UBS Asset Management
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August 2022

Fixed Income update:

Dreaming of a greener, cleaner and fairer world.

"The economy is a wholly owned subsidiary of the environment, not the reverse." - Herman E. Daly

Individuals, corporations, governments, investors and other stakeholders are increasingly focused on sustainability. Moves in this direction - a more holistic approach to the economy and capitalism – will necessitate significant investment, which in turn will require considerable funding. The bond market has and will continue to play a central role in this transition.

This is a two-part paper, providing:

I. A primer on the development of the green, social, sustainability and sustainability-linked bond market.

II. The UBS Asset Management Fixed Income approach to assessing a company's green, social or sustainability frameworks (investor discretion is advised).

Part I – The development of the green, social, sustainability and sustainability-linked bond market.

Key takeaways

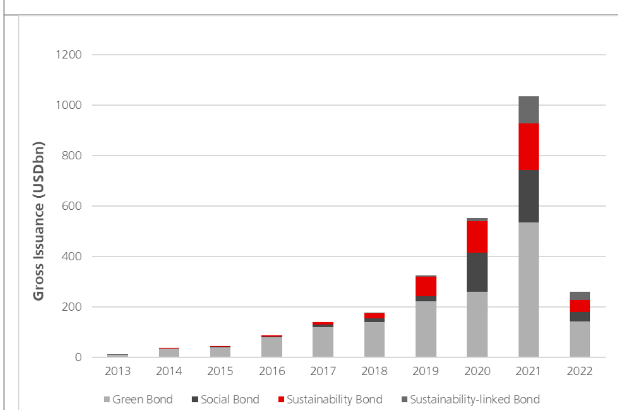
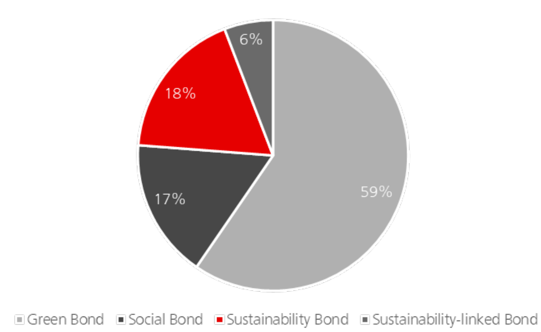
- Europe has led the development of the green, social, sustainability and sustainability-linked (GSSS) bond market
- Green issuance dominates and will continue to be the mainstay of the market
- Sustainability-linked bonds will likely be the fast growing segment

The GSSS market is 2.5trn in size and growing rapidly
Based on the use of proceeds, issuers can raise labelled ESG-related bonds. Within the green, social and sustainability bracket, bonds are issued to fund specific projects with environmental and/or social benefits. Sustainability-linked bonds, however, are not issued to fund specific projects. Rather, the proceeds are used for general corporate purposes but the company commits to meeting certain predefined sustainability targets. Failure to meet those targets on some future date will often result in a coupon step-up(s).

Green issuance has led the development of the sustainability bond market, driven in part by the pressing 'climate emergency', but also because their impact can be more easily tracked and understood by applying quantifiable and science-based metrics (lower Greenhouse House Gas (GHG) emissions for example). Social bond issuance, on the other hand, has been stymied given the complications around assessing social impacts, which tend to be more qualitative and less standardised.

Combined issuance of GSSS bonds totaled USD1.1trn in 2021 (chart below), doubling the level of global supply in 2020., bringing the total amount of outstanding GSSS bonds to USD2.5trn. The space is set for continued strong growth, with green bonds remaining the dominant segment. The ongoing transition towards net-zero will require enormous investment, hence we believe corporates will remain the biggest issuers. Sustainability-linked instruments are set to record fastest growth. The International Energy Agency estimates that, by the end of the 2020s, annual capital spend on clean energy by EM countries needs to expand by 7 times, compared to 2020 levels, to put the world on track for net zero by 2050*. So whilst we expect issuance in these regions to grow faster as the market naturally makes its way down the risk spectrum, developed market issuance will remain dominant. Growth in social bonds has lagged, a situation which is likely to persist given suitability is concentrated in the financial and supranational space.
*International Energy Agency: 'Financing Clean Energy Transitions in Emerging and Developing Economies', 2021.

