



Environmental
Finance

Sustainable Bonds Insight 2025

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After taking more than 12 years to reach \$1 trillion cumulative issuance in late 2019, the sustainable bond market now consistently adds around \$1 trillion in issuance every year – a trend consolidated in 2024.

Indeed, 2024 saw the sustainable bond market chalk up the fourth successive year of around \$1 trillion worth of annual issuance, which means cumulative issuance is set to breeze past \$6 trillion during 2025.

According to figures from *Environmental Finance Data*, green, social, sustainability, sustainability-linked, and transition bond issuance in 2024 grew 4% to more than \$1.04 trillion from \$1 trillion in 2023.

Although still short of the record \$1.15 trillion issuance in 2021, the resilience of the sustainable bond market in recent years is remarkable when faced with the challenges wrought by geopolitical conflict, an ‘anti-ESG’ backlash and relatively elevated interest rates.

Of course, 2025 is set to provide a panoply of new and renewed risks for the market to navigate – most prominently in the political realm, but also with regards to regulation and the macro-economic backdrop.

Naturally, the challenges and opportunities these risks pose is a theme that is explored in depth in this report – the 11th Sustainable Bonds Insight.

What remains clear is that finance is one of the most powerful tools to deliver economy-wide environmental and social impact, perhaps even more so at a time of vacillating public and political preferences. Within this, the sustainable bond market looks set to continue to innovate and burnish its credentials as a pace-setter in this respect.

This was particularly visible in 2024 with green bonds. The oldest sustainable bond label set another issuance record in 2024 at \$625 billion, with the stunning headline figure only one highlight during a year in which the trend towards even greater diversity of use-of-proceeds continued apace.

By far the largest sustainable bond market in the world,

Europe is anticipated to continue to lead the way in 2025 both with regards to market practice and volumes. As a result, the potential impact of the groundbreaking EU Green Bond Standard (EU GBS) is already becoming a critical topic to watch in 2025.

After coming into force at the end of 2024, this ‘gold standard’ set of requirements is probably the biggest revolution in the green bond market since the Green Bond Principles (GBP) were first published in 2014. But whether it is set to crimp or catalyse the quality and quantity of issuance in the healthy and growing green bond market will be watched closely. Again, this is a theme which is unpacked in detail within this report.

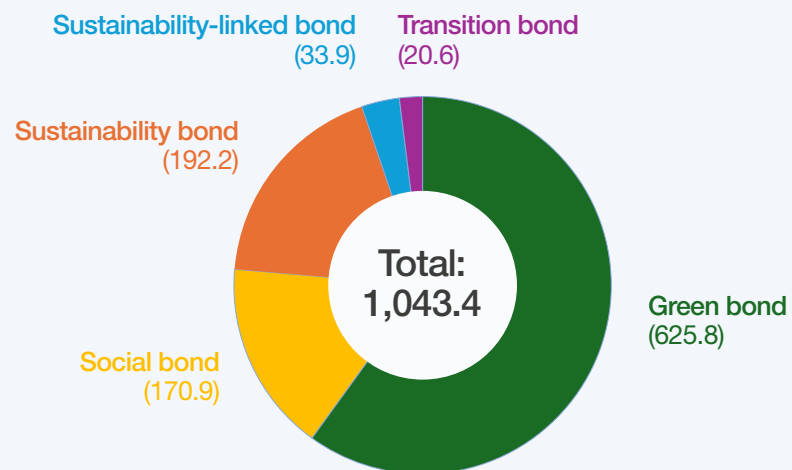
2025 is also set to be a critical year for two of the newest sustainable bond labels – transition bonds and sustainability-linked bonds (SLBs) – but for different reasons.

For SLBs, a torrid few years in which issuance of the target-based instrument has declined materially must be reversed. But there is optimism among market participants that issuers, investors, underwriters and service providers should develop a better grasp of what “good” SLBs look like as 2025 progresses. If so, this potential renaissance could begin to emerge this year.

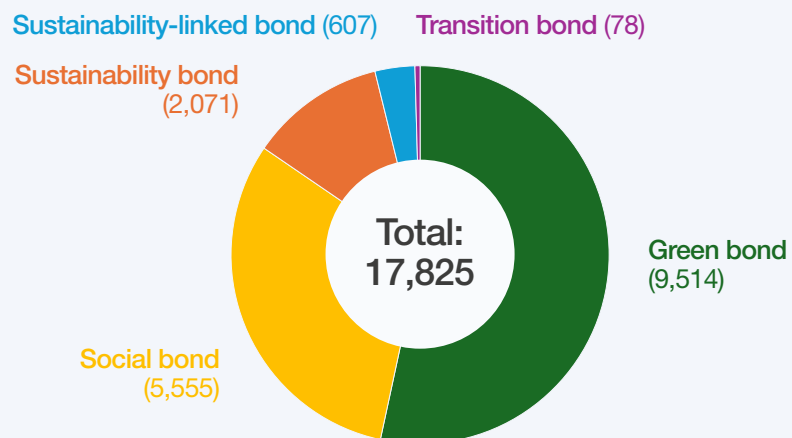
In contrast, transition bonds are looking to build on a milestone year to create a coherent and credible structure. The groundbreaking sovereign ‘climate transition’ bond from Japan in 2024 has revitalised this debate. But whether 2025 could mark a turning point for this difficult-to-define – and, for some, difficult-to-justify – sustainable bond label will be eagerly watched by the global market and, especially, emerging market issuers.

Whatever 2025 brings, issuers and investors alike must rally around the potential of sustainable bonds to achieve their environmental and social goals – if they do, this trillion-dollar market will lay down even stronger foundations for further scale and impact for years to come. ■

2024 Sustainable bond issuance volume breakdown (\$Bn)



2024 Sustainable bond issuance volume breakdown



Top 10 biggest issues of 2024 by USD*

Issuer	Catgory	Value (M)	Currency	Value in USD (\$M)
 Republic of Italy	Green bond	9,000	EUR	9,705
 Republic of France	Green bond	8,000	EUR	8,761
 European Union	Green bond	7,000	EUR	7,618
 European Investment Bank	Green bond	6,000	EUR	6,568
 IBRD	Sustainability bond	6,500	USD	6,500
 European Union	Green bond	5,000	EUR	5,527
 European Investment Bank	Green bond	5,000	EUR	5,523
 The Government of Japan	Transition bond	799,500	JPY	5,329
 The Government of Japan	Transition bond	799,800	JPY	5,311
 IBRD	Sustainability bond	5,000	USD	5,000

