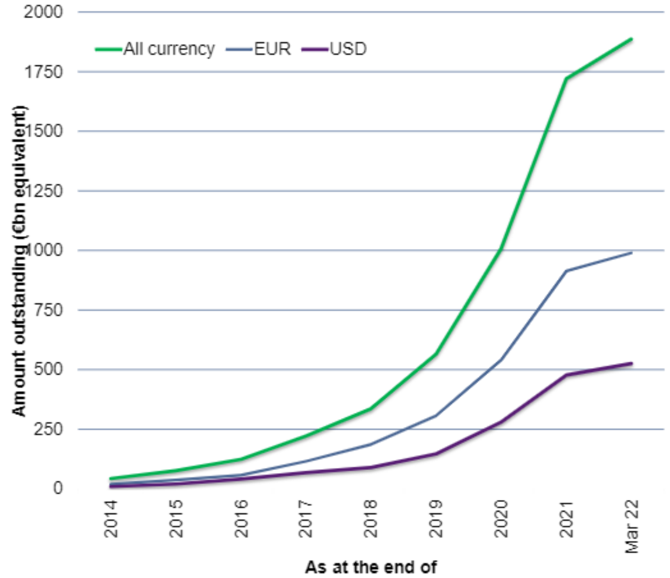
- **For the first time in their history, G&S bonds recorded a significant YoY decline in new issuance in Q1-22**: indeed, total G&S supply dropped by 18% vs Q1-21 (**although almost in line with the overall primary market decline**), in a sign that central banks' normalization policies and the war in Ukraine have not spared the Green bond dynamics. **€-denominated G&S supply has declined even faster** (-34%, see G5).
- **On the other hand, the total outstanding of G&S bonds** (graph G6) **continues to increase**: it has reached **1.89trn €-eq end Q1-22 , a 10% increase vs end 2021 levels**. It is worth noticing that the G&S total outstanding is expanding faster in GBP and in USD than in Euro.
- In a declining primary market overall in terms of volume, **some segments are still gaining traction**. The issuance volume in **sustainability-linked bonds** (SLBs) has **almost tripled** in Q1-22 vs Q1-21 at 24bn €-eq (see chart G8 below), including more than €15bn denominated in Euro. Sustainability bonds have also been gaining market share (from 14% in Q1-21 to 17% in Q1-22), at the expense of Green bonds mainly (from 48% to 32% market share for the same periods).
- **France, supranationals and Germany** (see graph G7) **are the "countries" reporting the biggest increase in G&S bond outstanding in Q1-22, mainly thanks to agencies in France** (11bn €-eq issuance from Cades notably), **while the G&S growth was more widespread in Germany** (€7bn from corporate entities, €3bn from covered bonds, €5bn from financials).

G5: Green & sustainable bond issuance (by currency, €bn equivalent)



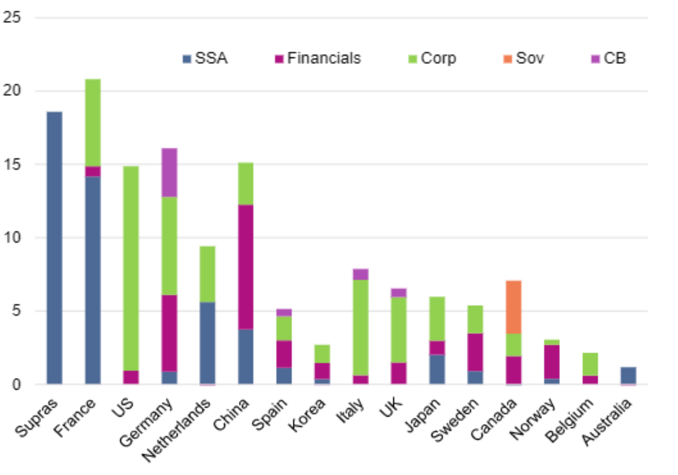
Sources : Bloomberg, Natixis

G6: Outstanding of green & sustainable bonds (by currency, €bn eq)



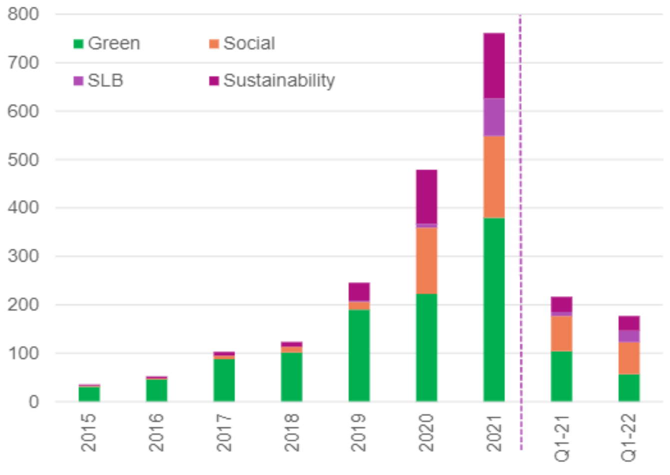
Sources : Bloomberg, Natixis

G7: change in outstanding (€bn Q1-21 vs FY2021) by country of domicile and sector



Sources : Bloomberg, Natixis

G8: Green & sustainable bonds issuance by type (all currencies, €bn equivalent)

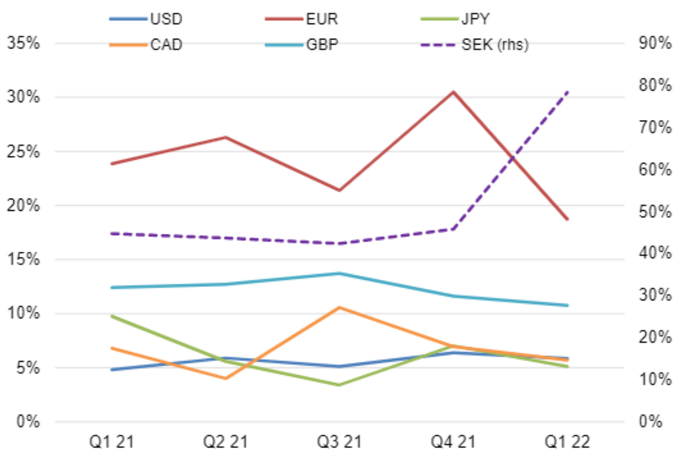


Sources : Bloomberg, Natixis

Green & sustainable bonds: share of total debt outstanding

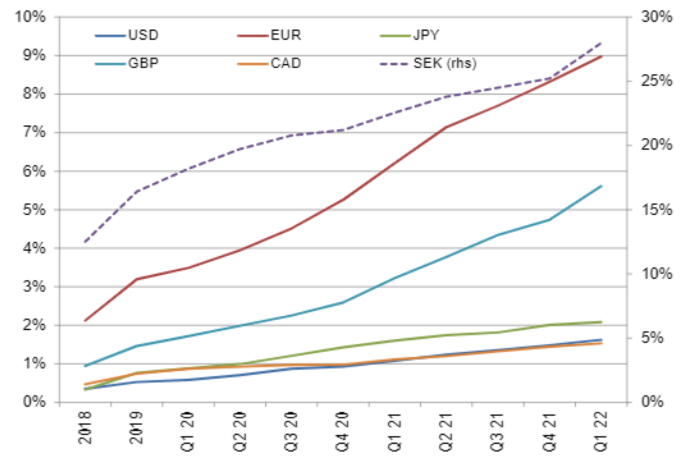
- **The penetration rate of G&S issuance in total bond issuance (excluding sovereign debts) has decreased in almost all the currencies (see chart G9), except in SEK**: in €, G&S issuance accounted for only 19% of all non-sovereign bond issuance, vs 24% in Q1 21.
- **As shown on the chart G8, the penetration rate in the €-denominated primary market has dropped in all market segments, but particularly in covered bonds:** less than 5% of new covered bond issuance in € was done in Green & sustainable formats (while the total € supply in CB has more than tripled vs Q1-21), compared with 15% on average over the past 4 quarters. G&S supply in financials excluding covered bonds was more resilient, with a penetration rate of 16% in Q1-22. However, the penetration rate of G&S bonds in total debt outstanding continues to grow. Although in decline too, **corporate non-financials** were actually the one to show the **lowest decline in G&S penetration rate**: it **reached 36% in Q1-22** in a declining market overall (-22% for € corporate issuance vs Q1-21)… albeit lower than the peak reached in Q4-21 (46%), but it remains the **2nd highest penetration rate in the € G&S corporate history** (see chart G12 below).
- G&S bond outstanding continues to grow faster than the total market size: the former now accounts for 9% of the total non-sovereign debt outstanding denominated in € (see chart G10) vs 6.2% one year ago, and above 5% of the GBP outstanding.
- **Sector-wise** (G11), **agencies, supranationals, banks, utilities and real estate recorded the fastest growth in €-denominated G&S** outstanding. Supply in € G&S Real Estate bonds in Q1-22 was quite impressive at €11.4bn, almost twice as much as in Q1-21 with new G&S issuers tapping the market (P3Group and Logicor in €).

