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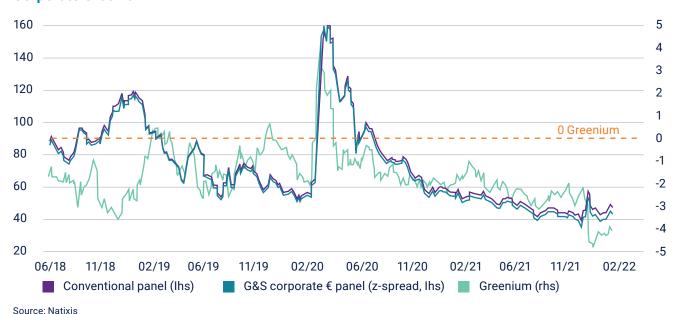
The Greenium – the yield that investors concede to companies issuing a green bond compared to the performance they would have required from these same companies for a conventional bond with the same maturity - was long perceived as volatile, hovering in one direction or another according to the seasonality. But it finally became a key issue in 2020.

Since our last study conducted in 2021 (Greenium, An ally, and source of opportunities), the Greenium, which for us is merely due to a discrepancy between supply and demand, has dipped, but it remains exposed to the current environment, characterised by heightened risk aversion and volatility.

In this new study, we shall examine factors that may act as new catalysts for the Greenium in 2022: positive interest rates, consecration by the European taxonomy, emergence of Sustainability Linked Bonds² as rivals for green bonds, and finally, updated credit ratings for indices and the overall bond universe.

Today³, the Greenium stands at 2.64bp as a yield differential (or credit spread⁴), having dropped to 1.5bp over the course of January. We believe the Greenium will **balance out in 2022 at 2bp for senior debt**, and more accurately at 5bp for senior corporate debt (excluding financials) and 6pb excluding utilities, governments, and financials. Within these sectors, it seems natural for the **green bonds issued by utility companies or banks to display a weak or even neutral Greenium**, as all their debt could become "green", and banks cannot issue Sustainability Linked Bonds due to regulatory challenges.

Corporate Greenium



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^{2.}SLBS, or Sustainability-Linked bonds are conventional bonds except for the fact that they set a "sustainability" target to be met within a specific timeframe. If the issuer fails to achieve this target, the coupon will be higher. These targets are often – but not systematically – determined in accordance with the SDGs, the UN's Sustainable Development Goals. The principles are listed by the ICMA (International Capital Market Association), the authority that governs market standards.

^{3.}Data as of 15/03/2022. Source: Mirova

^{4.}Differential between the yield of a bond and the swap rate, for identical maturities.

Green bonds issued by the automotive sector also appear to generate a limited amount of Greenium, as their financing needs chiefly concern "clean" vehicles which contribute towards carbon-neutral mobility.

The big uncertainty in the Greenium "equation" remains the predominance of Sustainability-Linked Bonds, which flooded the primary market last year with issuance volumes topping \$100 billion. Sustainability-Linked Bonds offer a degree of flexibility, as the targets remain in the company's hands, so to speak, which is not the case with green, sustainable, or social bonds.

It therefore seems likely that several sectors, particularly within cyclicals, could be attracted by this format: in these sectors, the Greenium will depend on the proportion of green bonds vs. conventional bonds vs. Sustainability-Linked Bonds, so could potentially be higher.

As we shall discuss later, the competition between Sustainability-Linked-Bonds and green or sustainable bonds, is a determining factor.

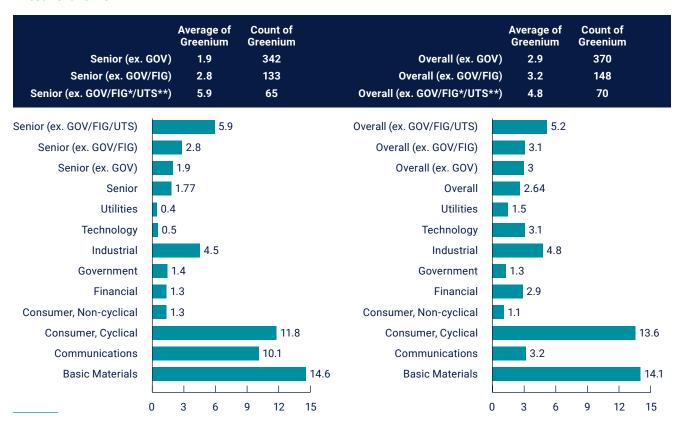
Recent events, including the invasion of Ukraine by Russia, have created a risk averse environment, causing credit spreads to widen. Against this backdrop, it seems that green and sustainable bonds tend to behave better (i.e. are less sold-off), demonstrating stronger resilience. This is driven by: i) the more defensive profile displayed by the green bond universe; ii) their popular "impact" characteristics; and iii) their investor base, believed to have a longer investment horizon.