*Currency conversion taken at pricing date of the bond

efdata.org

The largest deal and issuers of the year in the green bond market

Largest Single Green Bond



Republic of Italy
Value: \$9.7Bn

Largest Issuer



European Union
Value: \$21Bn

Largest Agency



Fannie Mae
Value: \$15.2Bn

Largest Sovereign



Federal Republic of Germany
Value: \$19Bn

Largest Supranational



European Union
Value: \$21Bn

Largest Corporate



Volkswagen Financial Services
Value: \$9.2Bn

Largest Financial Institution



ICBC
Value: \$5.9Bn

Largest Municipal



California Community Choice Financing Authority
Value: \$9Bn

The largest deal and issuers of the year in the social bond market

Largest Single Social Bond



Cades
Value: \$4.4Bn

Largest Issuer



Korea Housing Finance Corporation
Value: \$20.1Bn

Largest Agency



Korea Housing Finance Corporation
Value: \$20.1Bn

Largest Sovereign



Republic of Chile
Value: \$4.3Bn

Largest Supranational



Asian Development Bank
Value: \$4.3Bn

Largest Corporate



Motability Operators
Value: \$5.3Bn

Largest Financial Institution



Industrial Bank of Korea
Value: \$7.9Bn

Largest Municipal



Région Wallonne
Value \$2.2Bn

The largest deal and issuers of the year in the sustainability bond market

Largest Single Sustainability Bond



IBRD
Value:
\$6.5Bn

Largest Sustainability Bond Issuer



IBRD
Value:
\$53.1Bn

Largest Agency



**Agence
Francaise de
Developpement**
Value: \$4.8Bn

Largest Sovereign



United Mexican States
Value: \$5.9Bn

Largest Supranational



IBRD
Value:
\$53.1Bn

Largest Corporate



**Comisión Federal
de Electricidad**
Value: \$1.5Bn

Largest Financial Institution



BNG Bank
Value: \$4.4Bn

Largest Municipal



**South Australian
Government
Financing Authority**
Value: \$3.8Bn

The largest deals of the year in the sustainability-linked bond market

Largest Single Sustainability-linked Bonds

IHO HOLDING

IHO Holding
Value: \$2.1Bn



Enel
Value: \$2Bn



Snam
Value: \$1.6Bn

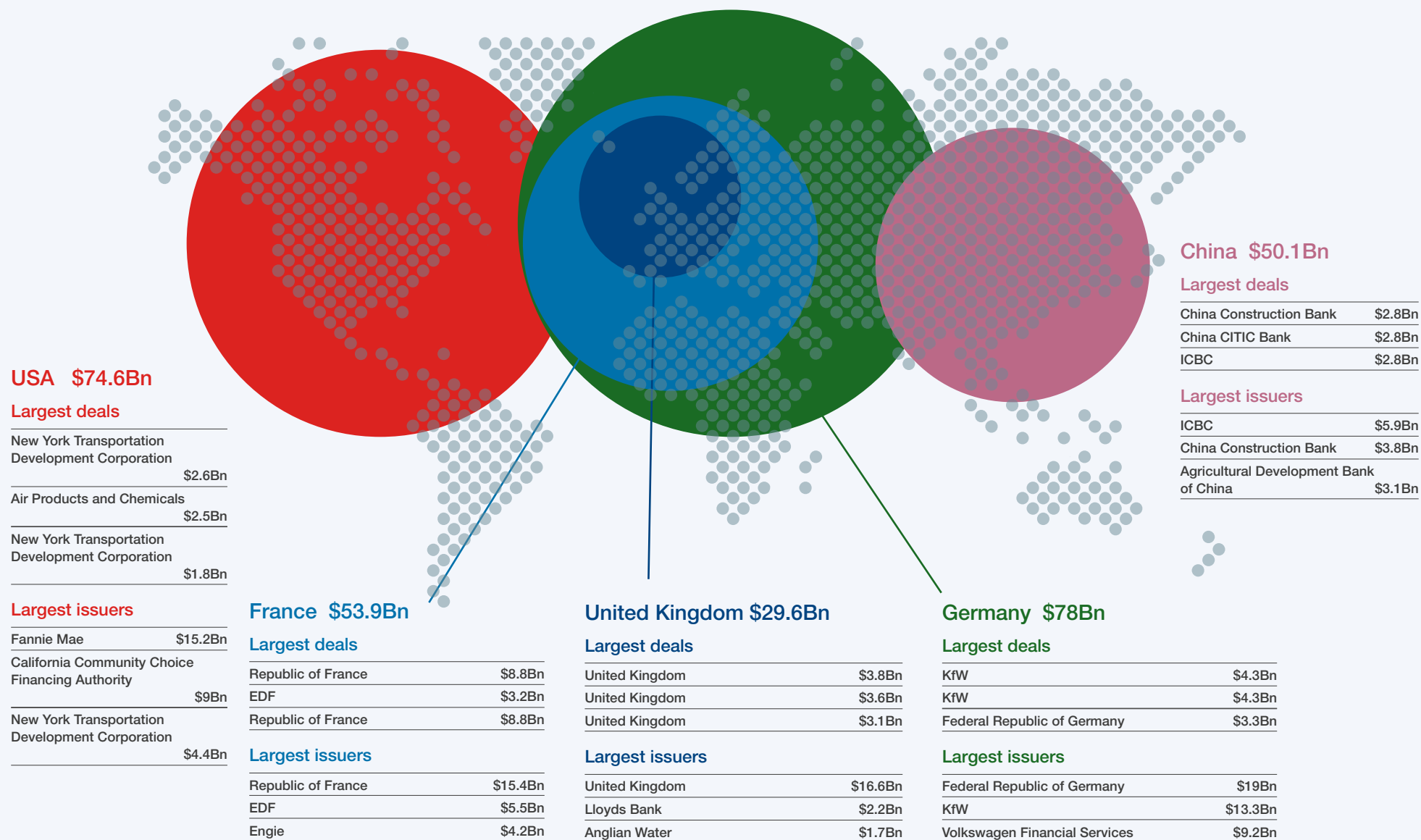


Kingdom of Thailand
Value: \$1.1Bn



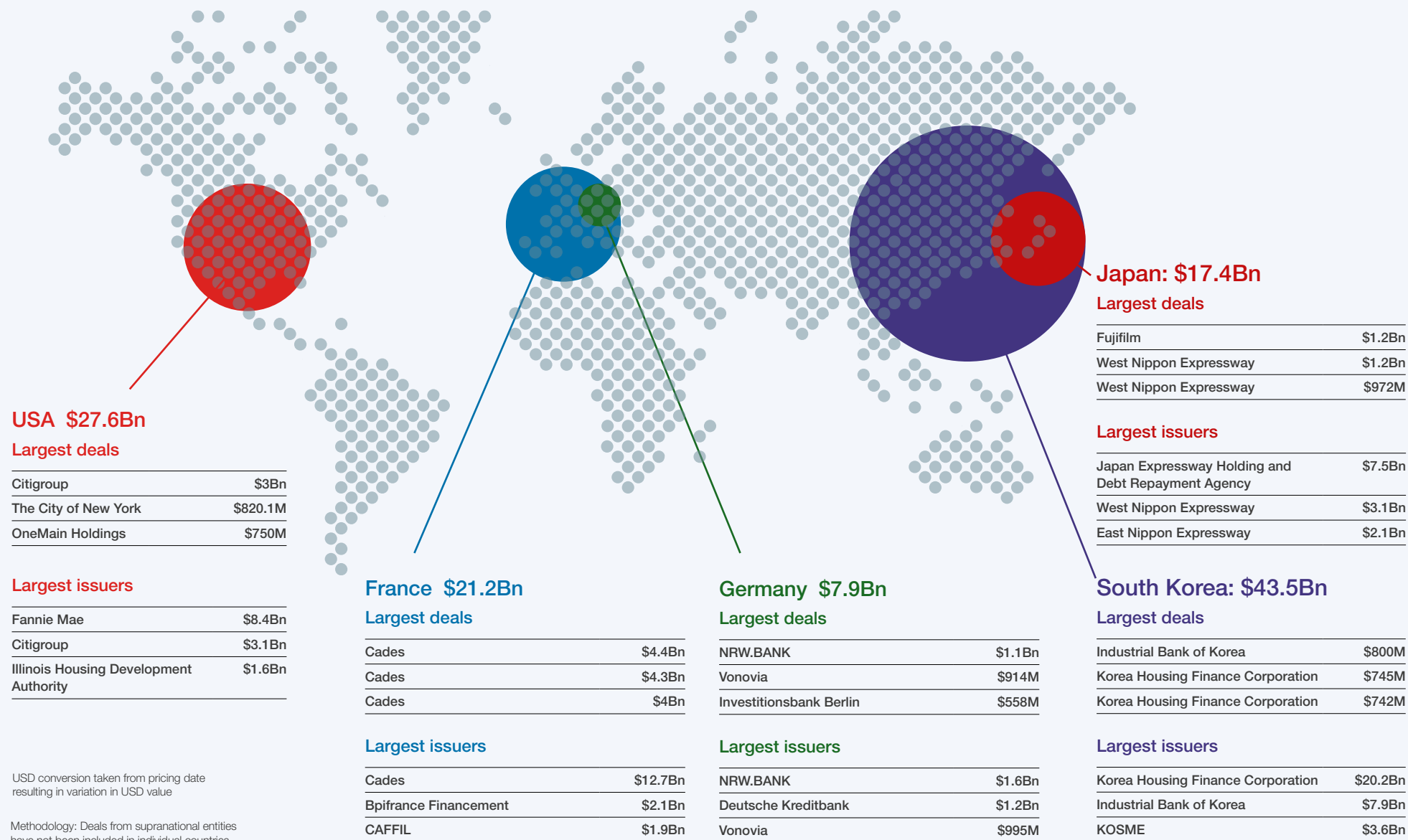
Snam
Value: \$1.1Bn

Top five largest issuing countries in 2024 in the green bond market



USD conversion taken from pricing date
resulting in variation in USD value

Top five largest issuing countries in 2024 in the social bond market



Top five largest issuing countries in 2024 in the sustainability bond market

USA: \$10.7Bn

Largest deals

Los Angeles Unified School District	\$1.1Bn
Maryland Economic Development Corporation	\$661 M
Starwood Property Trust	\$600M

Largest issuers

New York City Housing Development Corporation	\$1.8Bn
Freddie Mac	\$1.5Bn
Los Angeles Unified School District	\$1.1Bn

Mexico: \$10.9Bn

Largest deals

United Mexican States	\$2.2Bn
Comisión Federal de Electricidad	\$1.5Bn
America Movil	\$1.2Bn

Largest issuers

United Mexican States	\$5.9Bn
Comisión Federal de Electricidad	\$1.5Bn
Bancomext	\$1.5Bn

USD conversion taken from pricing date resulting in variation in USD value

Methodology: Deals from supranational entities have not been included in individual countries.

France \$21.2Bn

Largest deals

Agence Francaise de Developpement	\$2Bn
Agence Francaise de Developpement	\$2Bn
Caisse des Dépôts et Consignations	\$1.1Bn

Largest issuers

Agence Francaise de Developpement	\$4.8Bn
Caisse des Dépôts et Consignations	\$1.1Bn
Region Ile de France	\$870 M

United Kingdom: \$8Bn

Largest deals

Compass Group	\$812M
Dwr Cymru	\$790M
United Utilities Group plc	\$699M

Largest issuers

Compass Group	\$1.4Bn
United Utilities Group plc	\$1.3Bn
Dwr Cymru	\$981M

Japan: \$6.9Bn

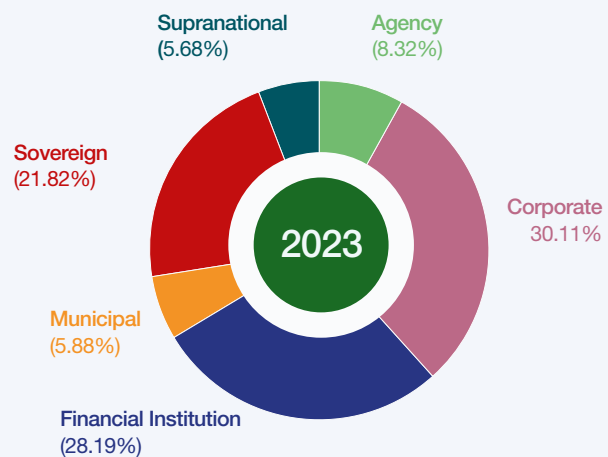
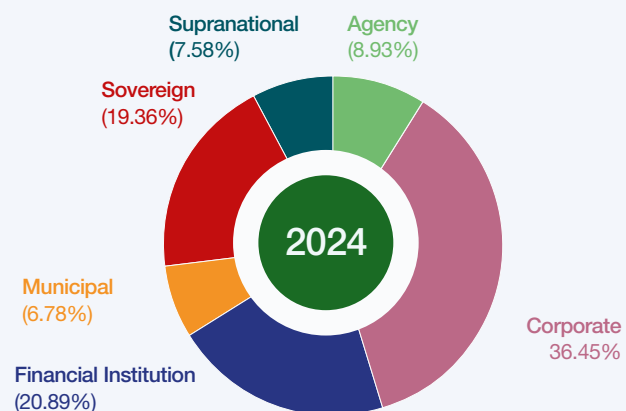
Largest deals

Japan International Cooperation Agency	\$1Bn
KDDI Corporation	\$857M
Development Bank of Japan	\$666M

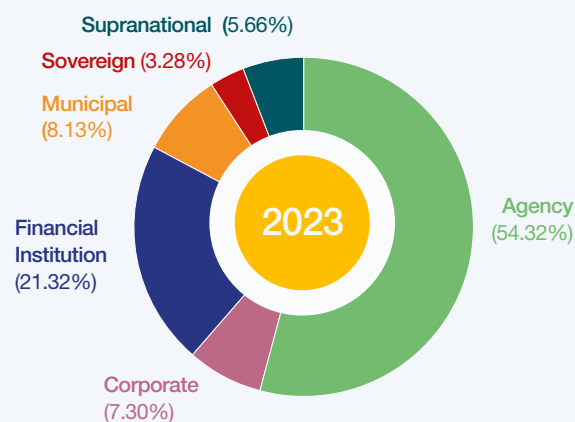
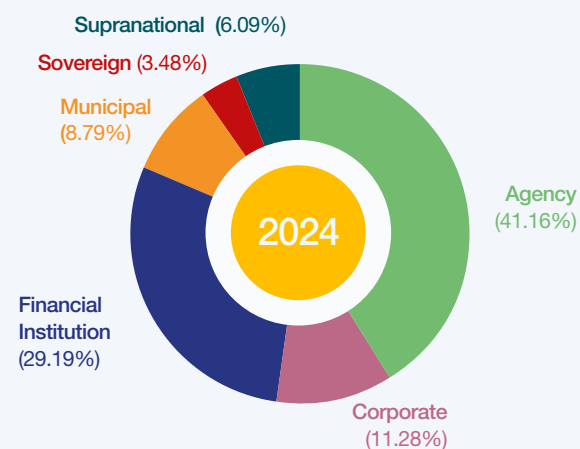
Largest issuers

Japan International Cooperation Agency	\$1.4Bn
Development Bank of Japan	\$1.3Bn
KDDI Corporation	\$857M

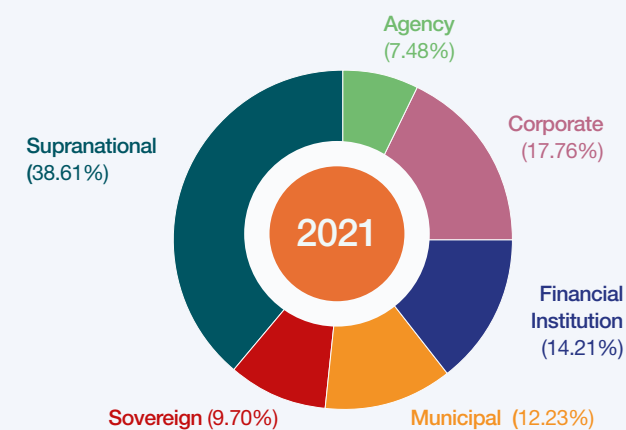
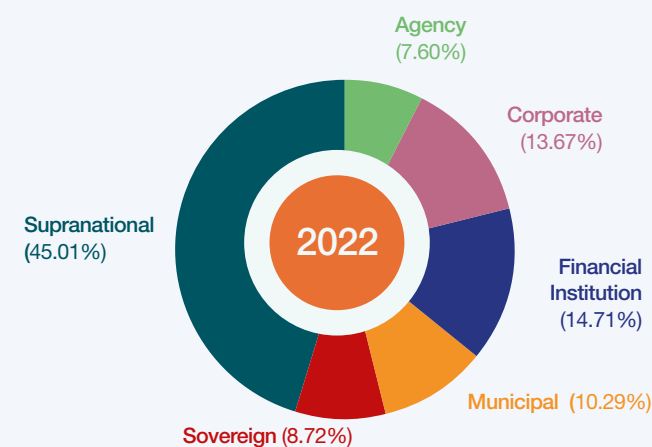
Green bonds



Social bonds



Sustainability bonds





Sustainable finance in a changing world

Despite political headwinds, sustainable bond issuance is set to be supported by strong fundamentals, innovative applications and strong investor demand, say **Trevor Allen, Agnès Gourc, Chaoni Huang, Franck Rizzoli and Frederic Zorzi** of BNP Paribas

Environmental Finance: What do you see as the main drivers of issuance in the sustainable bond market in 2025?

Agnès Gourc: There are a few major forces shaping the market this year. One is regulation, particularly in Europe, where the Sustainable Finance Disclosure Regulation (SFDR) continues to be a supportive influence for green bond issuance, and the new EU Green Bond Standard (EU GBS) is bringing further comparability to the market. Another is a growing focus from investors on specific thematic, as shown by the interest from investors in blue bonds and other innovative financing mechanisms for ocean conservation. And, finally, demand remains strong. Sustainable bonds continue to attract a deep and growing investor base, reinforcing their importance as a key financing tool.

Frederic Zorzi: The introduction of the EU GBS is positive progress for the market, as it will provide greater clarity and reliability for investors. This added stability will ultimately translate into increased investor demand for these issuances. With the introduction of this standard, the EU will continue to be a major engine driving the sustainable bond market forward alongside the continued and accelerating drive to decarbonise, which continues at pace both in the EU and Asia.

Trevor Allen: For green bonds, specifically, we expect issuance to grow around 8% this year, to \$660 billion from



Agnès Gourc



Frederic Zorzi



Trevor Allen

\$609 billion in 2024. A big factor is the ‘maturity wall’, a term we coined to describe the fact that between 2025 and 2026 an equivalent volume of bonds will mature as were issued in the whole of 2023. This creates a ‘push-pull’ effect – where issuers are more likely to roll over their green debt and investors will demand new supply to replenish their maturing green bonds. We’ve never had a maturity wall like this before, so it’s a big deal.

EF: There has been growing corporate issuance. What’s behind that, and how do you see that evolving in 2025?

AG: We’ve seen corporates really step up in recent years, and I expect that trend to continue. In 2024, close to a quarter of all investment-grade corporate bond issuances in EMEA were issued in sustainable bond format. Part of it is that more companies have integrated sustainability into their financing strategies – not just as a compliance exercise but as a core



Franck Rizzoli

business priority. Many of the investments being made are also driven by the growing imperative to be on track to achieve net-zero targets for 2025 and 2030.

Further to this, sitting behind the green bond label are a relatively wide range of environmental objectives, not just to decarbonise, but also efforts in adaptation, biodiversity targets and water management, to name a few. There are these additional incremental expenditures that have added to the desire from corporates to tap into

green capital pools, as they are recognising that sustainable bonds can provide access to a broader pool of investors.

TA: In Europe, one in three bonds issued by a utility were in the form of a green bond. Onshore wind and solar are cost competitive and solar in particular provides one of the quickest means for utilities to meet growing electricity demand. Meanwhile, we're seeing technology companies entering into clean energy power purchase agreements to meet their power demand and turning to green bonds as an obvious way to fund those projects.