G9: Share of green & sustainable bonds in total bond issuance by currency, excluding sovereigns



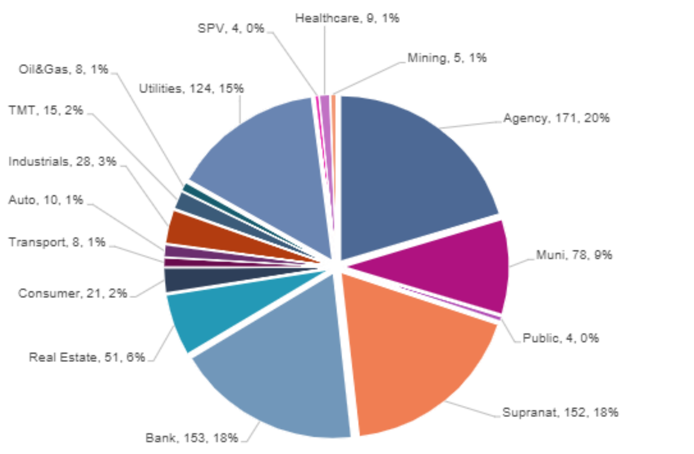
Sources: Dealogic, Bloomberg, Natixis. *Note: SEK on the right-had side.*

G10: Share of green & sustainable bonds in total bond outstanding by currency, excluding sovereigns



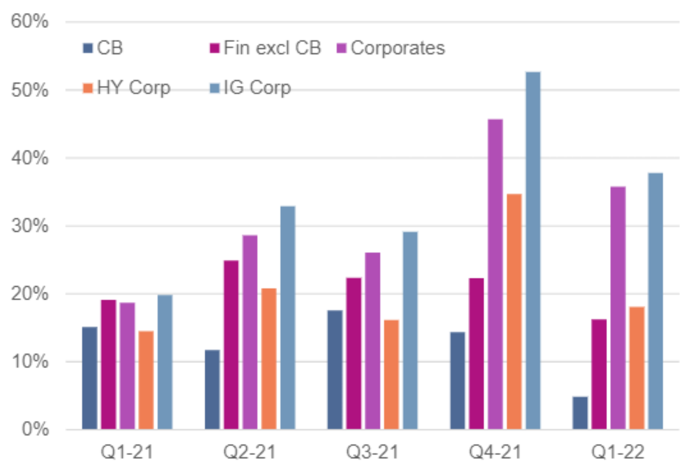
Sources: Dealogic, Bloomberg, Natixis. *Note: SEK on the right-had side.*

G11: Outstanding of € G&S bonds by sector (in €bn) at end March 2022



Sources : Markit, Bloomberg, Natixis

G12: Penetration rate of G&S bonds in €-outstanding by segment

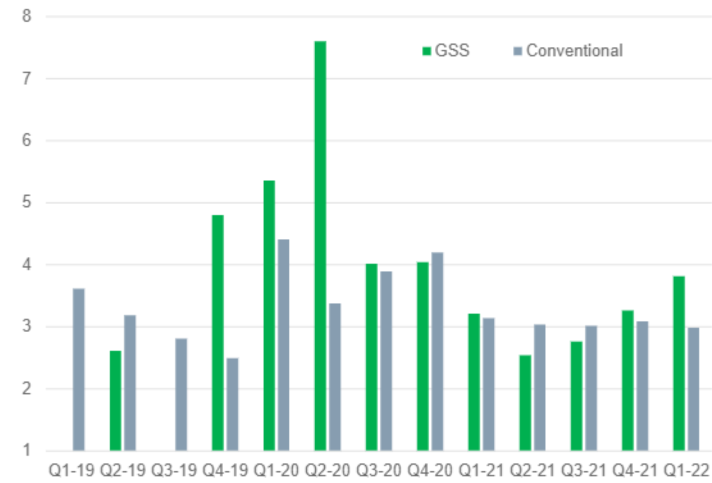


Sources: Bloomberg, Natixis

Focus on €-denominated A-rated Corporate debt

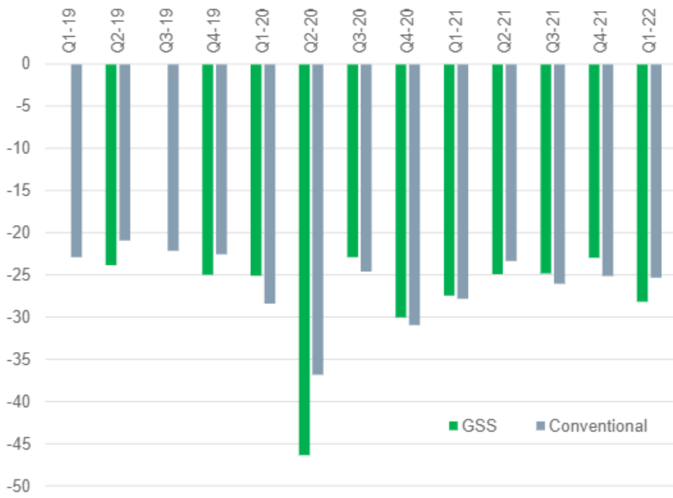
- **Oversubscription rates indicate the magnitude of investor appetite for bonds at the moment of their issuance.** While the investors' appetite for G&S bonds in this category significantly exceeded their demand for comparable conventional bonds between Q4-19 and Q2-20, both G&S and conventional bonds in this category were, on average, similarly sought after since Q3-20 and Q1-21**.** G&S bonds were slightly more sought-after during Q4-21 and the trend became more pronounced in Q1-22.
- **Spread compression between the time of the IPT and the time of pricing is closely related to oversubscription rates. As part of the pricing process, bonds experience spread tightening. Stronger investor demand for a bond (reflected in higher oversubscription rates) results in a higher spread compression between the time of the IPT and the time of pricing.** Euro-denominated G&S A-rated corporate bonds exhibited slightly higher spread compression versus the IPT than their conventional peers in Q1-22.
- **New issuance premium (NIP) refers to the extra yield received by the buyer (paid for by the seller) for a newly issued bond relative to how other bonds from the same issuer trade in the secondary market at the time a new bond is priced.** To calculate NIPs, we built z-spread curves for each issuer in our sample and interpolated the secondary curve on the maturity of the newly issued bond.
- **The pricing in primary markets is consistently in favour of the G&S format** compared to conventional issuances with similar characteristics as **the average NIPs exhibited by G&S €-denominated A-rated Corporate debt are consistently lower** than the issuance premia displayed by similar bonds in a conventional format, although the differences have been less pronounced since Q4-21.