Global GSSS Issuance Trends

Global	Cumulative Issuance by Type
	

Source: Bloomberg

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Regional issuance: Europe leads, others follow

European issuers have forged the way having issued 50% more in sustainability related bonds compared to all other continents combined, as evidenced in the chart below. Although debt issuers in North America are increasingly willing to consider sustainable financing as part of their capital funding, the region currently only represents a relatively small share of the global mix.

Global Cumulative Green, Social, Sustainability and Sustainability-Linked Bond Issuance

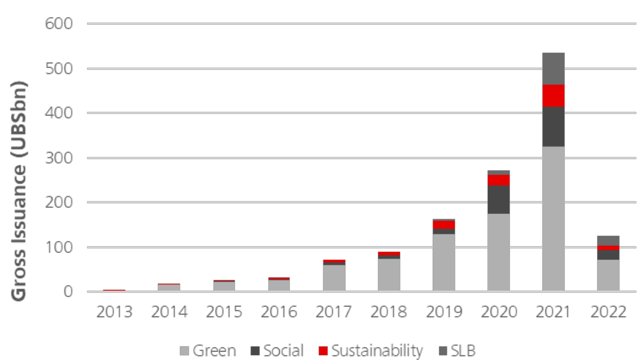
Source: Bloomberg

Excludes Supranationals: USD469bn

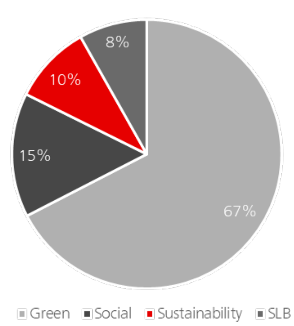
Europe, the early mover

EU citizens benefit from some of the highest environmental standards in the world. The EU and national governments have set clear objectives to guide environment policy, with the support of research programmes, legislation and funding with a view to: protecting the EU's natural capital; turning the region into EU into a competitive low-carbon economy; and safeguarding citizens from environment-related risks to health and wellbeing. This focus has resulted in Europe being an early mover (led by the Nordics, Scandi and France) and has advanced the fastest, leading the global market since issuers first dipped their toes in the space post the financial crisis. The region also has the largest pool of dedicated funds investing the GSSS space, underpinned by a relatively advanced regulatory framework.

Europe



Cumulative Issuance by Type



Source: Bloomberg

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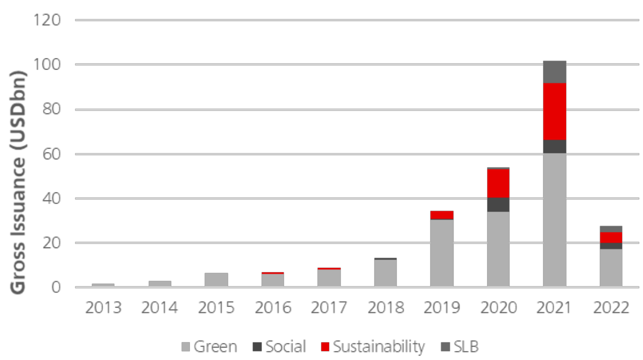
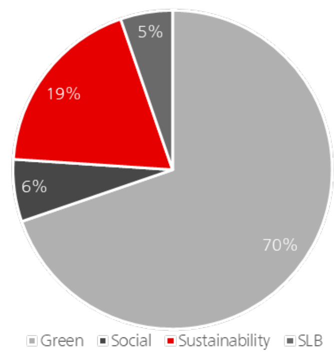
North America, fashionably late