In addition, we've seen more and more global sustainability commitments from corporates. Many of these have been using green bonds as a stakeholder engagement tool, to help their investors understand how they are changing their product or service mix as part of their transition plans.

EF: How are those corporate sustainability plans likely to be affected by the changing political environment?

TA: In Europe and Asia, I expect companies to remain on the path they are on but perhaps be more considered in how they convey their strategy. In terms of sustainable bond issuance,

there is something of a captive audience, from Article 8 and 9 funds under the SFDR: if there's demand from the market, there's going to be issuance.

We also expect to see continuing strong focus from issuers in the Global South. With Brazil as the host of COP30 this year, we see a strong drive to issue green bonds and to be vocal about it. Given something of a global vacuum around sustainability, I see real potential for leadership in the climate talks to emerge from Brazil and some of the other 'BRIC' countries, such as India and China, which could well feed into innovation around sustainable finance.

AG: Sustainable finance is increasingly global and, while political shifts in the US could influence sentiment, the broader momentum behind sustainable bonds remains strong. Regulatory frameworks in Europe, Asia and other regions are continuing to evolve, and investor demand is still there and has historically always been driving these markets. Companies with long-term sustainability commitments are unlikely to fundamentally change course based on short-term political dynamics.

EF: What about sentiment from the investor community?

Franck Rizzoli: In Europe, every new mandate has a reference to ESG somewhere, even if it's not in the title. The attitude of investors is that sustainability assessments are simply business as usual, and there is no need to bang the drum about it any more. Looking at ESG is one way of measuring and addressing risk and is an important element of achieving the best possible risk-return ratio. Even in the US, many asset managers will tell us that assessing ESG risk is fully embedded in their processes and, while they might not talk about it publicly, it's just part of the investment process.

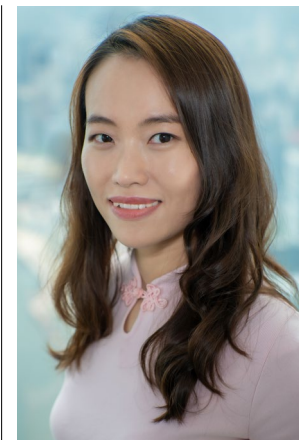
EF: How are your clients thinking about the approaching EU GBS? Do you think it's likely to spur significant issuance?

FZ: The EU GBS is absolutely a step in the right direction. Ultimately, the test of effective regulation from



BNP PARIBAS

The bank for a changing world



Chaoni Huang

an investor perspective is that it encourages standardisation that enhances comparability and harmonisation of approach. This standardisation then allows for investors to access consistent data and make informed decisions, which in turn promotes confidence in the market and drives further demand.

AG: The EU GBS is certainly a welcome step. One key consideration for issuers will be aligning their frameworks with the new

requirements, particularly around EU Taxonomy alignment. That said, there are already a number of transactions in the market that have been very successful. BNP Paribas has been active on most, and there is now a very good understanding of the application of the regulation. It is seen as a complement to the International Capital Market Association (ICMA) Green Bond Principles (GBPs), and investors expect alignment to both the GBPs and the EU GBS.

FR: Investors see it as a positive evolution for the asset class, given the transparency and additional requirements that it introduces – but it still remains a nascent asset class. As we progress and more issuers get to grips with the new standard, we would expect to see investors begin to look for more aligned issuances.

EF: What are you seeing from the sovereign, supranational and agency (SSA) part of the market?

FZ: SSA issuances will remain a key driver in terms of innovation. We expect this part of the market to continue pushing sustainable financing models into economic sectors that it hasn't yet reached. We have already seen that with the



rapid development of the blue bond market and last year we worked on a gender bond for the Republic of Iceland. These kinds of innovation from SSAs will continue to offer the market new financing models to adopt, where they see clear demand from investors.

AG: Supranationals have always been pioneers in the sustainable bond market, and that hasn't changed. They're setting benchmarks and helping to develop new methodologies and frameworks. Their presence continues to provide liquidity and credibility to the market.

Chaoni Huang: We could see new thematics coming in, particularly when it comes to climate adaptation. This is likely to become an important part of the market, given the world's inability to hold global warming below 1.5°C: it will become critically important to adapt to warming, at the same time as continuing to work to mitigate emissions. Given that investments in adaptation tend to be in public goods and public infrastructure, it makes perfect sense for SSAs to lead with climate-resilient issues. We have seen just such an issue last month, with the Asian Infrastructure Investment Bank's second climate adaptation bond, raising AUD500 million (\$380 million).

EF: Transition bonds have proved popular in Japan, but not elsewhere. What will it take for their appeal to spread?

CH: Transition could be the story for 2025. Cumulative issuance of corporate transition bonds has only reached \$3.9 billion, and this is concentrated in Japan, China and South Korea. But there is a lot of effort underway from regulators in the region – from the Monetary Authority of Singapore, the Hong Kong Monetary Authority and the People's Bank of China – to provide clarity and confidence to the market.

Given the relative carbon-intensity of the Asian economy, it's natural for Asia to take the lead with this part of the market. It's important for investors to understand the local context, and how transition finance fits in with the decarbonisation of companies across the region: for those investors with Asian

exposure, these emerging taxonomies provide a very good basis to define transition in the region. I expect to see more transition bonds issued from this part of the world and, more importantly, to see global acceptability of transition bonds by international investors.

AG: Transition bonds can make a lot of sense for companies in high-emission industries, but they need a clear framework to gain wider acceptance. Investors want to see strong science-based targets and credible transition plans with related investments. Japan has led the way, but until other markets develop transition taxonomies, we will lack broader adoption. The key is ensuring that these instruments are robust and not seen as a form of greenwashing.

EF: How are pricing trends evolving? Are issuers still able to benefit from a 'greenium'?

FZ: We certainly still see a benefit for issuers, although it is natural that, at a time when the market is historically very tight, the difference in pricing inevitably narrows somewhat. We continue to see a clear boost in terms of demand from investors for these issuances.

TA: There remains a greenium in European sovereigns, although it does fluctuate. Over the last two years, while rates were going up, this effect was seen most clearly in shorter-dated bonds. However, as rates come down, we expect the greenium to move to longer-dated paper, as investors seek to lock in higher rates for as long as they can.

A greenium is a function of supply and demand, and one of the things that drives that demand is investors seeking diversification. So, if there's issuance from a geography or a sector that doesn't typically issue sustainable debt, it is likely to be able to attract a pricing premium.

CH: In the APAC region, we've been analysing the pricing of sustainable bonds issued in dollars and euros compared with conventional bonds. We found that, over 2024, sustainable bonds delivered additional pricing compression of 3.5 basis points (bps) compared with their conventional equivalents.

In terms of new issuance premium, sustainable bonds also outshined conventional bonds, by 3.38 bps. So, there's a bit of green premium to issuers, but it shouldn't be exaggerated: the main benefit to issuers from sustainable bonds is their ability to attract additional demand.

EF: Finally, what innovations do you expect to see in the market in 2025?

TA: Transition bonds are going to be a key source of innovation, and I expect China to really explore this part of the market. One of the benefits for Chinese issuers is that they have a large domestic investor base, so they don't need to develop a transition label that is necessarily universally accepted. I think the Middle East will start to look at transition bonds as well.

CH: I also expect to see innovation around blended finance. We hope to work closely with the multilateral development banks (MDBs) and development finance institutions (DFIs) to help issuers in emerging markets with credit challenges to come to market. There are various instruments that can help de-risk sustainable debt issuance from these issuers, whether its credit guarantees, partial guarantees or tapping concessional capital.

AG: Blended finance or development finance, however you name it, is the area where I would expect most innovations to come from. There is a real need to develop better structures, with the help of the MDBs and DFIs, to make financing the Global South more palatable to institutional investors. ■

Frederic Zorzi is global head of primary markets, Trevor Allen is head of sustainability research at BNP Paribas Markets 360, Agnès Gourc is head of sustainable capital markets, BNP Paribas Global Markets, in London, Chaoni Huang is head of sustainable capital markets, global markets APAC, at BNP Paribas in Hong Kong, and Franck Rizzoli is head of ESG financing advisory, at BNP Paribas in London.

For more information, see: <https://cib.bnpparibas>

Financing the transition: banks turn to new tools

How banks put their transition plans into practice is attracting growing scrutiny as they seek to tap new transition financing instruments. **Federico Pezzolato, Camille Roux and Masaki Kadowaki** explain how ISS-Corporate is assessing their transition approaches and related issuance

Environmental Finance: The banking sector will play a central role in the net-zero transition. How are you assessing banks' approach to the transition?

Camille Roux: Despite the recent turmoil impacting the Net Zero Banking Alliance, launched in 2021, we've seen a growing number of banks committing to net zero, signalling increased efforts towards the transition and to aligning with the pathway to net zero by 2050. On the other hand, it takes significant efforts to move from a commitment to a real action plan, and we see that the sector is still in the early stages of a transition to a low-carbon economy.

Financing policies, transition lending conditions and transition financing overall could be key drivers for banks to reach net-zero goals by achieving financed and facilitated emission reductions. By directly influencing banks' capital allocation, transition finance incentivises their clients to reduce their carbon emissions.

For that, banks need to assess the transition plans of their borrowers. It is on this premise that we have developed our methodology to assess the transition frameworks of financial institutions. It considers both the bank's own decarbonisation strategy as well as its assessment of the transition plans of the companies that make up its loan books.

EF: What are the key considerations at the bank level?

CR: The main things we look for are a quantified climate



Camille Roux

transition plan, with short-, medium- and long-term targets to reduce their greenhouse gas (GHG) emissions, including both

financed emissions (through direct lending) and facilitated emissions (through advisory and underwriting, for example). We focus first on financed emissions, as banks are only just starting to quantify facilitated emissions.

We look for a clear scope, in terms of what proportion of emissions are covered, and which sectors, businesses and geographies. We assess the bank's target-setting methodology, which climate scenarios are used, and whether the targets are aligned with 1.5°C and verified by a third party. The final consideration is the bank's action plan to reach these targets, including information on its exposure to high-emitting sectors, any sectoral phase-out targets or policies, and the extent of its locked-in emissions.

The second step is to assess the ability of the bank to screen and monitor corporate transition plans as borrowing companies progress through their transitions. This is essential for banks in their capital allocation decisions, in their corporate engagement and to deliver their own decarbonisation goals. Under our methodology, the bank must check whether its borrower's transition plan includes several key elements, such as a transition commitment, a quantified transition strategy and an associated delivery strategy, the impact on the core business and disclosure of climate-related impacts.

EF: Looking specifically at how banks are assessing their portfolios, what are the issues they are grappling with?

CR: This is the more challenging part. First, banks need to develop a whole governance structure to gather, analyse and monitor the relevant data at the borrower level throughout the life of their loans. Second, and as with all sustainable finance instruments, there are challenges around data availability and quality. The lack of data standardisation makes it difficult to compare transition plans from one borrower to another or across sectors, for example. The third challenge is that borrowers need to be actively pursuing a decarbonisation strategy, so are most likely to be companies in high-emitting sectors. This means that banks will be exposed to transition risks that stem from the increasing regulatory and market pressures these companies face.

EF: How does the approach you are taking align with existing market guidance?

CR: Currently, there is no single recognised transition finance standard for financial institutions. Our methodology leverages different frameworks and guidelines that have been developed by recognised organisations. They include the UK Transition Plan Taskforce, the International Capital Market Association (ICMA) Climate Transition Finance Handbook, the Glasgow Financial Alliance for Net Zero's Expectations for Real Economy Transition, the Climate Bond Initiative's Financing Credible Transitions paper, the European Commission Sustainability Reporting Standard, and the OECD Guidelines on Transition Finance. But new guidance is continually being developed, and we'll continue to update our methodology in response.

EF: How can banks integrate this assessment with their existing sustainable financing frameworks, and potentially use it to issue sustainable financing instruments?

Federico Pezzolato: Banks are asking whether it's appropriate for them to combine green bond, transition and now sustainability-linked loan (SLL) financing bond frameworks. However, in our experience, it's not straightforward to combine everything, because a single framework becomes very complicated to manage. But we



Federico Pezzolato

recognise that some banks are active on a variety of fronts and may have a well-established green bond framework process in place, for instance. Here, it might make sense for these to work in parallel to develop their approach to other types of financing solutions for them and for their clients.

EF: A number of banks have issued SLL financing bonds (SLLBs) – what are their motivations for this issuance?

Masaki Kadowaki: SLLBs are bonds issued to finance a selected portfolio of sustainability-linked loans. These SLLs themselves can be linked to any green or social key performance indicator (KPI) and sustainability performance

target (SPT) but, to date, most have included decarbonisation goals. As such, they have the potential to be important transition finance tools.

We have worked with most of the financial institutions who have issued SLLBs, and we have ongoing mandates with others who are working on forthcoming issuances.

We see three motivations. The first is to contribute to the bank's sustainability effort and climate strategy; supporting their clients' climate transition plans helps banks achieve their Scope 3 emission reduction targets. ICMA's Sustainability-Linked Loans financing Bonds Guidelines require issuers to set a sustainability objective in the bond's eligibility criteria: if that objective is climate change mitigation, then the instruments help drive reductions in financed emissions.