G13: Oversubscription: G&S vs Conventional Bonds



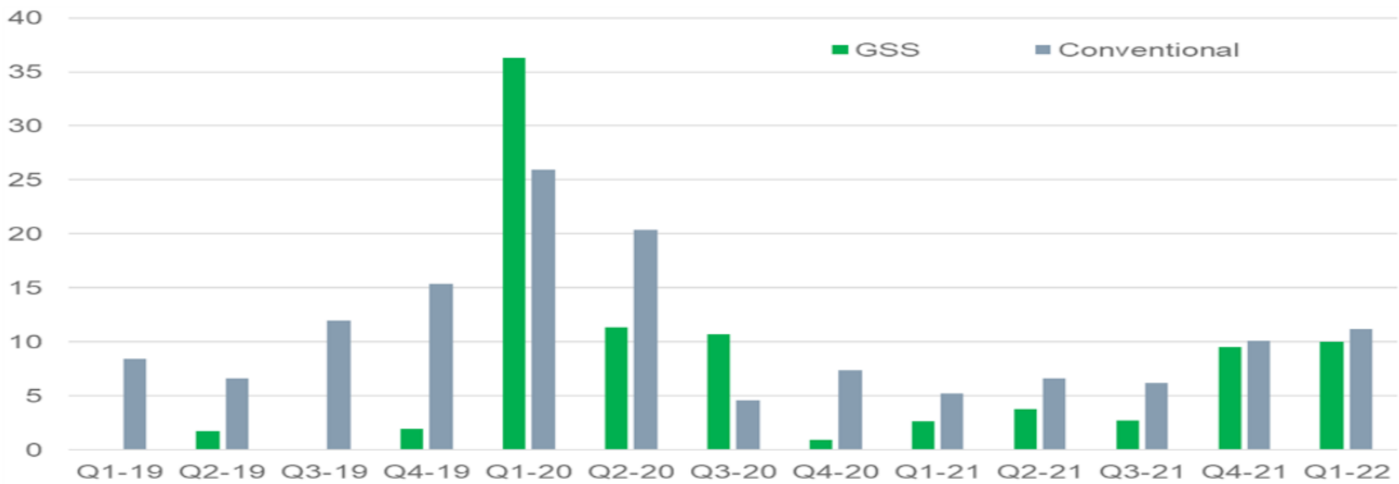
Sources: Bloomberg, Natixis

G14: Spread – IPT: G&S vs Conventional Bonds



Sources: Bloomberg, Natixis

G15: New issuance premium (NIP): G&S vs Conventional Bonds

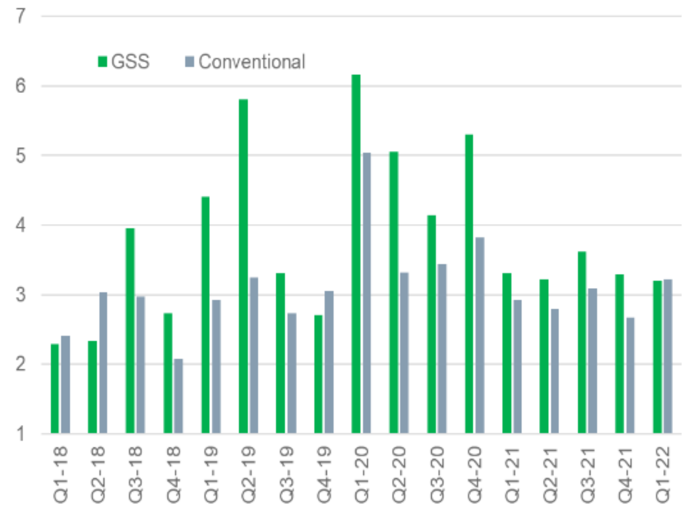


Sources: Bloomberg, Natixis

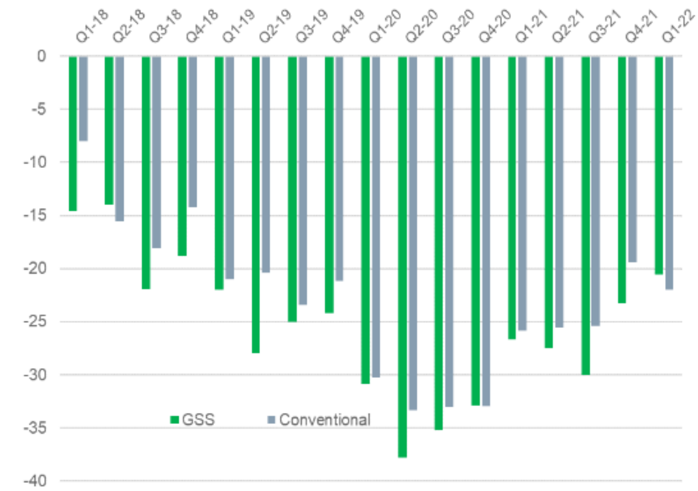
Focus on €-denominated BBB-rated Corporate debt

- **Investor appetite for G&S BBB-rated corporate debt far exceeds their demand for similar conventional bonds as G&S bonds in this category exhibit, on average, a higher oversubscription rate in all but three quarters** since the beginning of 2019. **It was the case again in Q1-22**, particularly for 7-year Pernod Ricard SLB (4.5x oversubscribed), 5-year CEZ SLB (5.3x oversubscribed) and 7-year EDP (4.9x oversubscribed).
- **Despite the strong investor appetite,** Euro-denominated G&S BBB-rated corporate bonds exhibited slightly lower spread compression versus the IPT than their conventional peers in Q1-22 (see chart G17).
- **G&S bonds in this category had consistently displayed a lower NIP than conventional bonds between Q4-18 and Q4-21 but the trend has reversed for the first time in Q1-22** (see chart G18), although name specifics explain part of that reversed trend. The highly oversubscribed above mentioned 5-year **CEZ** SLB displayed NIP of 29bp, the similarly sough-after 7-year **EDP** displayed NIP of 19bp. The much less sought after (merely 2.3x oversubscribed) 4-year green **Kojamo** displayed NIP of 27bp, the 8-year Green **NE Property** (2.6x oversubscribed) NIP of 28bp, and 4-year Green **CTP** (1.7x oversubscribed) NIP displayed NIP of 20bp, both issued on the same day (13th January).
- Furthermore, **Sustainability-linked issuances from SNAM displayed high NIPs**, in line with what has been observed previously for such issuances: 7-year SLB displayed NIP 22bp and 12-year SLB displayed NIP of 18bp.

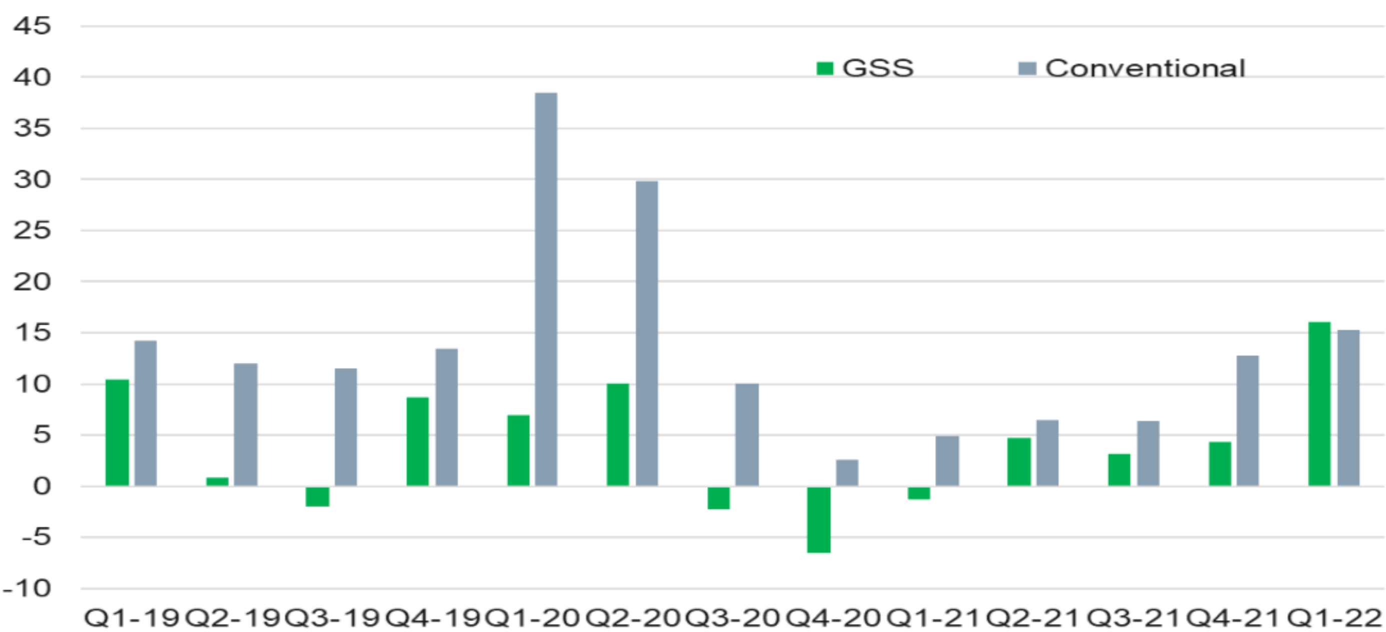
G16: Oversubscription: G&S vs Conventional Bonds