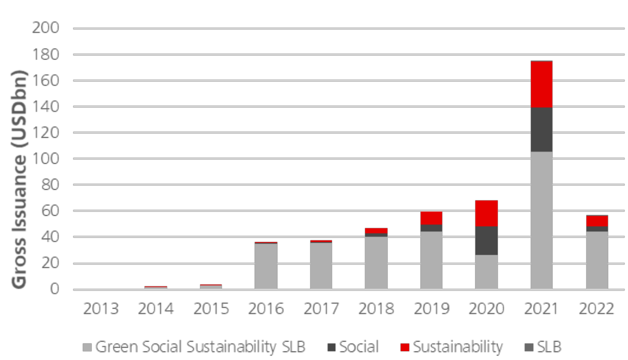
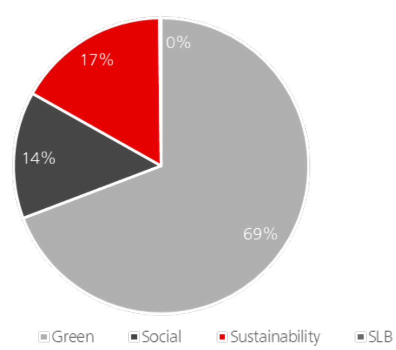
Europe has been well ahead of the US in its adoption of ESG and European companies are also typically ahead in their ESG reporting and policies, largely on the back of demands from investors. European regulators have been involved at a much earlier stage than the US, with the SEC only just publishing proposals for mandatory climate-related disclosures from companies. Going forward, the ruling Democrats climate initiatives are likely to provoke more interest from public and private issuers. Whilst US investors have been late to the ESG/GSSS party, it is clear they are becoming increasingly focused on this space, which should prompt more mutually beneficial bond supply from US issuers.

North America	Cumulative Issuance by Type
	

Source: Bloomberg

Asia, leading the EM universe

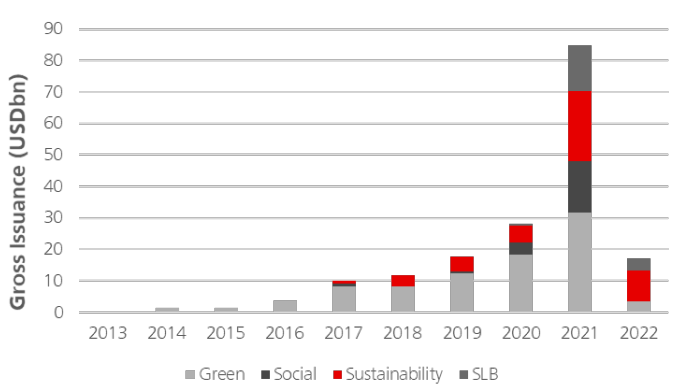
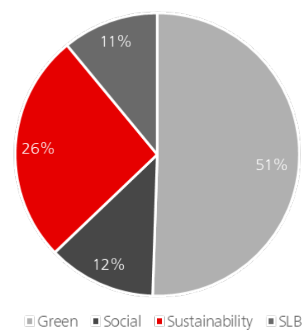
Within EM, Asia dominates in terms of ESG bond issuance, with China, Korea and India representing the majority of ESG bonds outstanding. Historically, financials have dominated the space, with Korean and Chinese banks being the biggest issuers. Corporate issuance has been ramping up, propelled by supply from Chinese property, and energy and utility companies from Korea and India. Sovereign green bond issuance has also been catching up, with issuance by HK, Indonesia and Korea. We expect continued issuance, underpinned by increasing recognition amongst stakeholders in the region, further supported by the ramp up in sustainability campaigns by governments. Going forward, Chinese energy and utilities, Indian renewables and other energy/infrastructure companies are likely to be the main sources of green bond supply.