The second motivation is that SLLBs help banks to showcase the ESG and sustainability governance of their SLL portfolios. Due to the private nature of those loans, the bank's due diligence processes and the quality of the KPIs or SPTs are not always disclosed. An SLLB sheds light on these processes, as the bank needs to disclose how it selects and evaluates the underlying SLLs.

Finally, from a financial perspective, SLLBs provide new liquidity to reinvest in other green, social or sustainability-linked assets. SLLBs are emerging as a complementary funding instrument to bridge the gap between asset origination and asset funding.

EF: What approaches are banks taking to structuring SLLBs?

MK: There are two approaches to structuring SLLBs. The first is to define the eligibility criteria of the SLL portfolio, mapped to the five core components of the Loan Market Association's Sustainability-Linked Loan Principles (SLLPs), especially with regards to how the KPIs and SPTs are assessed at the SLLB framework level. In addition, they need to define the KPIs and SPTs that they would like to incorporate into that particular framework.

This approach allows the bank to retain greater flexibility, because the assessment stays at the framework level. However, it does not provide investors with a detailed SLL-by-SLL

assessment, and it requires the bank to provide a lot of specific criteria regarding the KPIs and SPTs chosen to enable investors to make a thorough assessment at the framework level.

The second approach is to have a selected portfolio of SLLs reviewed by an external reviewer, with each of the SLLs needing to align with the SLLPs. But then the heavy lifting of assessing the KPIs and SPTs for each SLL is done by external reviewers.

This approach trades this more in-depth assessment of each SLL for future flexibility. Every time a bank wants to add a new SLL to the SLLB portfolio, it will be expected to update the external review.

Currently, the market is dominated by the second approach. But the inquiries we are currently receiving are mostly for the first, and some banks are considering a mixed approach.

EF: What guidance should banks apply to SLLB issuance? What challenges do they face?

MK: SLLB's are guided by two sets of guidance: ICMA's guidelines, which set out how banks should formulate their frameworks before issuing an SLLB; and the SLLPs, which provide the minimum requirements for any underlying SLLs to be included in the portfolio. These two sets of guidance should ensure consistency, transparency and accountability in the issuance of SLLBs and assure their alignment with sustainability objectives.

From our conversations with market participants, most of the challenge lies in the underlying SLL selection. This is because guidance and market expectations have continued to evolve since the first SLLs were contracted, so banks need to have methods or processes in place to ensure that their underlying SLLs meet current market expectations, such as around what constitutes ambitious targets, or what KPI is considered 'Relevant, Core and Material', according to the SLLPs.

Banks need to be very clear on how they conduct ESG due diligence on their borrowers before structuring an SLL facility, how they identify, select and monitor eligible SLLs to be included in the SLLB, and how they communicate these processes to potential investors. For banks taking the first



Masaki Kadowaki

approach to SLLBs, they also need to consider the granularity of the KPIs and SPTs that investors are comfortable with, and borrowers are willing to commit to. Banks need to structure their SLLB framework in a manner that is sufficiently transparent to inspire confidence among their investors but also respect their borrowers' confidentiality.

EF: What are the key considerations for investors in assessing SLLBs specifically, and banks' transition financing frameworks more broadly?

MK: Investors will need to decide how comfortable they are with the level of transparency the banks offer and how much they trust the banks' ESG governance structures. In terms

of tying SLLBs to transition finance, they will be looking for environmental KPIs that address carbon emissions reductions. In a broader sense, banks will need to explain how the SLLB fits in their wider transition strategy and, if possible, the extent of the financed emission reduction it contributes to.

CR: Investors will play an important role in supporting the banks in their own transition. When it comes to the transition framework itself, investors will pay specific attention to how the banks are assessing their borrowers' transition strategies and the project categories financed that are contributing to climate transition in order to deliver on their own financed emission reductions. Investors will hold the banks accountable for their long-term strategies.

EF: What developments are you anticipating in this part of the sustainable finance market in 2025?

FP: We are seeing considerable interest from banks on SLLBs and other transition financing instruments, and we're having conversations with banks in a variety of jurisdictions in Europe, Asia and the Middle East.

The market is evolving. Initially, issuers had very long and extensive lists of KPIs, for instance, or very large portfolios. Now, we are seeing a more specific approach, with a reduced number of KPIs or sectors considered, or a reduced number of loans with a recurring verification of the portfolio. As mentioned, issuers are also considering mixing the two approaches, so having a list of KPIs as well as portfolio reviews at the same time.

We see SLLBs as a useful instrument not just to finance the transition, but also to help banks' clients meet a number of their sustainability-linked objectives. ■

Federico Pezzolato, based in London, is global sustainable finance manager, Camille Roux, based in Paris, is sustainable finance research team lead, and Masaki Kadowaki is a Tokyo-based sustainable finance research associate at ISS-Corporate.

Learn more about ISS-Corporate's Sustainable Finance solutions here: www.iss-corporate.com/solutions/sustainable-finance/

2025: A tough challenge for the sustainable bond market?

Marcus Pratsch, head of sustainable bonds & finance at DZ BANK, considers the outlook for sustainable bonds in 2025 and some of the main themes for the year ahead.

For a long time, the sustainable bond market knew only one direction: always forward, never back. In 2020 and 2022, it suddenly faced its first major challenges: Covid-19 and a new geopolitical reality, coupled with many economic obstacles. This was seen as a sword of Damocles by many detractors.

However, the relatively young market has defied its critics and mastered these uncertain times with flying colours. At the epicentre of a pandemic, it fought his way back to new heights. And its response to the new geopolitical and economic world has been one of qualitative growth.

In 2025, the sustainable bond market will be put to the test again. The headwind is anything but light at the moment: the setback for ESG in the US, ongoing geopolitical and economic uncertainty around the globe, the question of how to reconcile sustainable transformation and competitiveness in Europe as well as a regulatory environment that remains complex and difficult to navigate.

In this area of turbulences, how is the sustainable bond market reacting? As a result, the volume of new sustainable bond issuance in the first four weeks of the year was down by around 15% year-on-year. However, from our perspective, there is no reason to bury our heads in the sand. In the medium-to-long term, the opportunities outweigh the risks. And the market is also experiencing enough tailwind to avoid going off track in the future. Given the global nature



Marcus Pratsch

of the sustainability movement, capital markets will continue to respond to real-world challenges beyond the politics of Washington, DC. We believe that despite, or perhaps because of, the changing political landscape and the backlash against sustainable finance, investing in sustainable bonds remains attractive for investors on the international stage seeking long-term value creation.

Don't worry – be optimistic!

While the debate on sustainable bonds may focus on challenges and risks in the short term, and voices critical of sustainable finance/ ESG may be raised in some parts of the world, we should instead devote ourselves to the many, many opportunities that the market offers.

COP30 will be a “COP of transition plans of sovereigns.” As governments around the globe have already started to prepare their next round of nationally determined contributions (NDCs), sustainable bonds by sovereign issuers will be an important catalyst for accelerating future market development. And investor appetite for sovereign sustainable bonds remains strong. With first-time issuers in the starting blocks and established issuers, particularly from Europe, expanding their sustainable finance activities, we could see new record levels. A look at the figures reveals great potential. There are about 170 countries that issue sovereign debt, and so far, only about 60 of them have come to the market with a sustainable bond. So, there are still many who have not ventured into sustainable funding.

Although sustainable finance/ESG will find itself on shakier ground in the US in the coming months and sustainable bond issuance by US issuers is expected to decline, this will not be the death knell for the global market. First, and unfortunately, the US has already lost ground in the global sustainable bond market in recent years. The action is already elsewhere and will

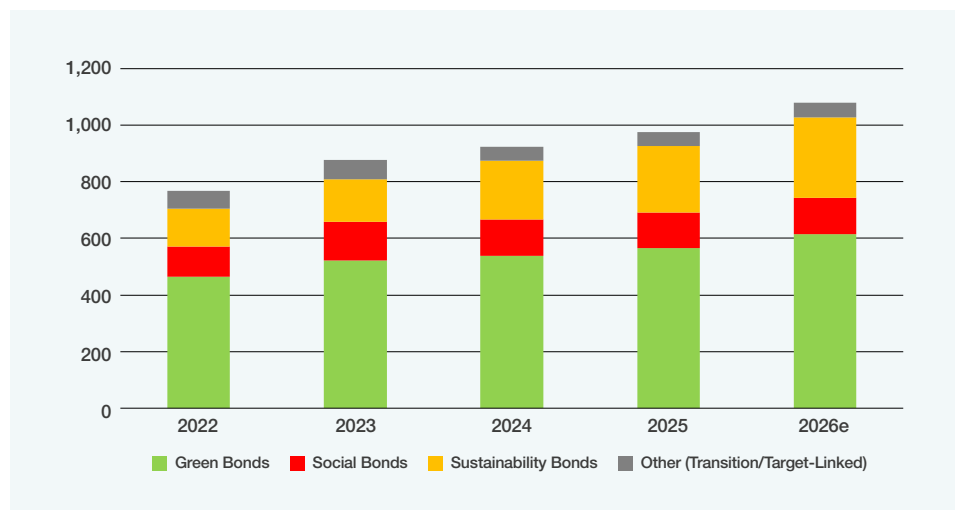


Figure 1: Development of Sustainable Bond's new issuance volume 2022-2026e (in USDBn)

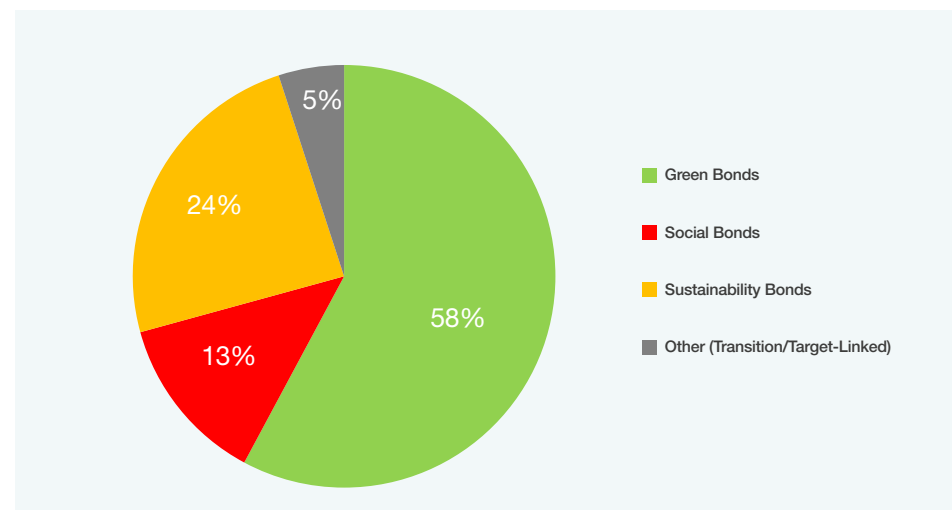


Figure 2: Sustainable Bond Market 2025e: Share by segment (in %)

be elsewhere in the future. Europe will remain in the driver's seat in terms of new sustainable bond issuance. It is also home to the largest number of sustainable and responsible investors in the world. With an estimated share of more than 40% of the new issuance volume in 2025, it will continue to be the largest source of sustainable debt on the globe. In fact, as the net-zero targets set by most European governments require significant funding, we expect sustainable bond issuance in Europe to continue to grow. In addition, we do not expect many European financial institutions that issue sustainable bonds to pull out of net-zero initiatives, in contrast to their US counterparts. It will also be worth keeping a close eye on Asia, which is increasingly becoming a robust source of growth of sustainable debt.

Current developments are also likely to further strengthen the role of the euro in the sustainable bond market. With an estimated share of more than 40% of the new issuance volume in 2025, it will remain the most used and sought currency in the global sustainable bond market in 2025 and beyond.

With new records in sustainable bond maturities set to be

reached in the next two years, a large proportion of which will be green bonds, there will be an enormous refinancing requirement, especially for European issuers. It is to be expected that in this context, several issuers will update or expand their frameworks to include new categories or instruments.

Efforts to simplify the regulatory landscape and increase its usability could also provide further growth impetus. Many issuers support a balanced approach to sustainable finance regulation, which will help the market grow, and warn against over-regulation and excessive complexity, which can have negative effects. Regarding taxonomies, many issuers call for harmonisation, usability, and interoperability, but not uniformity. Sustainability always has a cultural component. Hence, there is no "one size fits all" solution.

No new highs, but not a leap off the cliff, either

In 2025, we expect the sustainable bond market to move broadly sideways. We forecast new issuance to reach around \$975 billion, rising by just over 5% compared to 2024.

While the new issuance volume of green and sustainability bonds is likely to increase for the reasons outlined above, we expect a slight decline in the issuance of social and sustainability-linked bonds. The growth of the former is limited by a lack of benchmark-sized projects. As for the latter, there is still a lot of scepticism in terms of materiality, ambition and hence credibility. Transition bonds are likely to remain at 2024 levels, driven mainly by Japanese government issues.

Green bonds will remain the dominant segment of the market with a share of 58%. After the successful debuts of A2A and Île-de-France Mobilité, we expect further bonds to be aligned with the European Green Bonds Standard (EU GBS), but not a major wave for the time being. It remains to be seen whether the new standard will find the desired acceptance among issuers and investors and whether it will be able to establish itself as the gold standard over the established ICMA Green Bond Principles. The share of sustainability bonds will continue to grow.