G17: Spread – IPT: G&S vs Conventional Bonds



G18: New issuance premium (NIP): G&S vs Conventional Bonds

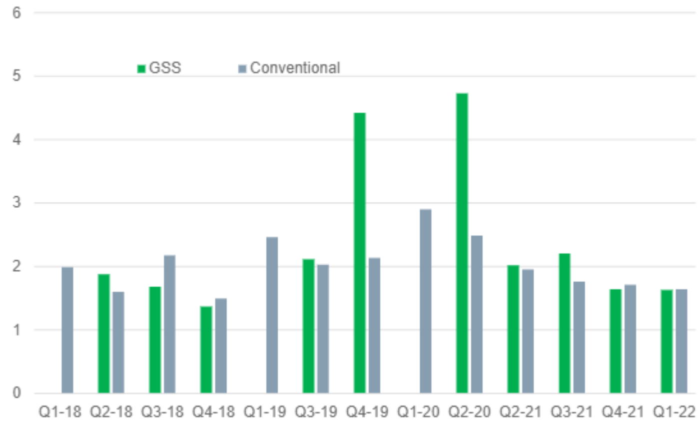


Sources: Bloomberg, Natixis

Focus on €-denominated Senior Preferred Financial debt

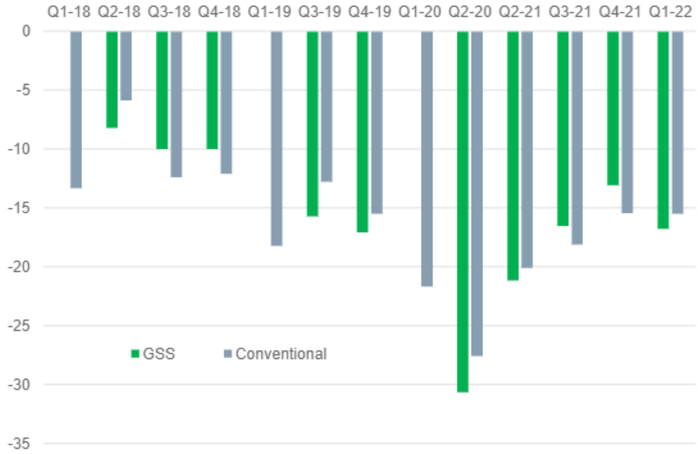
- **ESG Senior Preferred issuances reached new record during this first quarter of 2022, totalling €5.15bn. However, this positive trend has been stopped early February.**
- **This quarter, subscription rates on average were in line with their conventional peers (BTC 1.6x for ESG and conventional bonds).** The difference in oversubscription rates between G&S and conventional bond format in this category has become particularly pronounced throughout 2020 and much more attenuated throughout 2021.
- **€-denominated G&S Senior Preferred Financial bonds experience, on average, slightly higher spread compression versus the IPT than their conventional peers. During this quarter, ESG issuers were able on average to tighten by c. 17bp vs 15.5bp for their conventional peers.** This was also the case in every observed quarter since Q2-19, with the exception of Q3-21 and Q4-21. It is also worth mentioning that Berlin Hyp's green senior 5Y note issued mid-January at ms+30bp was able to price the tightest euro senior preferred transaction Year to date.
- Compared to the previous quarter, the **average G&S NIPs returned to positive territory, even offering a slightly higher NIP than conventional bonds (c. 12bps vs 10bps respectively).**

G19: Oversubscription: G&S vs Conventional Bonds



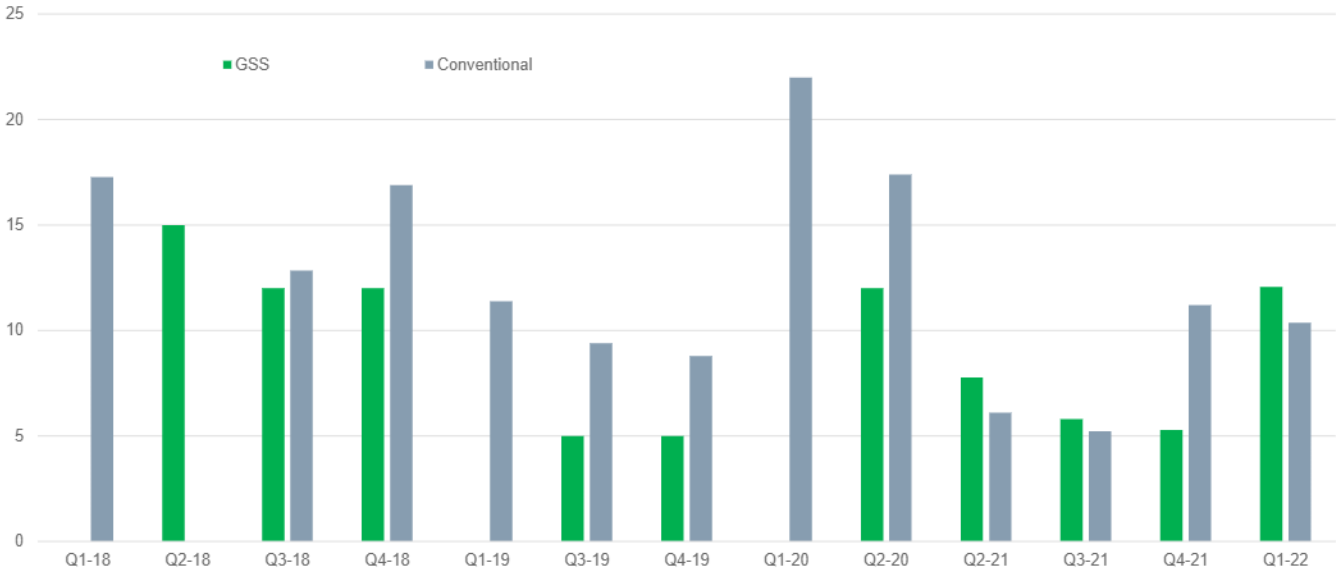
Sources: Bloomberg, Natixis

G20: Spread – IPT: G&S vs Conventional Bonds



Sources: Bloomberg, Natixis

G21: New issuance premium (NIP): G&S vs Conventional Bonds

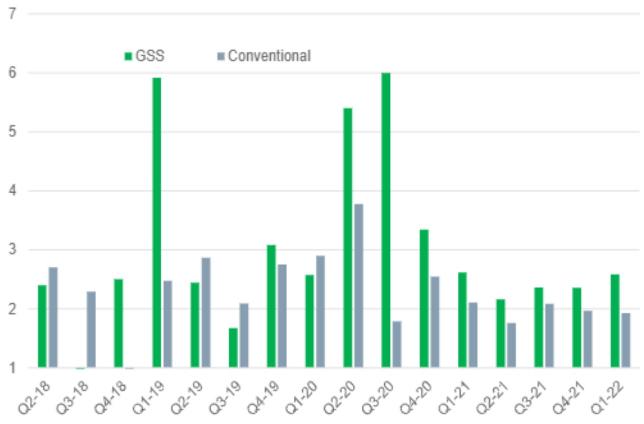


Sources: Bloomberg, Natixis

Focus on €-denominated Senior Non-Preferred Financial debt

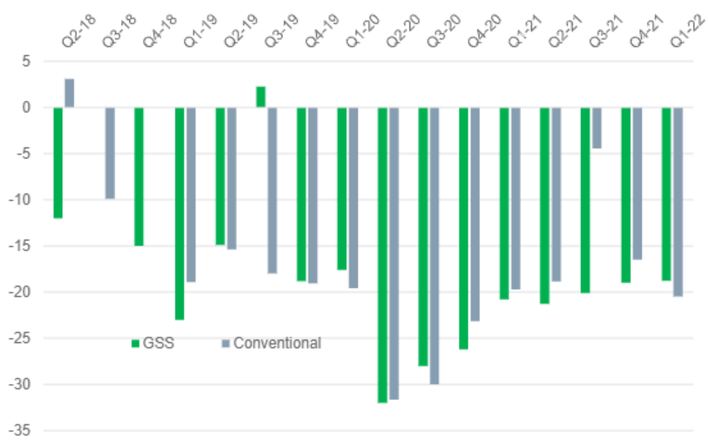
- Like senior preferred debts, **ESG Senior non-preferred registered their highest level of issuance on a quarterly basis, reaching €8.1bn.** Nordic issuers have been particularly active accounting for c.46% of the ESG deals.
- **In terms of investors' appetite for G&S bonds, the latter benefited this quarter from a higher subscription rate than their conventional peers (BTC 2.4x vs 1.9x for conventional bonds).** On March 16th, Sabadell was the first bank from a Southern European issuer to come back to the market after two months: it attracted a strong interest, totalling an orderbook of €4.2bn for its €7504 NC3 non-preferred green bond. The deal benefited from the highest BTC YTD for NPS transactions.
- **Trends in average spread compression versus the IPT in this category are heterogeneous over time. In Q1-22,** G&S issuances achieved lower average spread compression versus the IPT than their conventional peers (19bp for ESG bonds vs 21 bp for conventional bonds).
- Average NIP increased significantly during this quarter, but we observed a slightly lower NIP for ESG bonds (c.16bp) than for conventional bonds (c.18bp).