GREENIUM: OUR METHODOLOGY

This publication follows an <u>earlier article published in 2021</u>. Details of the calculation methodology are provided in this report. As a reminder, the Greenium is expressed in basis points as a yield differential, or credit spread, within the Euro-denominated universe (in effect, 460 Greeniums were calculated). This represents the yield conceded by investors, in basis points – and corresponds to a Greenium of 3bp⁵.

Greenium by sector: dispersion due to the number of green bonds and issuers

Scaled according to the issuing sector, the ratio between supply and demand has confirmed our expectations: the Greenium tends to be lower in sectors where conventional bonds are expected to be in a minority, replaced by green bonds. These sectors include utilities and financials. The utilities sector operates at the heart of the energy and environmental transition and structurally, issues a large number of green bonds. Financials, on the other hand, have large financing needs, including the funding of many green assets – often real estate. Consistent with our study conducted in 2021, cyclical sectors display a higher Greenium, for example, the consumer goods sector, which is still at a very early stage in the green bond market.



^{*}FIG= Financial Institution Group, **UTS= Utilities Sources: Mirova as of 21/03/22, Bloomberg

5. Source: Natixis

More market depth in 2021. But will the trend persist into 2022?

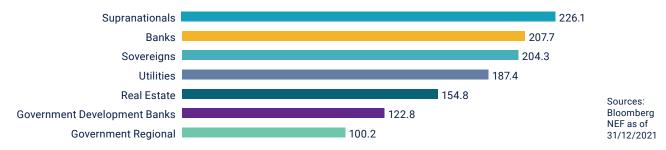
New records are beaten year after year. Since 2012, the market has grown at an average annual pace of 1.6 times.

2021 confirmed the trends that had been observed in 2020 and saw the emergence of new formats. In terms of size, sustainable and social bonds (which combine social and green projects) now each amount over \$350 billion across the market.

Developments in new sectors have been observed such as cyclicals. Car manufacturers and their suppliers are issuing on a recurring basis to finance the production of cleaner vehicles. The chemicals sector has also ventured in the green bond market. But Sustainability-Linked-Bonds are where we saw the largest growth in issuance volumes. More details in the following part: SLBs: a small detail that may generate Greenium?



Sustainable Debt Issued (\$bn) by Issuer Industry



In 2022, more and better-rated issuers: can we expect both quantity and quality?

This year, we expect issuance volumes to continue to grow at a fast pace (almost \$ 1.000 billion). The European Union is leading the way, with its massive NextGenEU issuance programmes, weighing almost €700 billion in total. Furthermore, in July 2021, the European Commission unveiled its "Fit for 55" package, a series of measures aimed at achieving a 55% cut in greenhouse gas emissions compared to 1990 levels, by 2030. These proposals have confirmed Europe's intention to lead the fight against climate change, both in terms of timing and implications for various sec-

tors: the objectives consider all economic sectors and need to be achieved by 2030.

Since the beginning of the year, the war in Ukraine has highlighted the need for Europe to become independent from energy imports: on March 8th, the European Commission outlined plans for "REPowerEU", a package designed to end Europe's reliance on Russian fossil fuels "well before 2030". The issuance of "REPowerEU" joint debt by the European Union in a green format seems like a reasonable option, after a fierce debate between its members states.

SOME ASSET CLASSES WILL MAKE A STRONG COMEBACK, WHILE OTHERS WILL CONSOLIDATE.

In 2022, we expect a major comeback for green senior preferred banking debt and covered bonds issued by banks (these instruments, considered to be safe havens, mostly finance the construction of green buildings). The supposed unwinding of the TLTRO III (a monetary measure involving loans worth €1.310 million conceded to European banks by the ECB, at preferential rates, and callable from mid-2022) will have significant implications.