From 2026 onwards, when the controversial debate on

sustainable finance, fuelled by critics, will have receded into shallow waters, we expect issuance to pick up significantly and double-digit growth to return.

Investor appetite for sustainable bonds will remain strong,

driven by the underlying fundamentals of the market, the unwavering global drive for sustainability and the enormous opportunities presented by the sustainable transition. Hence, in terms of order books, the following will still apply in 2025: There

will still be too much demand chasing too little supply. ■

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Green bonds and carbon markets – a complementary fit



Frank Scheidig, global head of senior executive banking at DZ BANK AG

Given the complementary nature of green bonds and carbon markets, the development of the latter is being watched with great interest.

COP29 saw significant progress and developments in the structure and implementation of carbon markets. After nearly a decade of negotiations, it laid the foundations

for functioning global carbon markets.

Several countries have made progress in finalising the rules for carbon trading and market-based mechanisms that will help them to meet their emission reduction targets. The focus was on ensuring transparency, integrity and accountability in the trading and accounting of carbon credits. Commitments have been made to increase the purchase of carbon credits and to increase participation in the carbon market. There was a greater emphasis on ensuring the quality of carbon credits and a push for credits that are more transparent, verifiable, and linked to real, additional, and long-term emission reductions. Some countries called for stricter rules to prevent “greenwashing” and to ensure that carbon markets do not simply become a way of offsetting emissions without actually reducing them. There was a strong focus on how carbon markets can be a tool to help developing countries meet their climate goals and an increased dialogue on making carbon markets more accessible and beneficial to countries with lower carbon footprints, providing them with financial incentives through international carbon credits. Discussions of carbon border adjustment mechanisms emerged, whereby countries with high carbon prices could impose tariffs on imports from countries with lower carbon

prices, with implications for international carbon markets and trade.

The results of COP29 offer promising developments for the future of carbon market particularly with the long-awaited agreement on Article 6 of the Paris Agreement. While it has made some progress in shaping the rules of the road for carbon markets, the process is still ongoing, with countries continuing to negotiate the finer details of how these markets will operate in a fair, effective, and equitable way.

We also call for innovative solutions when it comes to voluntary carbon trading. To implement the global sustainability agenda, public capital alone is not enough. Therefore, innovations are needed in the carbon markets which are focusing on mobilising private capital. At the same time, they should focus on the engine of the global world economy: small- and medium-sized enterprises. This important part of economic life has so far played only a subordinate role in most considerations, but it is crucial for the global transformation process of our economy and society. Due to the complexity of the market and the associated uncertainties, it has so far not been possible for most small- and medium-sized enterprises (SMEs) to become part of the carbon offset market.

Green bonds and carbon markets: Two different mechanisms with the same objective

Green bonds and carbon markets both play a critical role in financing and incentivising climate action. Both mechanisms aim to reduce emissions and stimulate investment in sustainable technologies and climate-friendly infrastructure for example, but in complementary ways.

Green bonds can finance projects that help generate or reduce carbon emissions, such as building wind farms, installing solar panels, or investing in carbon capture technologies. The funds raised through green bonds can go directly into activities that help reduce carbon emissions, which in turn can contribute to the supply of high-quality carbon credits in the carbon market.

For example, a green bond funded project can generate carbon credits that can then be sold on the market, creating a revenue stream for project developers, making them more financially attractive and self-sustaining.

Both green bonds and carbon markets attract investors interested in the sustainable transition. However, green bonds often appeal to institutional investors looking for low-risk, fixed income investments, while carbon markets can attract companies and organisations looking for a more direct way to offset their emissions.

Combining the two gives investors access to a wider range of financial instruments – green bonds for financing long-term projects, and carbon markets for short-term emissions management or offsetting. This helps to increase the flow of capital into the sustainable economy.

Carbon markets provide a mechanism for companies to offset emissions they cannot reduce directly by purchasing credits from projects that reduce or eliminate emissions elsewhere. Green bonds can finance the projects that generate these credits, creating a direct link between investment in sustainable initiatives and the carbon reduction goals that companies are trying to achieve through carbon markets.

Carbon markets drive the demand for emissions reductions, creating a financial incentive for projects that reduce carbon emissions. Green bonds, meanwhile, provide the capital to finance such projects. By working together, these tools can scale up the transition to a low-carbon economy more effectively than if they were used separately, addressing both the financial and regulatory aspects of climate action.

As lower-risk investments for institutional investors, green bonds can provide a stable source of funding for carbon reduction projects. Meanwhile, carbon markets, by putting a price on carbon emissions, provide an economic signal that increases the market value of carbon reduction projects, helping to make them more financially viable. The combination of these mechanisms can reduce risk for both investors and project developers.

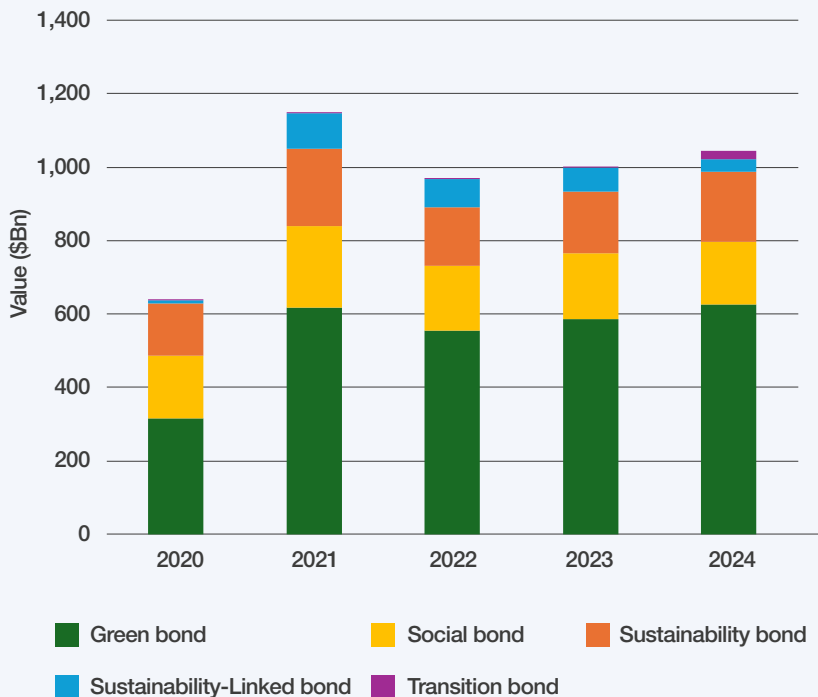
Sustainable bond issuance saw some growth in 2024, breaching the \$1 trillion mark again. The sustainable bond market is still some way from recovering to its 2021 highs, however as many economies saw inflation at more manageable levels leading to interest rate cuts in 2024 the conditions for a more stable sustainable bond market bore out with the second largest year on record.

Green bonds, which accounted for nearly 60% of the sustainable bond market in 2024, saw their biggest year on record with \$625.8

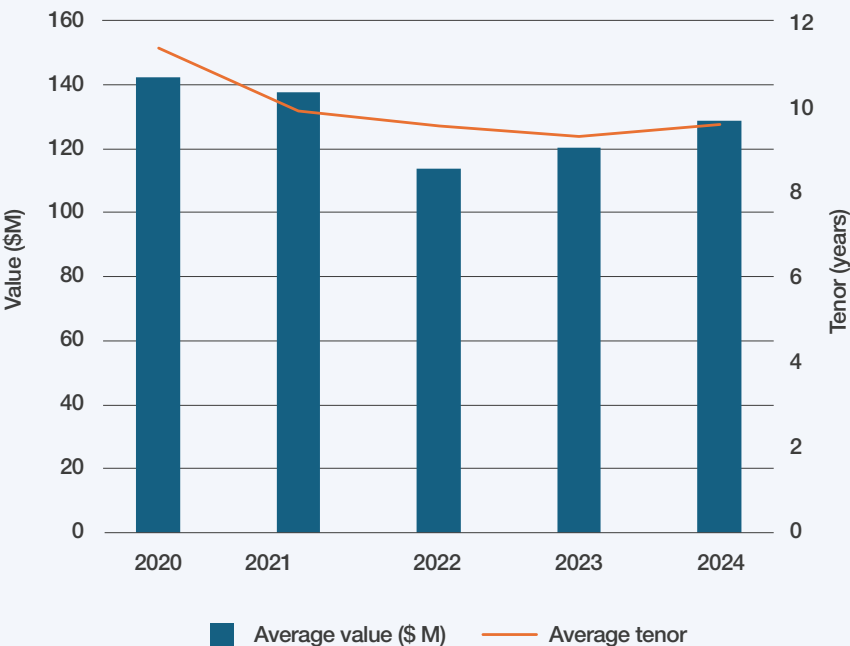
billion in issuance compared to previous highs of \$618.2 billion. But social and sustainability bonds, which saw a huge surge in issuance in 2021 in response to the Covid-19 pandemic, and declining interest in the sustainability-linked bond label prevented the sustainable bond market from hitting the same levels of issuance as 2021.

However, transition bonds have seen renewed interest, with the Japanese government forging ahead with the label in 2024 and heavily contributing to the label's record year of \$20.6 billion in issuance.

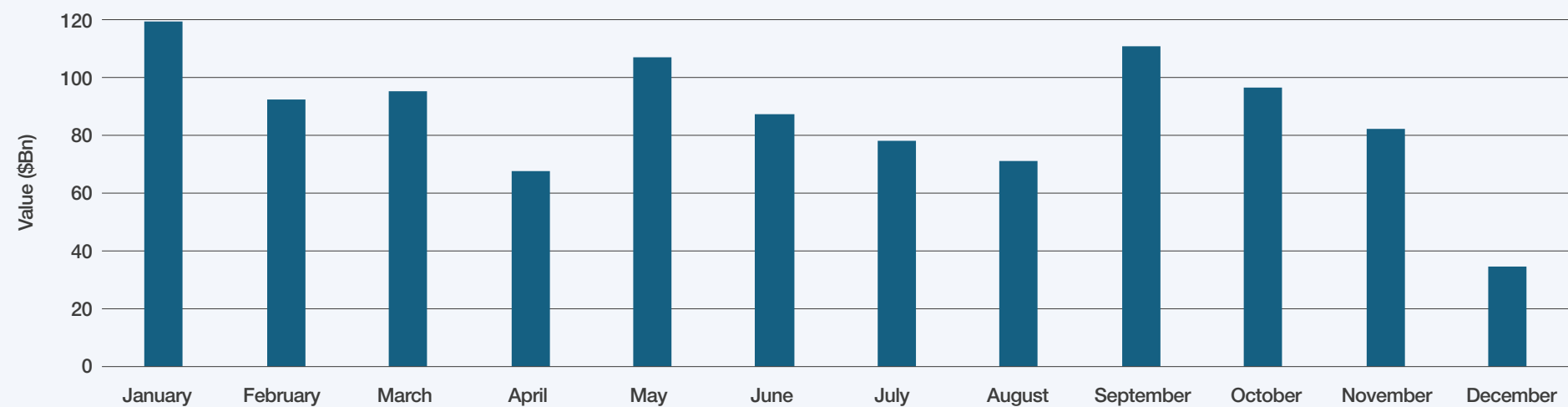
Annual issuance of sustainable bonds by label



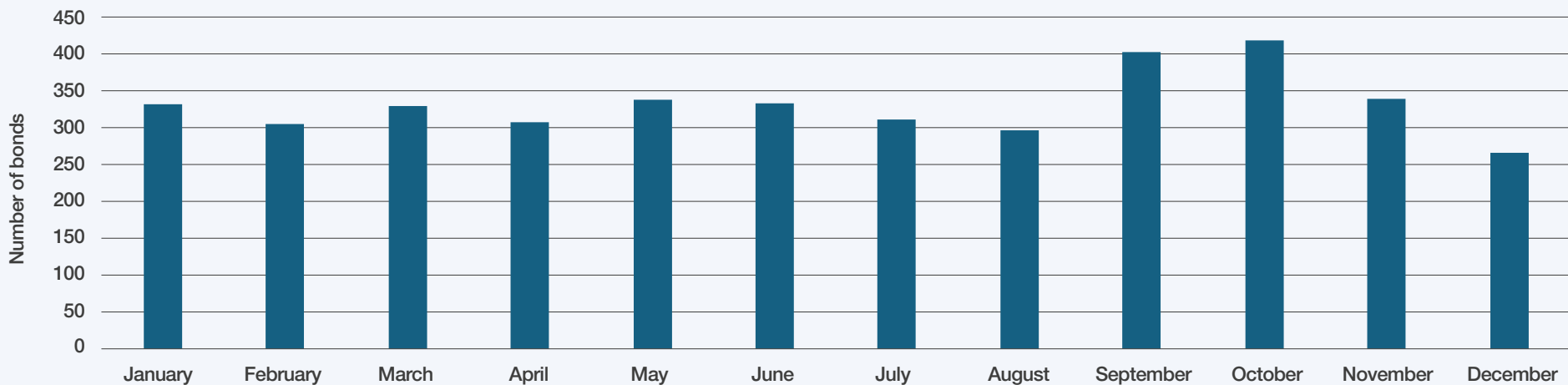
Average value vs average tenor of sustainable bond tranches