G22: Oversubscription: G&S vs Conventional Bonds



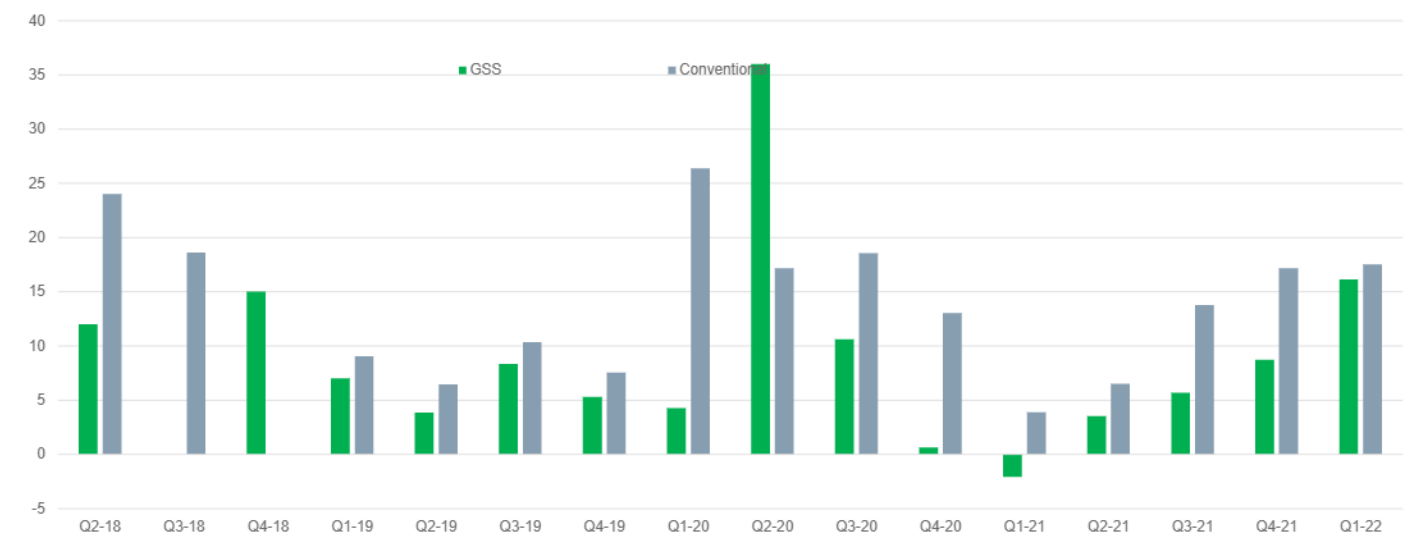
Sources: Bloomberg, Natixis

G23: Spread – IPT: G&S vs Conventional Bonds



Sources: Bloomberg, Natixis

G24: New issuance premium (NIP): G&S vs Conventional Bonds

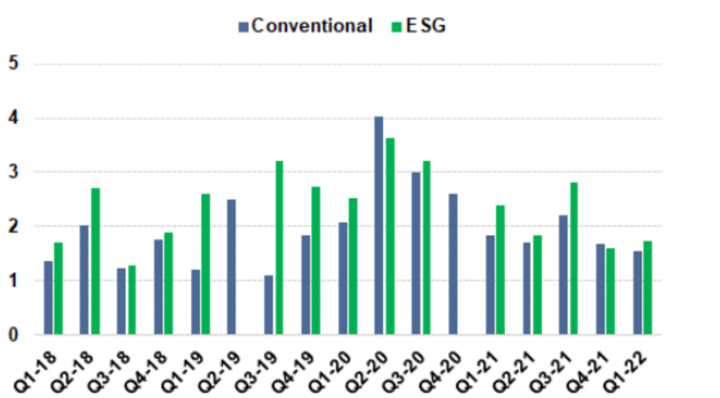


Sources: Bloomberg, Natixis

Focus on €-denominated Covered bonds

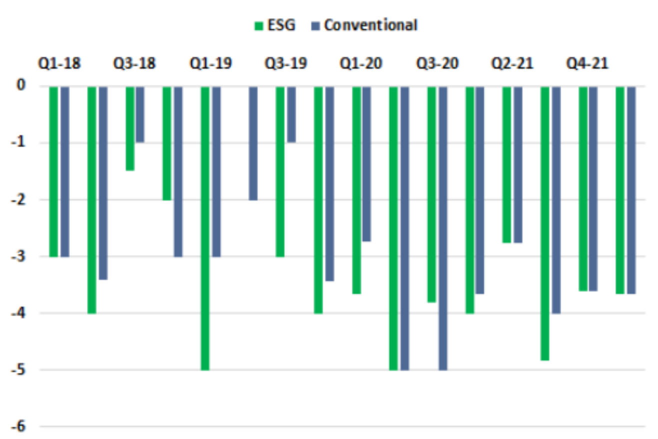
- ESG covered bond issuances reached €3.9bn in Q1-2022, decreasing by 9% compared to Q1-2021. Their share in the covered bond market also declined by 14% yoy compared to the same period last year representing now 5.1%. It can be explained by the exceptional level of Covered bonds issued since the beginning of the year (€76.3bn vs €22bn issued in Q1-21). Issuers tend to frontload their annual funding plan in anticipation of ECB's tightening monetary policy, favouring then the size through Conventional covered bonds. In addition, issuers favored the senior unsecured format for their green issuances.
- Among the five ESG transactions coming to this market this quarter, two were inaugural: **Banco BPM** issued its first euro green covered bond with a 5Y maturity, €750m at ms+23bp. and **DZ HYP** priced its inaugural green Mortgage Pfandbriefe : a 7Y €1bn at ms-1bp. The net proceeds for both deals will be used to finance and refinance green mortgages.
- By country, the largest **ESG issuers in terms of outstanding issue volume are in France (28%),** followed by Germany (21%) and Norway (20%). Norway represents 20% of the ESG market while only seizing a 4% market share of the global covered bond market, just as South Korea represents 13% of the ESG market but has only issued ESG covered bonds. As a result, key covered bond players such as Canada are still absent from the ESG segment.
- With an average subscription ratio of 1.7x, investor demand for ESG covered bonds slightly strengthened compared to the previous quarter (1.6x), while demand for conventional covered bonds continued to weaken (1.5x vs 1.7x for Q4-21), notably following the ECB's hawkish stance and the conflict in Ukraine. That said, spread compression at launch remained stable compared to the previous quarters for both conventional and ESG covered bonds (3.7 bp on average). Regarding the new issue concession, ESG covered bonds offered on average a similar NIP as their conventional (c. 3bp on average).
- In terms of performance, **ESG covered bonds perform roughly the same way than conventional peers after launch** (0.2bp vs 0.3bp respectively).