With central banks gradually tightening their monetary policies, covered bonds⁸ (more than half of which are rated AAA) and senior banking debt⁹ (often rated above A), are likely to dominate corporate bond issuance as a growing number of countries, both inaugural and historical, will be issuing debt.

At sector level, we also expect energy companies and public utility companies to be as active as ever. The automobile industry and its suppliers should also issue substantial amounts of debt.

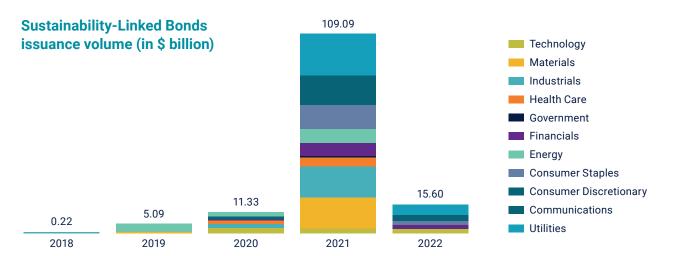
This year will be a year of change for the index, including: a higher average rating, with more A and above ratings,

even more financials - with real estate assets weighing more in the Use of Proceeds¹⁰, and possibly more "fixed income" bonds (sovereign, supranational, agencies - and we also include covered bonds) as opposed to credit (corporate bonds). As a result, we expect a convergence between Green Bond indices and the Global Aggregate conventional indices.

SLBs: a small detail that may generate Greenium?

The big unknown in the Greenium "equation" remains the growth of Sustainability-Linked bonds, which flooded the primary market last year, with issuances reaching over \$100 billion.

Attracted by the flexible nature of Sustainability-Linked Bonds - as the targets/KPIs are pretty much in the hands of their issuers - some companies are moving away from green, sustainable, and social bonds. After all, any company can instantly issue a Sustainability-Linked Bond; however, the same cannot be said of a green bond.



Sustainable Debt Issued (\$bn) by Issuer Industry



^{8.} Covered bonds are debt instruments issued by a bank or by a mortgage company, guaranteed by a pool of assets such as mortgage loans.

^{9.} Senior debt offers specific guarantees and takes priority over other unsecured or otherwise more "junior" debt owed by the issuers, known as "subordinate".

10. The projects that are financed must be described in sufficient detail and demonstrate a proven environmental benefit.

We should all scrutinize on the growth of this asset class, which will have key implications for the Greenium. Sectors that issue large amounts of Sustainability-Linked Bonds relative to Green Bonds will exacerbate the Greenium. Examples are industrials (with the exception of the car industry, which will have no trouble tracking its "green' CapEx), but also consumer goods, pharmaceutical and technology sectors, or companies with weaker operating leverage – i.e. with a much larger share of OpEx and variable costs.

This is also the case in the High Yield market, where few issuers (except in emerging countries) have issued green bonds, clearly preferring Sustainability-Linked Bonds.

Banks and Sustainability-Linked Bonds: an impossible alliance?

In contrast, the financial sector – and banks in particular – may not issue SLBs: due to the current regulation, it is not recommanded for banks to issue Sustainability-Linked Bonds, which means they only issue green bonds until further notice, choosing formats in the following order of preference: covered, senior, and finally subordinated, if there are enough tracked assets to finance. Banks will only track more assets, and therefore issuances, if these are aligned with the European taxonomy. Consequently, banks will now have to sort their balance sheets and start tracking their green assets.

Sustainability-Linked Bond premiums: the challenges of comparing apples and oranges...

Sustainability-Linked Bonds, which we associate with a low amount of "additionality" - althought we admit they feature some benefits if used appropriately, are an asset class we follow closely.

Calculating a Greenium, as we do with Green Bonds, is crucial to us. However, the asset class comes with a variety of options. In short, Sustainability-Linked Bonds are less uniform and standardised: multiple Key Performance Indicators (or KPIs), varying penalty amount, values depending on how difficult it is to achieve the KPIs (the easier, the higher the penalty; and the harder, the lower the penalty), different horizons and time frames for the penalties and KPIs, not to mention the wide range of formats...

In 2022, the Greenium is likely to evolve in a positive interest rate environment, characterised by the achievement of the European Taxonomy and the structural convergence between Green Bond indices and more conventional Global Aggregate indices. Furthermore, the emergence of Sustainability Linked Bonds could slow down the growth of the green bond market, preventing the Greenium from shrinking in some sectors.

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