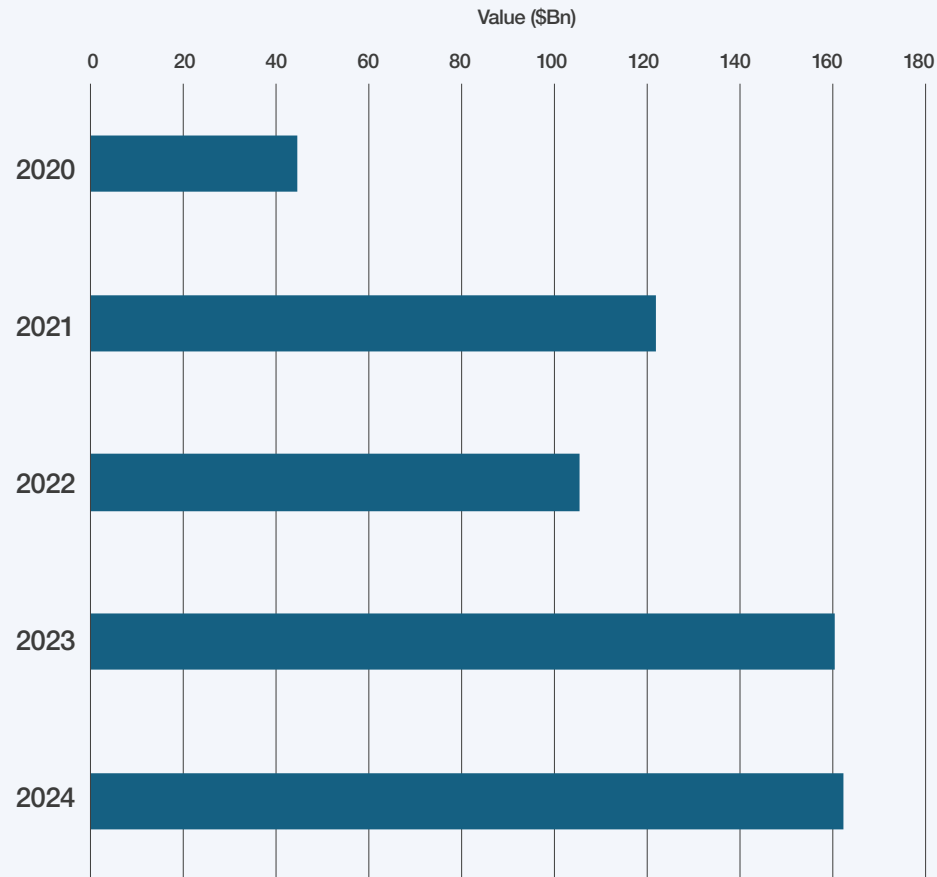
Monthly value of sustainable bond issuance in 2024



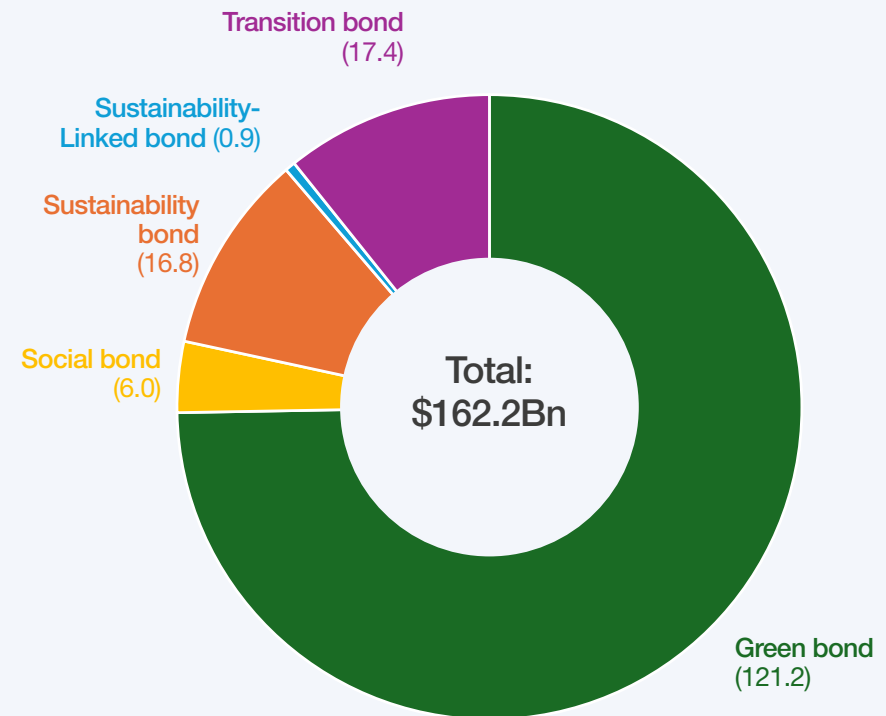
Monthly number of bonds issued in 2024



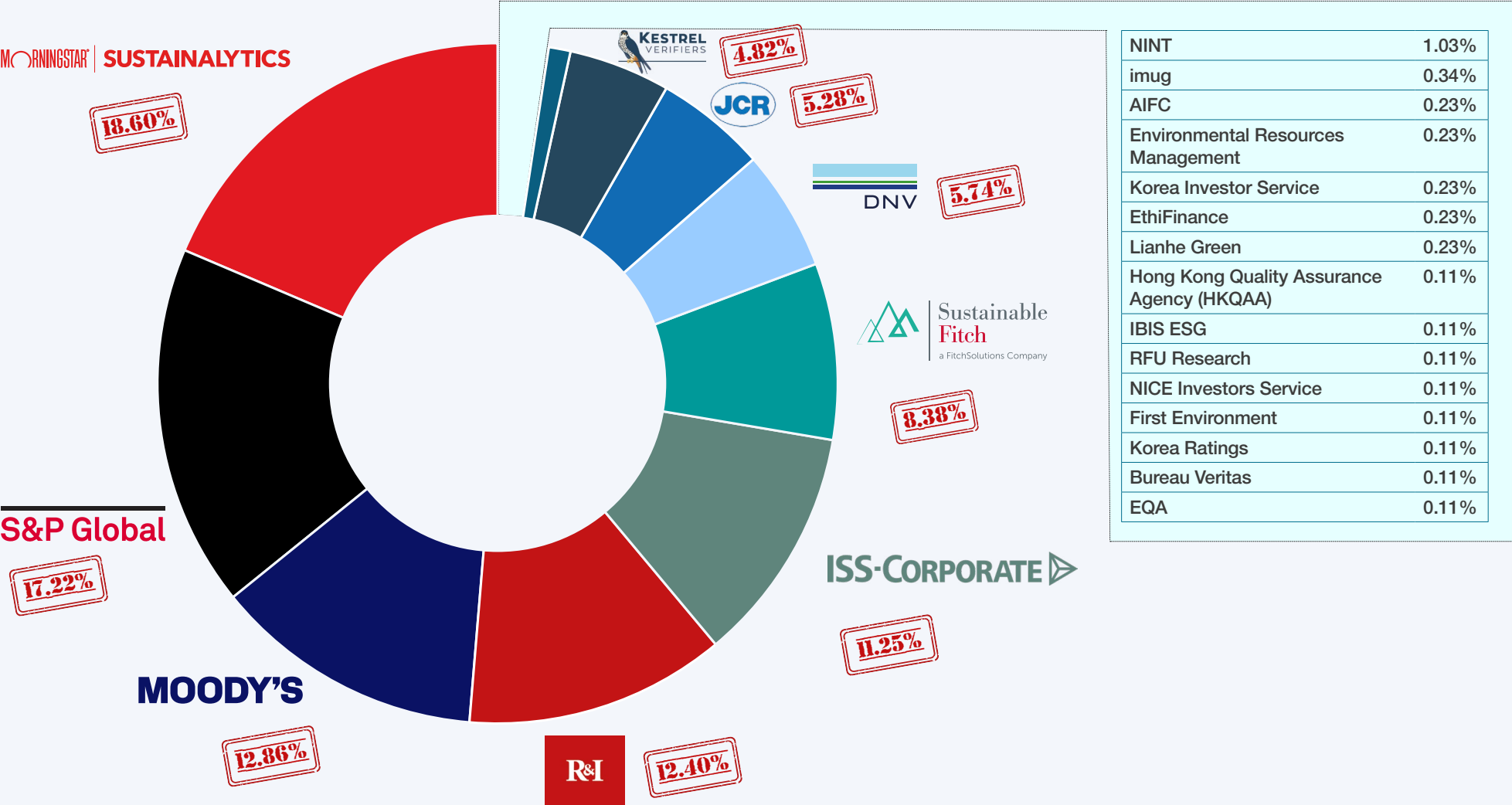
Sovereign sustainable bond issuance by year



Breakdown of sovereign sustainable bond market 2024 (\$Bn)



Title



Top 15 Lead managers of 2024

Lead manager	Value (\$M)
 BNP PARIBAS	42,431
J.P.Morgan	40,735
 BANK OF AMERICA	38,985
 citi	36,889
 HSBC	36,671
 Deutsche Bank	34,555
 CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	33,331
 BARCLAYS	29,669
Morgan Stanley	27,009
 SOCIÉTÉ GÉNÉRALE	23,121
 Goldman Sachs	22,119
 NatWest	21,236
 NOMURA	20,491
 RBC	19,068
 NATIXIS BEYOND BANKING	18,815

Methodology: the value of bonds with multiple lead managers was pro rated equally to each lead manager.

Top 5 lead managers for EUR denominated bonds in 2024

Lead manager	Value (\$M)
 BNP PARIBAS	27,504
 CRÉDIT AGRICOLE CORPORATE & INVESTMENT BANK	25,302
 Deutsche Bank	23,362
 SOCIÉTÉ GÉNÉRALE	20,945
J.P.Morgan	20,500

Top 5 lead managers for USD denominated sustainable bonds in 2024

Lead manager	Value (\$M)
 BANK OF AMERICA	20,105
 citi	18,325
J.P.Morgan	18,066
 HSBC	14,657
Morgan Stanley	14,190

Top 5 lead managers for JPY denominated sustainable bonds in 2023

Lead manager	Value (\$M)
 MIZUHO	8,286
 SMBC SMBC NIKKO	7,923
 NOMURA	7,750
 Daiwa Securities Group Inc.	7,406
Mitsubishi UFJ Morgan Stanley	4,674

Top 15 lead managers for green bonds in 2024

Lead manager	Value (\$M)
BNP Paribas	27,672
Deutsche Bank	22,222
JP Morgan	21,588
Credit Agricole CIB	20,976
Bank of America	20,246
Citigroup	17,784
HSBC	15,946
Morgan Stanley	15,921
Goldman Sachs	15,839
Société Générale	15,359
Barclays	14,816
NatWest	13,004
Natixis	11,642
Unicredit	11,092
Danske Bank	10,953

Top 15 lead managers for social bond issuance in 2024

Lead manager	Value (\$M)
Bank of America	7,966
HSBC	6,777
JP Morgan	6,330
Kyobo Securities	6,049
Credit Agricole CIB	5,943
Barclays	5,513
Nomura	5,337
Citigroup	4,820
Natixis	4,768
NatWest	4,610
SMBC Nikko	4,375
Mizuho Securities	4,324
Royal Bank of Canada (RBC)	4,184
Deutsche Bank	4,077
Daiwa Securities Group	3,999

Top 15 lead managers for sustainability bond issuance in 2024

Lead manager	Value (\$M)
Citigroup	13,005
HSBC	12,580
JP Morgan	11,726
Bank of America	9,450
Wells Fargo	8,673
Barclays	8,301
BNP Paribas	8,118
Nomura	7,407
Deutsche Bank	6,953
Morgan Stanley	6,744
TD Securities	6,383
BMO Capital Markets	6,096
Royal Bank of Canada (RBC)	6,077
Credit Agricole CIB	5,372
Scotiabank	4,758

Top 15 lead managers for sustainability-linked bond issuance in 2024

Lead manager	Value (\$M)
BNP Paribas	2,855
Santander	1,437
HSBC	1,369
Deutsche Bank	1,303
SMBC Nikko	1,289
Citigroup	1,280
Société Générale	1,233
Bank of America	1,207
Mizuho Securities	1,207
Intesa Sanpaolo	1,132
Unicredit	1,104
JP Morgan	1,091
Credit Agricole CIB	1,040
Barclays	1,039
ING	950

A new standard for the green bond market

The EU Green Bond Regulation introduces a new benchmark for green bond issuance, with implications for sustainable finance markets around the world, say **Florence Devevey**, **Patrice Cochelin** and **Christa Clapp** of S&P Global Ratings

Environmental Finance: The EU Green Bond (EU GB) Regulation came into force at the end of 2024. What does it introduce?

Florence Devevey: The regulation is part of the EU's sustainable finance strategy, which is intended to direct investment towards sustainable activities that contribute to the EU's environmental and climate goals. The regulation introduces a voluntary but standardised framework for issuing green bonds in the EU whose proceeds are allocated to activities that are aligned with the EU Taxonomy (alongside a 'flexibility pocket' for activities that are not yet covered by the Taxonomy).