G25: Average BTC: G&S vs Conventional Bonds



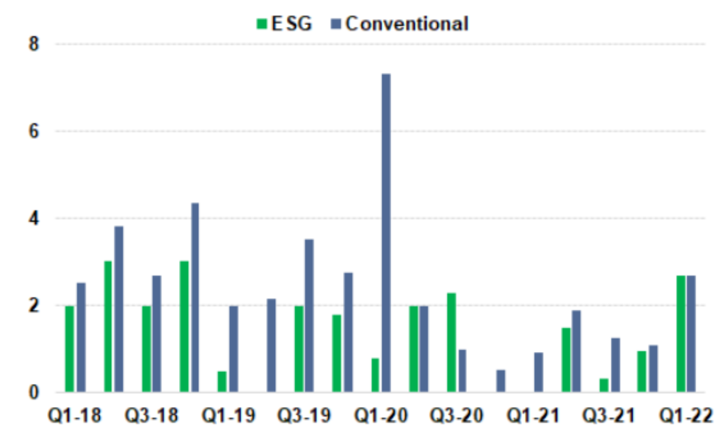
Sources: Bloomberg, Natixis

G26: Spread – IPT: G&S vs Conventional Bonds



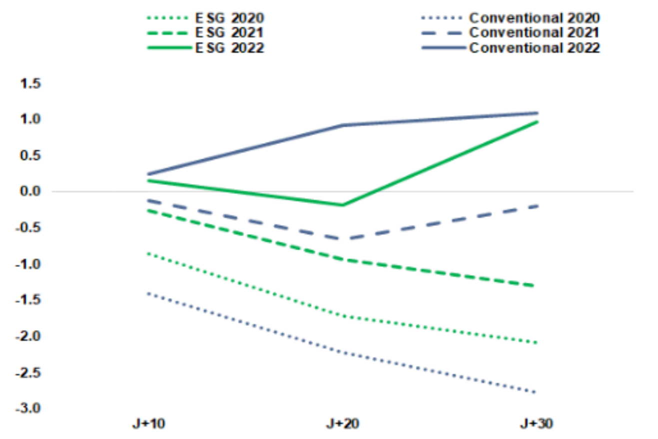
Sources: Bloomberg, Natixis

G27: New issuance premium (NIP): G&S vs Conventional Bonds



Sources: Bloomberg, Natixis

G28: Performance of new issues (1 month): G&S vs Conventional Bonds

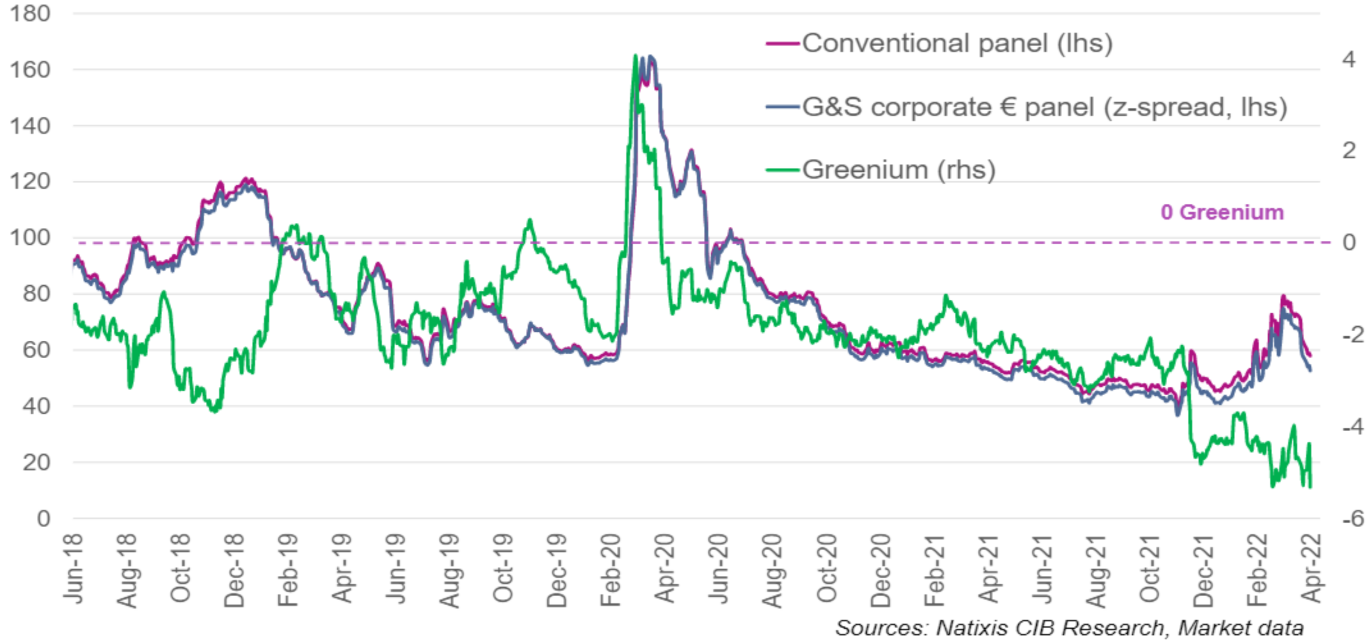


Sources: Bloomberg, Natixis

Focus on Corporate Greenium

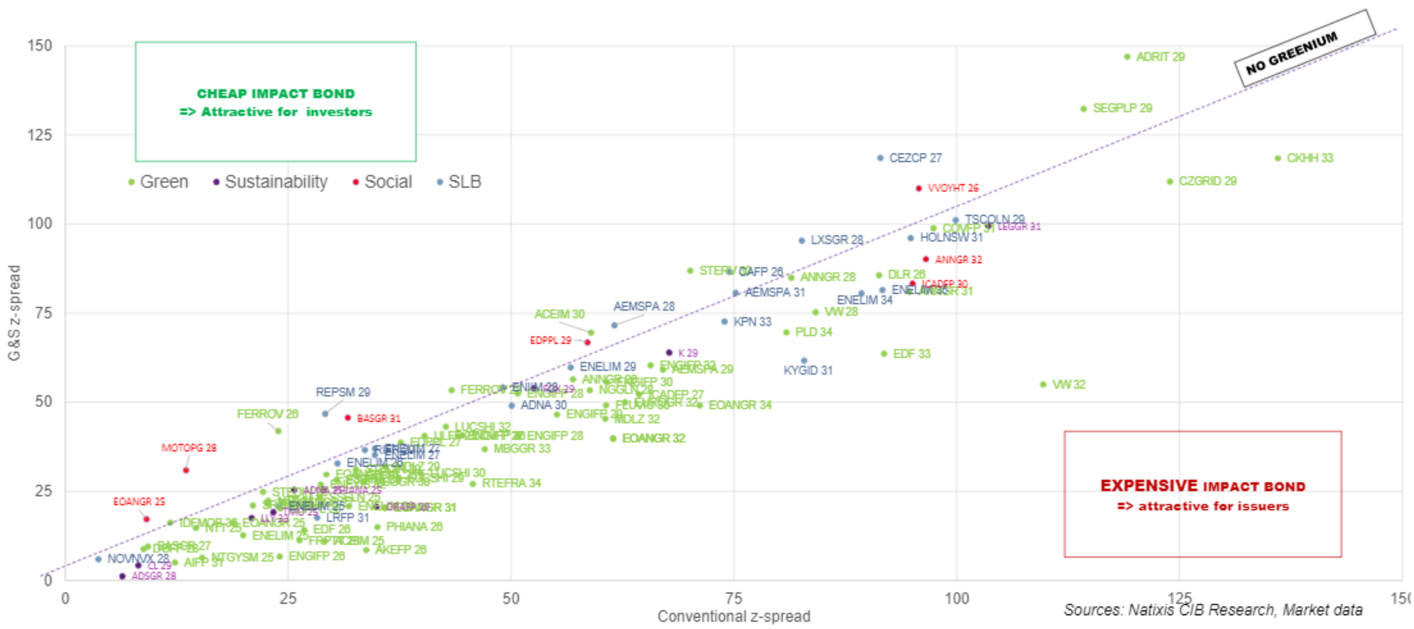
- **The Greenium has significantly expanded in the € corporate market during Q1-22 (1 pb on average)**. It is worth noticing that the Greenium increased when credit spreads widened earlier in the year.

G29: New issuance premium (NIP): G&S vs Conventional Bonds



- **67% of secondary market Greenium are negative** (i.e G&S Bonds trading tighter than their conventional counterparts) **for corporate bonds in €, with the Greenium increasing with the maturity of the bond and its credit risk**. **Green and sustainability bonds benefit from higher Greenium than social bonds and above all SLBs**, which display a premium vs equivalent conventional bonds. In particular, all recently issued SLBs (CAFP 26, LXSGR 28, AEMSPA 28, RIFP 29, SANFP 29, CEZCP 27) are all trading, so far, significantly wider than their respective conventional curves

G30: Secondary Market Greenium in €-denominated corporate non-financial bonds



Sources: Bloomberg, Natixis

Natixis Research CIB

Head of CIB Research

Jean-François Robin
+33 1 58 55 13 09
jean-francois.robin@natixis.com

REAL ASSETS / ENR

Head of REAL ASSETS / ENR Research- Strategist

Thibaut Cuillière
+33 1 58 55 80 56
thibaut.cuilliere@natixis.com

Commodities

Base & precious metals
Bernard Dahdah
+44 20 321 691 31
bernard.dahdah@natixis.com