Asia	Cumulative Issuance by Type
	

Source: Bloomberg

Rest of the World, the sleeping giant

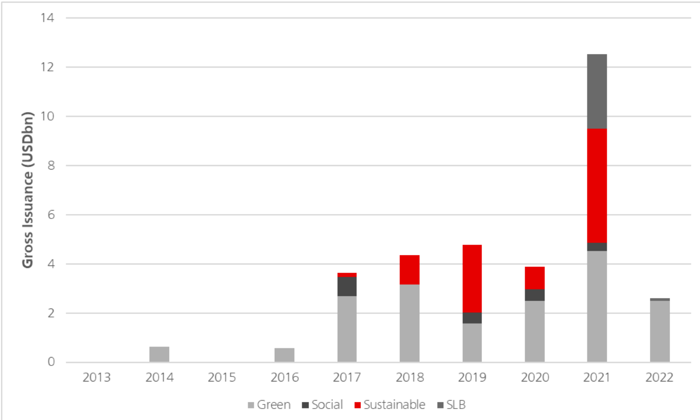
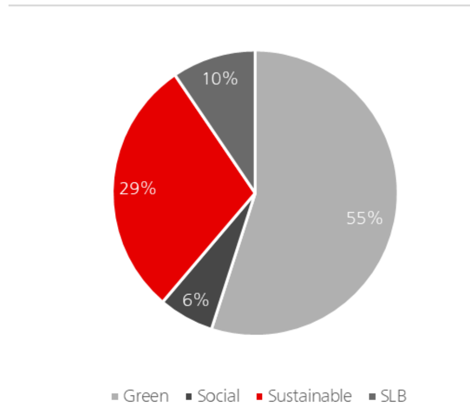
GSSS issuance in Africa, Latam and Australasia is still in its infancy, but has exhibited similar trends to developed markets, albeit on a smaller scale. In Latam, green bond issuance dominates, primarily driven by sovereign issuance from Chile (USD3.8bn) and by various issuers from Brazil (USD2.5bn). Social and sustainability labelled bonds have also emerged more recently, highlighting broader potential on the continent. Within Africa, issuance has been concentrated in South Africa. Despite the excellent potential for GSSS bonds out of the region, actual issuance has lagged behind emerging markets elsewhere. There is no shortage of projects in need of GSSS financing across the continent (electricity, transport, clean water and sanitation), market naivety, credit quality and the commodity based nature of many economies has been an impediment to stronger growth. Supranationals (see below) have stepped in to some degree to fill the void.

Rest of the World	Cumulative Issuance by Type
	

Source: Bloomberg

Australia, the only way is up

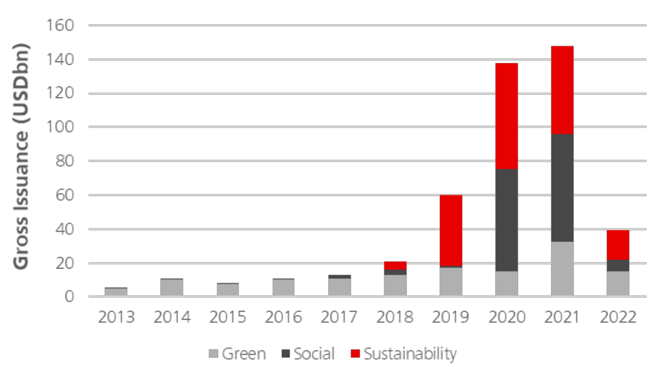
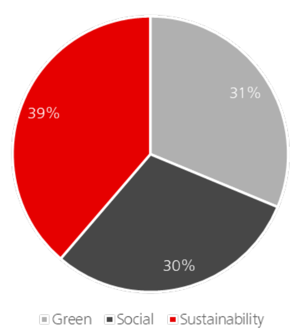
Overall growth within the Australian sustainability bond issuance arena is at a lower base level, reflecting the size of the domestic economy vis-à-vis the Eurozone for example. One obvious difference relative to other developed markets is modest level of Australian dollar denominated GSSS issuance from the Australian banks, whom historically have had a preference for the EUR market (pricing benefits). Like elsewhere, green bond issuance has dominated, but a handful of other 'use of proceeds' bonds (social and sustainability) have gradually emerged (the Australian university sector has been an active issuer). In the sustainability-linked sphere, borrowers have so far favoured bank loan structures over bonds, although we have seen Woolworths, Wesfarmers and Optus make Sustainability-Linked Bonds (SLB) forays into the domestic market. While Australian issuers and the investment community are in the early stages of their respective ESG journeys, this means the only way is up for AUD GSSS issuance over the long term, which implies greater opportunities to support Australia and domestic businesses achieve their net zero targets.

Australia	Cumulative Issuance by Type
	

Source: Bloomberg

Supranationals, doing the heavy lifting where others cant

Supranationals have been quite active issuers but distinguish themselves within the GSSS space, exhibiting a much more balanced distribution across green, social and sustainable bonds (and no Sustainability-Linked Bonds). ESG themes in many cases are closely aligned with the mission statements of supranationals, such as supporting energy-efficient housing and infrastructure or addressing poverty. EIB has historically been the largest green issuer. In recent years, there was a surge in social bonds, boosted by the EU SURE instruments (designed to protect employees affected by the coronavirus pandemic). Going forward, we expect the highest percentage of new issuance to come with a green label, reversing the covid-related supply trends.