We believe that the regulation could promote greater transparency, credibility and integrity within the EU's green bond market, in that it requires issuers to disclose more detail on how bond proceeds will be used, as well as post-issuance reporting around allocation and impact. The regulation also introduces the need for external reviews of these green bonds.

EF: What processes should potential EU GB issuers follow when considering issuance?

FD: The bulk of the work issuers need to do is around their alignment with the EU Taxonomy. There are three things the issuer needs to show: that the activities financed by the



Florence Devevey

EU GB proceeds make a substantial contribution to one of the EU's environmental objectives; that they do not do significant harm to any other objective; and that the issuer is aligned with a series of minimum safeguards around human rights, corruption, tax and so on.

We will discuss with the issuer to understand whether they have the processes and policies in place to demonstrate these three things before issuance. Issuers also need to bear in mind that they also commit to post-issuance allocation and impact reporting.

EF: What do you see as its implications for the EU's green bond market?

FD: We see two types of EU green bond in the market. The first will be 'standalone' EU GBs, and those green bonds that are also aligned with the International Capital Market Association's Green Bond Principles (GBPs). And there will be varying degrees of overlap between the two standards, where a proportion of the proceeds fund activities that are aligned with the EU Taxonomy, and some which meet GBP requirements for contributing to an environmental objective, but which are not covered by the EU Taxonomy, such as energy-from-waste or aquaculture projects.

Patrice Cochelin: The EU Taxonomy is very deep, but some will argue it's a bit narrow because of the project types it doesn't cover. It's also somewhat binary – projects are either aligned with the Taxonomy or they are not. Finally, it is very much based on EU regulations and directives, which can make it difficult to apply to projects in other parts of the world. That's why we think it's useful to also apply our Shades of Green methodology to our reviews of EU green bonds.

EF: How does the application of the Shades of Green methodology to EU GBs work?

FD: We apply our Shades of Green methodology to our reviews of all projects to which green bond proceeds are directed, whether EU GBs, those using the GBPs, or those that use different standards or none at all. We assign a shade to every environmental project, and if we believe the project is green, we assign one of our three Shades of Green; light green, medium green or dark green. (We also have three non-green shades, red, orange and yellow, but for a project to align with the GBPs, it needs to obtain at least a light green shade.) So, within Taxonomy-alignment, a renewable energy project would typically be dark green, whereas other types of project, like the construction of energy efficient buildings or natural gas-fired assets, we would typically view as light green.

We do the review required by the EU GB regulation, but we go beyond that by adding two things:

1. A shading to every project to provide more nuance. This provides investors with a global benchmark: it enables global comparability of projects and green bonds, whether they align with the EU Taxonomy or a local taxonomy or the GBPs.
2. A section called Issuer Sustainability Context, which gives context about whether the projects financed by the EU GB are relevant to the issuer's sustainability factors and how the issuer addresses those beyond the green bond projects. These two elements feature in both our EU GB and second-party opinion reports.

PC: We also apply the Shades of Green methodology to project types that could qualify for the flexibility pocket



Patrice Cochelin

(Article 5 of the EU GB Regulation), which can account for up to 15% of an EU GB's proceeds. It's not clear to me how reviewers that don't have an equivalent green analysis methodology will approach these projects, and I think there's a risk that some analysis could be cursory.

EF: S&P Global Ratings is an approved reviewer: what does that mean, and what role do you – and other

approved reviewers – play in the issuance process?

FD: We can act as a reviewer on both pre-issuance and the two post-issuance reports. We issue an opinion on these documents, and on whether we think they align with the EU GB regulation.

One thing that's important to understand is that our product is solicited: the issuer asks us to do it. It's what we call an engaged product, in the sense that we speak to the issuer and, when relevant, to their intermediaries. We interact with issuers by asking questions to help us do our analysis. For example, we would ask to understand policies or how the company intends to comply with the EU Taxonomy.

PC: We also add more information about the issuer's broader sustainability context. This is important, because one of the objectives of the EU GB regulation is to reduce greenwashing: an issuer may tick all the boxes in terms of its use of proceeds, but what it does elsewhere in its business might disqualify it in the eyes of some investors. Our research doesn't answer 'yes' or 'no' to that question, but it provides the investor with important context about 'who' issues the debt.

EF: What about post-issuance reporting?

Christa Clapp: The GBPs recommend post-issuance reporting, but it's not a requirement. However, given its voluntary nature, the level of detail provided by issuers is not consistent and the comparability of reports is limited. The EU GB regulation, which requires audited allocation reports, for example, will introduce more standardisation.

PC: In the grand scheme of things, it's welcome that there is a stronger focus now on impact reporting, given the market's growing maturity. Given the maturities of much existing sustainable debt in the market, there's going to be a lot of refinancing opportunities over the next few years. One of the parameters that investors will be looking at will be what the issuer achieved the first time around with its bonds. If issuers can demonstrate that they had a real-world impact with this reporting, then we would expect investors to be more open to go in for a second round.

EF: How does your approach to corporate and sovereign EU GBs differ?

FD: First of all, the regulation treats corporates and sovereigns differently in some regards. For sovereign categories of EU GBs, the ways that the issuer can use the proceeds are a bit broader: they can use them for tax relief, subsidies or other types of expenditures. For the third criteria of EU Taxonomy alignment, regarding the application of minimum safeguards at the issuer level, we follow the recommendations of the Platform for Sustainable Finance, and limit the analysis to human rights and corruption, whereas we also do some analysis around taxation and fair competition for corporate issuers. Also, we take into consideration that sovereign issuers are usually not the entity that is directly carrying out the project, which means there's a level of detail that will not be available.

EF: What implications does the introduction of EU GBs have for the sustainable bond market in other jurisdictions?

FD: It may be difficult, but not impossible, for global entities with operations outside of the EU to show that financed projects comply with the EU Taxonomy rules. For example, the do no significant harm (DNSH) criteria are often linked to EU directives, and it can be complex to demonstrate compliance with those criteria outside the EU.

PC: It is doable, and we have cases of non-EU issuers coming to us with projects that we have found to be aligned. If the EU GB Standard emerges as a popular one within the market, we could see pick-up from outside Europe. If investors in the EU become fluent in using the EU Taxonomy and the EU GB standard, then issuers outside the EU looking for liquidity from that pool of investors could see some advantage in speaking the language of the EU GB.

EF: How do you see the EU GB and the EU Taxonomy influencing the evolution of other regional taxonomies?

CC: We have already seen references to the EU Taxonomy in other jurisdictions. For example, Brazil is yet to issue its



Christa Clapp

own taxonomy, so the Brazilian stock exchange came out with green equity principles which reference the EU Taxonomy: its principles don't require alignment, but they mention the EU Taxonomy because it is such a big reference point globally.

We see other taxonomies taking a different approach to the EU, given their specific local contexts. A primary objective of the EU Taxonomy was to guard against potential greenwashing, which meant focusing on very green projects. This left open how to deal with the rest of the economy that didn't meet those high thresholds.

So, in south-east Asia, taxonomies are focusing more on the transition space, and address local considerations such as palm oil or early coal retirement. Canada, meanwhile, is talking about exploiting its resources, which are maybe more

fossil based. There are some very interesting local flavours coming out.

For investors, it will be important to have the transparency and the language to talk across these taxonomies, understand how they relate to each other, and to be able to understand whether they are enabling a good transition, which is the lens we see things through with our Shades of Green methodology.

EF: What other trends do you expect to see in the sustainable bond market this year?

PC: The market's been roughly flat for now the past two or three years. This year, we see the market going back to its roots, to some extent, with green bonds being the most resilient segment of the market, and with supranationals like multilateral development banks being very active in the space, alongside corporate issuers.

We are also watching parts of the market that have been less strong, such as issuance from the banks. They have a dual role in the market, as both issuers of sustainable bonds themselves and as arrangers. We are watching closely in the context of some banks leaving the net-zero alliances.

There are continuing questions over the sustainability-linked bond (SLB) market, which was a very strong part of the market back in 2021 but which has been declining since. It is possible, though, that we have reached the bottom and, on the way, there has been some cleaning up of the market, meaning that issuance in future will now be more credible and investors will be happy to absorb SLBs again.

Recurring questions remain over the transition bond market. Japan has been leading the charge here but, so far, it's been very much a Japanese story only. It remains to be seen if that market pocket will expand to other types of issuers.

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For more information, see: www.spglobal.com/ratings/en/research-insights/special-reports/sustainability-insights

Resilience, innovation and reinvention: the sustainable bond market in 2025

While overall market growth remains elusive, issuers and policymakers are continuing to innovate in 2025. Moody's Ratings' Adriana Cruz Felix, Matthew Kuchtyak and Swami Venkataraman analyse the market

Environmental Finance: Last year was the fourth straight year of around \$1 trillion in sustainable bond issuance. What are your expectations for volumes in 2025?

Matthew Kuchtyak: Our forecast calls for around \$1 trillion of global issuance, which would be steady from the last few years, balancing a combination of headwinds and tailwinds. We continue to see global focus on sustainable development and investment supporting the market. That said, various deterrents, including heightened scrutiny of greenwashing, evolution in market standards and regulations, and a more complex environment, including political headwinds in some countries, will likely stifle growth.

In terms of the composition of the market, again we see broad continuity. We expect that green bonds will remain the largest part of the overall market, at around \$620 billion of issuance. While the primary focus here will remain on climate mitigation, we expect to see growth in climate adaptation and nature projects.

In terms of social bonds, we're expecting a slight decline in volumes, to about \$150 billion, as we are now well past the bulk of pandemic-related financing. For sustainability bonds, we're expecting \$175 billion of issuance, with continuing long-term growth and support in that market, which is a bit more diverse than the social bond label, with more issuers who can get to a benchmark-sized offering by combining green and social projects.



Adriana Cruz Felix



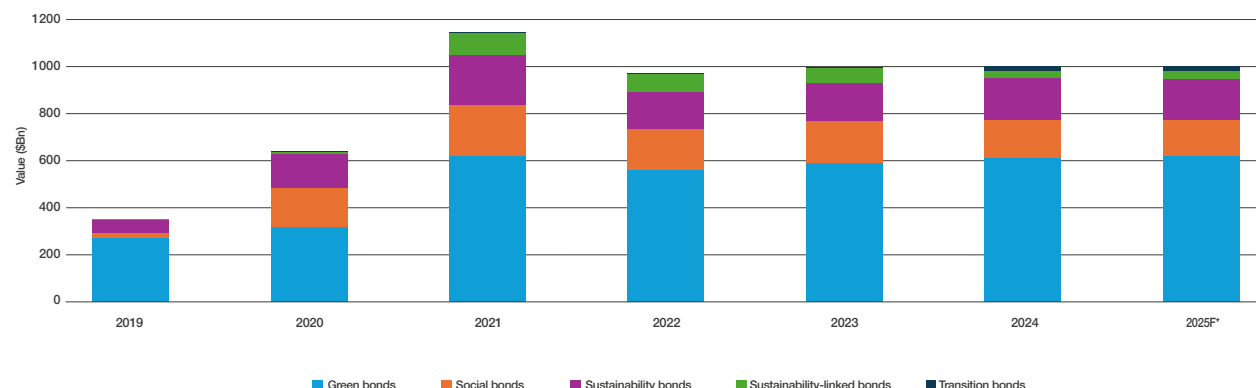
Matthew Kuchtyak



Swami Venkataraman

We're forecasting \$35 billion of sustainability-linked bond (SLB) issuance, slightly up from last year but still well below the records that we saw in 2021 through 2023. Many issuers remain wary of accessing the SLB market, as investor scrutiny of target ambition and financial materiality persists. Finally, we expect \$20 billion of transition bond issuance, largely concentrated in Japan. With a growing focus on transition finance and more awareness of transition bonds, however, there is potential for some gradual diversification in the segment.

Swami Venkataraman: I think it's worth noting that, even though the market has been flat at around \$1 trillion, that is in the context of some serious headwinds, starting with Russia's invasion of Ukraine in 2022 and the subsequent focus on energy security, higher interest rates and mixed policy developments. There have been questions around whether this market was going to be resilient. I think an important takeaway is that the market continues to account for 10%-plus of the overall bond markets.



Annual global sustainable bond issuance by label, \$1 trillion in 2025

The data for 2025 represents Moody's Ratings full-year sustainable bond issuance forecast
Sources: Environmental Finance Data and Moody's Ratings

EF: How do you see the policies of the new US administration impacting the market?

MK: The new administration's climate agenda diverges sharply from the previous administration, which will result in renewed support for the fossil fuel industry, reduced funding for clean energy and green technologies, and loosened environmental regulations.

However, from a volume standpoint, we've already seen quite a bit of decline among North American-based issuers and lower penetration rates in terms of sustainable bonds as a share of total issuance. These trends were already happening before the November election. In 2024, for example, sustainable bond issuance in the region was about 30% lower than in 2021, and volumes represented around just 3% of total issuance in the region. That compares with nearly 20% in Europe.

Given continued investment from parts of the private sector and certain state and local governments, along with the already-low penetration of sustainable bonds in the US market, we do not expect a significant further decline in US sustainable bond volumes in 2025. However, the evolving policy landscape will limit any rebound in issuance.

EF: To what extent will the new EU Green Bond Standard (EU GBS) change the European sustainable bond landscape?