Oil, Natural Gas
Joel Hancock
+44 20 321 696 48
joel.hancock@natixis.com

High Yield

Kirill Talai
+33 1 58 55 06 54
kirill.talai@natixis.com

Hospitality

Philippe Suchet
+33 1 58 55 45 03
philippe.suchet@natixis.com

Infrastructure, Green & Hybrids

Ivan Pavlovic
+33 1 58 55 82 86
ivan.pavlovic@natixis.com

Radek Jan
+33 1 58 55 14 68
radek.jan@natixis.com

Infrastructure & Natural resources

Benoît Maynard
+33 1 58 55 09 76
benoit.maynard@natixis.com

Real Estate

Stéphanie Dossmann
+33 1 58 55 14 31
stephanie.dossmann@natixis.com

Jennifer De Almeida
+33 1 58 55 26 18
jennifer.faucon@natixis.com

Tech & data specialist

Micaella Feldstein
+33 1 58 55 80 83
micaella.feldstein@natixis.com

Eric Benoist
+44 20 32 16 93 97
eric.benoist@natixis.com

Sales team France

Institutional investors	+33 1 58 55 80 36
Corporates / BPCE retail network	+33 1 58 55 81 80

Sales team International

Austria/Zurich	+33 1 58 55 81 00	Netherlands	+33 1 58 55 08 43
BeSwiLux	+33 1 58 55 83 96	Nordics	+44 203 216 9246
Central Banks	+33 1 58 55 82 61	Spain/Portugal	+34 91 791 75 21
Germany	+49 69 91507 7300	Singapore	+65 6228 5629
Hong-Kong	+85 2 3900 84 32	Tokyo	+81 3 3592 7550
Italy	+39 02 00 66 71 11	UK & Ireland	+44 203 216 9249
		US	+1 212 891 6281