Supranationals	Cumulative Issuance by Type
	

Source: Bloomberg

Part II – UBS AM Green, social and sustainability

Key takeaways

- Not all green bonds are equal (same applies to social and sustainability bonds respectively).
- Reliance on second party opinions is insufficient with deeper analysis of Use of Proceeds key.

The International Capital Markets Association (ICMA) provide guidelines on the key components of GSS bonds to help investors evaluate the credibility of any particular issue in this space. The ICMA principles are generally regarded by the international markets as the minimum standards that must be met, although alternative standards are being developed for onshore bond markets in certain countries. There are 4 core components of the ICMA principles: 1) use of proceeds, 2) process for project evaluation/selection, 3) management of proceeds and 4) reporting. In addition, there are 2 recommendations: 1) issuers should published a bond framework prior to any GSS issuance and 2) issuers should obtain an external framework review.

Whilst the ICMA standard are a good starting point, UBSAM view them as a minimum requirement. The Credit Research team within Fixed Income has therefore developed its own approach to determine whether green, social or sustainability bonds are suitable for investment, not only in GSS specific portfolios, but across the full suite of fixed income funds. There are a multitude of considerations our team of credit analysts assess, with the starting point being the documented green, social or sustainability framework that sets out the issuer's targets and objectives:

- **Analysts undertake independent reviews of frameworks to assess:**
  - Alignment with ICMA Standards
  - Use of Proceeds (UoP) of eligible projects: existing assets vis-à-vis new projects
  - Clarity and degree of ambition around KPI's and targets
  - Transparency around reporting, rated on a scale of 1 (strong) - 3 (weak)

- **Relative value & greenium/socium/sustainium considerations:**
  - An adequate framework does not imply automatic investment
  - Specific analysis of the UoP of a particular bond is require to justify the credentials of the project/portfolio of assets
  - Attention is also given to alignment with UN SDGs1, Climate Bond Initiative and (where relevant) the EU Taxonomy
  - Ultimately, is a spread discount justified based on the assessment of the framework and specific UoP?

[1] In 2015 all UN member states adopted 17 Sustainable Development Goals (SDGs), providing a blueprint for peace and prosperity for people and the planet, now and into the future. The members acknowledged that all countries - developed and developing – should not only strive to end poverty but develop strategies to improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Case studies

1. Look back and transparency an issue Electricity and Gas Distribution business	
What we like: • Bonds issued in accordance with the company's green bond framework • Use of proceeds allocated to towards supporting assets which facilitate the penetration of renewable energy capacity that gets ultimately delivered to end users • Framework assessed by a 2nd party	**What concerns us:** • UoP was allocated towards refinancing of existing debt which supports existing assets within the electricity network • UBSAM would prefer to fund new projects • The company was vague with respect to the specifics of the underlying assets
Decision: • Despite some positives around the structure, the 100% allocation to existing assets (no change to GHG emissions), and lack of transparency weighed on our valuation. The issued bond priced inside the vanilla bonds, whereas we felt fair value was closer to inline. Hence the decision was made to pass on the new issue. We will continue to monitor the market, and should secondary pricing of the green bond equal that of the straight bonds, then we will reconsider our positioning.	

2. Use of proceeds well aligned with UNSDGs Shipping company	
What we like: • Green Bond Framework aligned with ICMA standards • Use of proceeds allocated towards reducing the carbon intensity of shipping activities • Clearly aligned with UNSDGs • Well established targets and a clear timeline for achieving those targets • Clear and transparent reporting framework	**What concerns us:** • Framework allows for lookback periods which may be an issue for some investors
Decision: • While we prefer to fund new projects and the presence of lookback periods has been an issue for us, the clear benefit of reducing carbon emissions from shipping (one of the highest emission sectors within transport) was sufficient to support allocating capital to these bonds. In terms of pricing, while demand was strong at new issuance, the improving credit story supported our view that spreads will likely tighten.	

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