Macro & Financial Institutions Research

Head of Macro & Financial Institutions Research

Nathalie Dezeure
+33 1 58 55 99 93
nathalie.dezeure@natixis.com

Financial Institutions

Bouchra RHAJBAL
+33 1 58 55 79 93
bouchra.rhajbal@natixis.com

Samy Lakhdari
Tel. +33 1 58 55 24 45
samy.lakhdari@natixis.com

Covered Bonds

Jennifer Levy
+33 1 58 55 82 80
jennifer.levy@natixis.com

Macro Economic

Head of Europe Macro Research

Dirk Schumacher
+49 699 7153 354
dirk.schumacher@natixis.com

Spain, Portugal, Greece, Eurozone

Jesus Castillo
+33 1 58 55 99 90
jescastillo@natixis.com

Real Estate

Sylwia Hubar
+33 1 58 55 35 59
sylwia.hubar@natixis.com

France, Belgium, Eurozone

Véronique Janod
+33 1 58 55 34 28
veronique.janod@natixis.com

Eastern Europe, Middle East and Africa

Lysu Paez Cortez
+33 1 58 55 43 22
lysu.paezcortez@natixis.com

Solutions Research

Head of Solutions Research

Cyril Regnat
+33 1 58 55 82 20
cyril.regnat@natixis.com

Credit

Inna Mufteeva
+33 1 58 55 52 04
inna.mufteeva@natixis.com

Investment Strategies & Cross Asset

Florent Pochon
+33 1 58 55 32 81
florent.pochon@natixis.com

Emilie Tetard
+33 1 58 19 98 15
emilie.tetard@natixis.com

Forex

Nordine Naam
+33 1 58 55 14 95
nordine.naam@natixis.com

Celine Clari
+33 1 58 55 82 50
celine.clari@natixis.com

Green & Sustainable

Hong My Nguyen
+33 1 58 55 07 51
hongmy.nguyen@natixis.com

Rates

USD Derivatives / Vol / Stress Test

Guillaume Martin
+33 1 58 55 38 79
guillaume.martin@natixis.com

Disclaimer

This marketing communication and the information contained in this publication and any attachment thereto is exclusively intended for a client base consisting of professionals, eligible counterparties and qualified investors.
This document and any attachment thereto are strictly confidential and cannot be divulgated to a third party without the prior written consent of Natixis. If you are not the intended recipient of this document and/or the attachments, please delete them and immediately notify the sender.
Reference prices are based on closing prices (if mentioned in this document).
Distribution, possession or delivery of this document in, to or from certain jurisdictions may be restricted or prohibited by law. Recipients of this document are required to inform themselves of and comply with all such restrictions or prohibitions. Neither Natixis, nor any of its affiliates, directors, employees, agents or advisers or any other person may be deemed liable to any person in relation to the distribution, possession or delivery of this document in, to or from any jurisdiction.
This document has been developed by our economists. It does not constitute a financial analysis and has not been developed in accordance with legal requirements designed to promote the independence of investment research. Accordingly, there are no prohibitions on dealing ahead of its dissemination.
This document and all attachments are communicated to each recipient for information purposes only and do not constitute a personalized investment recommendation. They are intended for general distribution and the products or services described herein do not take into account any specific investment objective, financial situation or particular need of any recipient. This document and any attachment thereto shall not be construed as an offer nor a solicitation for any purchase, sale or subscription. Under no circumstances should this document be considered as an official confirmation of a transaction to any person or entity.
This document and any attachment thereto are based on public information and shall not be used nor considered as an undertaking from Natixis.
Natixis has neither verified nor carried out independent analysis of the information contained in this document. Accordingly, no representation, warranty or undertaking, either express or implied, is made to the recipients of this document as to or in relation to the relevance, accuracy or completeness of this document or as to the reasonableness of any assumption contained in this document. Information does not take into account specific tax rules or accounting methods applicable to counterparties, clients or potential clients of Natixis. Therefore, Natixis shall not be liable for differences, if any, between its own valuations and those valuations provided by third parties; as such differences may arise as a result of the application and implementation of alternative accounting methods, tax rules or valuation models. The statements, assumptions and opinions contained in this document may be changed or may be withdrawn by Natixis at any time without notice.
Prices and margins are indicative only and are subject to change at any time without notice depending on, inter alia, market conditions. Past performances and simulations of past performances are not a reliable indicator and therefore do not anticipate any future results. The information contained in this document may include results of analyses from a quantitative model, which represent potential future events that may or may not be realized and is not a complete analysis of every material fact representing any product. Information may be changed or may be withdrawn by Natixis at any time without notice.
The statements, assumptions and forecasts contained in this document reflect the judgment of its author(s), unless otherwise specified, and do not reflect the judgment of any other person or of Natixis. The information contained in this document should not be assumed to have been updated at any time subsequent to the date shown on the first page of this document and the delivery of this document does not constitute a representation by any person that such information will be updated at any time after the date of this document.
Natixis shall not be liable for any financial loss or any decision taken on the basis of the information disclosed in this presentation and Natixis does not provide any advice, including in case of investment services. In any event, you should request for any internal and/or external advice that you consider necessary or desirable to obtain, including from any financial, legal, tax or accounting adviser, or any other specialist, in order to verify in particular that the transaction (as the case may be) described in this document complies with your objectives and constraints and to obtain an independent valuation of the transaction, its risk factors and rewards.
All of the views expressed in this report accurately reflect the author's personal views regarding any and all of the subject securities or issuers. No part of author compensation was, is or will be, directly or indirectly related to the specific recommendations or views expressed in this report. The personal views of authors may differ from one another. Natixis, its subsidiaries and affiliates may have issued or may issue reports that are inconsistent with, and/or reach different conclusions from, the information presented herein.
[Natixis may have Conflicts of Interest : Natixis may from time to time, as principal or agent, be involved in a wide range of activities globally, have positions in, or may buy or sell, or act as market maker in any securities, currencies, financial instruments or other assets which are the underlying of the instruments to which this presentation relates. Natixis activities related to those instruments may have an impact on the price of the relevant underlying asset and may give rise to conflicting interests or duties. Natixis may provide services to any member of the same group as the recipient of this presentation on or any other entity or person (a Third Party), engage in any transaction (on its own account or otherwise) with the recipient of the presentation or a Third Party, or act in relation to any matter for itself or any Third Party, notwithstanding that such services, transactions or actions may be adverse to the recipient of the information or any member of its group, and Natixis may retain for its own benefit any related remuneration or profit. In addition, Natixis may, whether by virtue of the types of relationships described in this paragraph or otherwise, from time to time be in possession of information in relation to a particular instrument that is or may be material in the context of that instrument and that may or may not be publicly available or known to you. Providing to you an indicative price quotation or other information with respect to any such instrument does not create any obligation on the part of Natixis to disclose to you any such information (whether or not confidential).]
The stocks/companies mentioned might be subject to specific disclaimers. Please click on the following link to consult them: https://www.research.natixis.com/GlobalResearchWeb/main/globalresearch/DisclaimersSpecifiques
Natixis is supervised by the European Central bank (ECB).
Natixis is authorized in France by the Autorité de Contrôle Prudentiel et de Régulation (ACPR) as a Bank -Investment Services Provider and subject to its supervision.
Natixis is regulated by the Autorité des Marchés Financiers in respect of its investment services activities.
Natixis is authorized by the ACPR in France and regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority in the United Kingdom. Details on the extent of regulation by the FCA and the Prudential Regulation Authority are available from Natixis' branch in London upon request.
In Germany, NATIXIS is authorized by the ACPR as a bank – investment services provider and is subject to its supervision. NATIXIS Zweigniederlassung Deutschland is subject to a limited form of regulation by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) with regards to the conduct of its business in Germany under the right of establishment there. The transfer / distribution of this document in Germany is performed by / under the responsibility of NATIXIS Zweigniederlassung Deutschland.
Natixis is authorized by the ACPR and regulated by Bank of Spain and the CNMV (Comisión Nacional del Mercado de Valores) for the conduct of its business under the right of establishment in Spain.
Natixis is authorized by the ACPR and regulated by Bank of Italy and the CONSOB (Commissione Nazionale per le Società e la Borsa) for the conduct of its business under the right of establishment in Italy.
Natixis, a foreign bank and broker-dealer, makes this report available solely for distribution in the United States to major U.S. institutional investors as defined in Rule 15a-6 under the U.S. securities Exchange Act of 1934. This document shall not be distributed to any other persons in the United States. All major U.S. institutional investors receiving this document shall not distribute the original nor a copy thereof to any other person in the United States. Natixis Securities Americas LLC, a U.S. registered broker-dealer and member of FINRA, is a subsidiary of Natixis. Natixis Securities Americas LLC did not participate in the preparation of this report and as such assumes no responsibility for its content. This report has been prepared and reviewed by authors employed by Natixis, who are not associated persons of Natixis Securities Americas LLC and are not registered or qualified as research analysts with FINRA, and are not subject to the rules of the FINRA. In order to receive any additional information about or to effect a transaction in any security or financial instrument mentioned herein, please contact your usual registered representative at Natixis Securities Americas LLC, by email or by mail at 1251 Avenue of the Americas, New York, NY 10020. The stocks mentioned might be subject to specific disclaimers. Please click on the following link to consult them: http://research.intranet/GlobalResearchWeb/main/globalresearch/DisclaimersSpecifiques
In Canada, Natixis operates through Natixis Canada Branch which is supervised and regulated by the Office of the Superintendent of Financial Institutions (OSFI) as a Foreign Bank Branch (Schedule 3– Lending only) . Natixis Securities Americas LLC is not a registered broker-dealer in any Canadian province but operates under the International Dealer Exemption in each province. NATIXIS is not a registered broker-dealer in any Canadian province and operates under the International Dealer Exemption in Quebec and Ontario. Any securities transaction or other offer, sale, or solicitation will be structured to be in compliance with such exemption.
Natixis Japan Securities Co., Ltd. (NJS) is a Financial Instruments Business Operator (Director General of Kanto Local Finance Bureau (Kinsho) No. 2527 and is supervised by the Financial Services Agency. NJS is a member of the Japan Securities Dealers Association and Type II Financial Instruments Firms Association. This document is intended solely for distribution to Professional Investors as defined in Article 2.31 of the Financial Instruments and Exchange Act. All of the views expressed in this report accurately reflect the author's personal views regarding any and all of the subject securities or issuers. No part of author compensation was, is or will be, directly or indirectly related to the specific recommendations or views expressed in this report. I(WE), AUTHOR(S), WHO WROTE THIS REPORT HEREBY CERTIFY THAT THE VIEWS EXPRESSED IN THIS REPORT ACCURATELY REFLECT OUR(MY) PERSONAL VIEWS ABOUT THE SUBJECT COMPANY OR COMPANIES AND ITS OR THEIR SECURITIES, AND THAT NO PART OF OUR COMPENSATION WAS, IS OR WILL BE, DIRECTLY OR INDIRECTLY, RELATED TO THE SPECIFIC RECOMMENDATIONS OR VIEWS EXPRESSED IN THIS REPORT. The personal views of authors may differ from one another. Natixis, its subsidiaries and affiliates may have issued or may issue reports that are inconsistent with, and/or reach different conclusions from, the information presented herein.
In Hong Kong, this document is for distribution to professional investors only (as defined in the Securities and Futures Ordinance (Cap.571) of Hong Kong and any rules made under that Ordinance).
Natixis Singapore branch is regulated by the Monetary Authority of Singapore. This document is intended solely for distribution to Institutional Investors, Accredited Investors and Expert Investors as defined in Section 4A of the Securities and Futures Act of Singapore.
In Mainland China, Natixis Shanghai branch and Natixis Beijing branch are regulated in the PRC by China Banking and Insurance Regulatory Commission, the People's Bank of China, and the State Administration of Foreign Exchange for the engagement of banking business. This document is intended solely for distribution to Professional Investors who are authorized to engage in the purchase of Product of the type being offered or sold. PRC professional investors are responsible for obtaining all relevant approvals/licenses, verification and/or registrations themselves from relevant governmental authorities (including but not limited to China Banking and Insurance Regulatory Commission, the People's Bank of China, State Administration of Foreign Exchange and/or China Securities Regulatory Commission), and complying with all relevant PRC regulations, including, but not limited to, all relevant foreign exchange regulations and/or foreign investment regulations.
In Taiwan, Natixis Taipei Branch is regulated by the Taiwan Financial Supervisory Commission. This document is intended solely for distribution to professional investors in Taiwan for reference only.
In South Korea, this research material has been provided to you without charge for your convenience only. All information contained in this material is factual information and does not reflect any opinion or judgment by Natixis. The information contained in this research material should not be construed as offer, marketing, solicitation or investment advice with respect to any financial investment products mentioned in this material.
In Australia, Natixis has a wholly owned subsidiary, Natixis Australia Pty Limited ("NAPL"). NAPL is registered with the Australian Securities & Investments Commission and holds an Australian Financial Services License (No. 317114) which enables NAPL to conduct its financial services business in Australia with "wholesale" clients. Details of the AFSL are available upon request.
Natixis S.A. is not an Authorised Deposit-Taking Institution under the Australian Banking Act 1959, nor is it regulated by the Australian Prudential Regulation Authority. Any references made to banking in the document refer to Natixis activities outside of Australia.
Natixis is authorized by the ACPR and regulated by the Dubai Financial Services Authority (DFSA) for the conduct of its business in and from the Dubai International Financial Centre (DIFC). The document is being made available to the recipient with the understanding that it meets the DFSA definition of a Professional Client; the recipient is otherwise required to inform Natixis if this is not the case and return the document. The recipient also acknowledges and understands that neither the document nor its contents have been approved, licensed by or registered with any regulatory body or governmental agency in the GCC or Lebanon.
In Oman, Natixis neither has a registered business presence nor a representative office in Oman and does not undertake banking business or provide financial services in Oman. Consequently, Natixis is not regulated by either the Central Bank of Oman or Oman's Capital Market Authority.
This document has been prepared by Natixis
The information contained in this document is for discussion purposes only and neither constitutes an offer of securities in Oman as contemplated by the Commercial Companies Law of Oman (Royal Decree 4/74) or the Capital Market Law of Oman (Royal Decree 80/98), nor does it constitute an offer to sell, or the solicitation of any offer to buy non-Omani securities in Oman as contemplated by Article 139 of the Executive Regulations to the Capital Market Law (issued vide CMA Decision 1/2009). Natixis does not solicit business in Oman and the only circumstances in which Natixis sends information or material describing financial products or financial services to recipients in Oman, is where such information or material has been requested from Natixis and by receiving this document, the person or entity to whom it has been dispatched by Natixis understands, acknowledges and agrees that this document has not been approved by the CBO, the CMA or any other regulatory body or authority in Oman.
Natixis does not market, offer, sell or distribute any financial or investment products or services in Oman and no subscription to any securities, products or financial services may or will be consummated within Oman.
Nothing contained in this document is intended to constitute Omani investment, legal, tax, accounting or other professional advice.
In Qatar, The information contained in this document has been compiled in good faith with all reasonable care and attention and, to the best of our knowledge and belief, is correct at the time of publication and does not omit any data available to us that is material to the correctness of such information. Any opinions expressed herein have been formed in good faith on the relevant facts available at the time of its formation.