Adriana Cruz Felix: The EU GBS will provide support for the growth of the market and adoption of best practices, but its complexity means any uptake will, at least initially, be modest. To issue EU GBs, around 80% of the work is in demonstrating the alignment of financed activities with the EU Taxonomy. The first movers have been working on EU Taxonomy alignment for a couple of years already, incorporating EU Taxonomy criteria into their green or sustainable bond frameworks, either partially or fully. Adopting the criteria has been challenging for market participants, in particular when it comes to 'do no significant harm' (DNSH) criteria.

The fact that, so far, we have only seen a couple of EU GBs come to market suggests that issuers are taking it slowly: they want to see how the market develops, and they want to make sure they get it right. It's important to remember that although the use of the EU GBS is voluntary, issuers who choose to use the EU GB label for their bonds must ensure compliance with the regulation's requirements. Failure to meet the requirements may result in sanctions from competent authorities. Increased

market and regulatory scrutiny, alongside greenwashing concerns, may cause issuers to take longer in structuring EU GBs.

EF: Will emerging market issuance rebound in 2025?

SV: Emerging markets may be one area where we could see growth in 2025, because there are substantial gaps in terms of the climate finance that emerging economies need. In addition, we have COP30 coming up in Brazil: we saw the COPs in the Middle East leading to an increase in sustainable bond issuance in that region.

And, to the extent that investor interest creates a 'greenium' in pricing, this could help reduce, if only to a small extent, the high cost of capital that emerging markets typically face in raising finance for climate mitigation and adaptation.

But another point we often make at Moody's Ratings is that, for some emerging market countries, reforms have strengthened credit quality, and hence lowered the cost of borrowing, despite low incomes. A number of governments have carried out economic reforms to enhance their business climate and competitiveness, almost always backed by institutional reforms. Where successful, such reforms have increased policy effectiveness and resilience to shocks and led to sustained strengthening in credit quality.

ACF: An innovative type of eligible project that we saw included in a framework last year was the financing of projects to assist public policies aimed at strengthening the productive sector, the investment climate and budget sustainability by the French development bank, Agence Française de Développement. These projects include ongoing monitoring of implementation and effectiveness, with the gradual disbursement of funds linked to the achievement of key performance indicators.

EF: What types of projects will be the most common in 2025? Will climate mitigation remain the primary focus?

SV: Climate mitigation is likely to continue to be the core of

the market, constituting nearly 50% of the eligible categories across a sample of about 200 use of proceeds frameworks for which Moody's Ratings provided second-party opinions in the past two years. While renewable energy, energy efficiency and clean transportation are the dominant types of projects, we think there will be a move to other types of projects to address the huge increases in energy demand we are seeing forecast. For example, last year we saw green bonds issued to finance data centres in the Asia-Pacific region. Their growth would perhaps add even more pressure, in some ways, to ensure that increasing electricity demand from data centres is supplied in a manner that's reasonably green and allows these countries to minimise their emissions growth. Emerging green technologies will also become an increasingly prominent fixture in sustainable bond frameworks in hard-to-abate sectors, as policy support helps improve their cost competitiveness.

ACF: We're also seeing growing interest in nuclear energy as a means to address growing energy demand. Nuclear became controversial following the 2011 Fukushima accident. However, with the substantial demand forecast from artificial intelligence, some investors are seeing it as a promising means of meeting this growing need.

EF: How will the transition to a low-carbon economy be financed this year? Do you expect to see growth in the transition bond segment?

SV: We have seen Japan articulate a very ambitious approach to transition finance. Singapore and Australia are both now trying to do so. The Asia-Pacific region needs huge amounts of funding for the transition, and there is an effort to channel much of this through labelled transition bonds.

The transition label has been difficult to define, which meant it has not really taken off. However, given the significant regulatory push in Japan, Hong Kong, Singapore and Australia to define the transition label, we might see that become a growing option for transition funding in 2025.

EF: What is your outlook on adaptation and nature-related financing in the sustainable bond market?

SV: When it comes to climate change mitigation, the market now has a very clear view on how to account for the benefits of greenhouse gas emissions reductions. In contrast, for projects related to adaptation and nature, there is less clarity about the benefits that they can deliver. However, the labelled market has the potential, with the transparency it brings, to demonstrate the benefits from these projects.

We expect proceeds in the labelled bond market to continue to diversify and to see more issuance linked to adaptation- and nature-related projects. Adaptation and resilience will become more prominent in policy and investment as the costs of extreme weather rise and Paris Agreement targets seem increasingly unattainable.

ACF: The emphasis on conserving ecosystems and biodiversity to combat global warming will also boost labelled debt issuance for nature-based solutions. Proceeds from adaptation- and nature-related green and sustainability bonds have steadily increased, reaching record levels in 2024 at \$73 billion and \$113 billion, respectively, and accounting for around 23% of these bonds' proceeds, a share that has grown annually since 2020.

For example, last year we worked on a blue bond framework to finance a really interesting project to cultivate kelp forests along the Namibian coastline. Kelp and seaweed aquaculture capture and store carbon, reducing greenhouse gas emissions, but also offer sustainable alternatives to fossil fuels in multiple industries. Harvested kelp is transformed into products like bio-stimulants for farmers, reducing the need for chemical inputs in agriculture. Diverse applications of kelp derivatives, such as bioplastics and pharmaceuticals, increase its market potential. Kelp forests also provide significant ecosystem services, including nutrient recycling and buffering ocean acidification.

Since the launch of the International Capital Market Association's Blue Bond guidelines in 2023, we're seeing a

lot of potential for issuances related to fisheries and marine nature-based solutions. The difficulty is that these projects, similar to adaptation projects, tend to be publicly funded: the challenge has and will continue to be to mobilise private capital towards adaptation and nature-related projects.

EF: What about the social side of the market? How do you see its prospects as pandemic-related issuance falls away?

MK: We've been seeing a slight decline in issuance in this relatively concentrated part of the market in recent years, as pandemic-related financing has wound down. But we're still expecting \$150 billion of issuance in 2025, much higher than the \$19 billion issued in 2019 before the pandemic.

We're also seeing social projects getting financed through sustainability bonds, and there's much consideration among issuers of green bonds, for example, around managing the potential social externalities of environmental projects.

ACF: For emerging markets, the inclusion of social projects in labelled instruments is a natural measure to address the biggest socioeconomic challenges of these countries – whether related to education, access to essential services such as water or public transportation, micro-finance or affordable housing. When we assess frameworks from development agencies, multilateral development banks and emerging markets sovereigns, we see that the focus tends to be on broad sustainability challenges and not just on climate change mitigation. These frameworks are bringing higher-quality social projects, specifically aimed at supporting the most vulnerable populations, that sometimes include environmental co-benefits.

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Learn more about the [Second Party Opinion](#) and how Moody's Ratings can support your [Transition Finance journey](#).

EU Green Bonds: navigating a new market

Antoine Corbin and Saga Rad of Sustainable Fitch dig into the details of the EU Green Bond Regulation, and what it means for issuers and investors

Environmental Finance: Sustainable Fitch carried out the review for the first issuance under the EU Green Bond (EU GB) regulation, from A2A. How did that process go?

Saga Rad: We conducted a pre-issuance review of the EU GB factsheet prepared by A2A ahead of its issuance of a €500 million (\$520 million), 10-year EU GB, in January. The factsheet outlines four eligible project categories: renewable energy, energy efficiency, transmission and distribution networks, and pollution prevention and control.

It was a very engagement-based process, with frequent interactions between us and the issuer. We typically take two to three weeks to carry out this type of review but had a longer window due to the process starting early. We also had the advantage of knowing the issuer well, having reviewed A2A for an unsolicited rating. We arrived at an expected final review at the announcement date, which the issuer could use in its roadshow, followed by a final version once the terms of the transaction were fully defined. As the factsheet was transaction-specific, so was our review, but we also envisage that there are ways to adapt reviews to suit multiple transactions, using a type of ‘master factsheet’.

EF: What requirements does the EU GB regulation place on issuers?

SR: The main thing is that EU GBs are regulated, so issuers need to comply with all the mandatory components of the regulation. The main requirement is that at least 85% of the



Saga Rad

proceeds need to be directed to activities that are not only eligible under the EU Taxonomy, but are also aligned with its substantial contribution, do no significant harm (DNSH) and minimum safeguard criteria. If the issuer has a transition plan, it needs to describe the link between the projects being financed by the bond and the entity-level transition plan.

EF: Which of these are likely to prove most challenging?

SR: Certainly the need to demonstrate not just eligibility but also alignment with the Taxonomy. In that process, DNSH is commonly the most challenging for issuers, because there is a range of different DNSH criteria. Some, such as Type A criteria, have very specific thresholds. Other more high-level ones, Types B and C, require companies to have specific policies or procedures in place or to comply with a particular EU directive or international framework: some can be onerous to demonstrate compliance with.

EF: Where does the EU GB regulation overlap with guidance from the International Capital Market Association (ICMA), and can they co-exist?

Antoine Corbin: The ICMA Green Bond Principles and the EU GB regulation share some core principles, such as an emphasis on use of proceeds’ impact and reporting transparency. However, we see the EU GB as going a step further when it comes to disclosure and impact, while still being within the boundaries of the ICMA Green Bond Principles.

Furthermore, while traditional green bonds are principle based, the EU Green Bond Standard (EU GBS) is regulation-based and under the supervision of the European Securities and Markets Authority (ESMA).

Under EU GBS, issuers have to demonstrate the environmental impact via an alignment or future alignment

to the EU Taxonomy for the financed activities, accompanied by a strict duty to report and obtain an external verification, something that ICMA does not require for green bonds. While this can ensure that the use of proceeds of EU GBS would align with science-based thresholds, it also creates additional disclosure requirements and comes with difficulties to navigate some parts of the regulation, notably the Taxonomy.

The view is that those standards will coexist in the market. We can't expect all issuers to be in a position to issue EU GBs, or indeed to want to. On the one hand, there may be a 'greenium', due to rarity around EU GBs, and issuers might be able to attract more sophisticated investors with an EU GB. On the other hand, there could be challenges around scalability and reporting requirements.

ICMA-aligned bonds do not require use-of-proceeds alignment to science-based taxonomies, but they offer a good deal of flexibility. The ICMA approach is also deeply rooted in the market and is used worldwide.

“The ICMA approach is deeply rooted in the market and is used worldwide.”

EF: The EU GBS external review process is very much directed at the transaction level. What does this mean for larger issuers?

AC: The regulation partially addresses that issue with its reporting requirements, where issuers can report either at the bond level or on a portfolio basis, across a number of bonds with a similar asset pool. Such allocation and impact reports can be provided in a single document, akin to the current reporting practices of green bond issuers under ICMA.

But we come across questions from issuers and arrangers around the pre-issuance review and factsheet, and the approach that a company that is planning to issue a lot of bonds might take. We envisage the possibility of having a sort

of 'master' factsheet, which is put in place before the first issue. It would analyse all the core elements of the regulation, and Taxonomy alignment, which is where most of the work has to be done. That master factsheet could be used by the issuer to gauge investor appetite and announce the transaction; once the issuer has defined all the terms of the transaction (i.e. the international securities identification number, price, issue and maturity date) as well as any specific features relevant to the specific bond and required to be disclosed by the regulation, when applicable, we would then produce a final factsheet at the moment of the transaction. That would minimise the amount of work required and make it easy for an issuer to swiftly access the debt capital market multiple times.

EF: The EU GBS provides for a 'flexibility pocket' for up to 15% of proceeds to go to activities that are not Taxonomy aligned. How does it work?

SR: The flexibility pocket was created to acknowledge that there are some activities that could be positive from an environmental perspective, but which are not yet covered by the Taxonomy. There are therefore specific criteria for that flexibility pocket under Article 6 of EU GBS: issuers cannot simply allocate the last 15% to anything they like. The main requirement is that these activities should still be considered positive from an environmental perspective. So, most likely, this would involve avoiding emissions or expanding a green technology. The other scenario is for activities which have received significant international support in terms of their sustainability. The final condition is that the activities meet generic DNSH criteria under the Taxonomy.

EF: It also allows for activities that are not fully aligned to be funded, if there is an associated capex plan. What does that involve?

AC: Under Article 7 of the EU GBS, issuers have the option to include assets that are not yet aligned to the Taxonomy, but for which the company has a plan to achieve alignment within five years, or up to 10 years for specific long-life assets, or those with a significant technological challenge to bringing them in



Antoine Corbin

line with the Taxonomy's substantial contribution criteria. For those assets, the issuer has to produce a capex plan, to be reviewed annually, to demonstrate how it is progressing in terms of bringing those assets into alignment with the criteria.

The reading behind Article 7 is that the regulation acknowledges that it may be difficult for some companies to demonstrate full Taxonomy alignment, so it's providing that extra flexibility.

So far, neither Article 6 or 7 have been used. It will be interesting to see what sort of appetite there is for bonds that use either of them, because an investor buying into these bonds does not have the fully realised impact of an EU GB with 100% alignment at issuance. Having said that, the vast majority of green bonds issued under GBP equally don't provide that taxonomy alignment certainty, and they have proved to be quite appealing to investors.

EF: What feedback have you had from investors on EU GB issuance? What questions do they have?

AC: There is definitely a lot of interest from investors; the perception is that it offers more certainty with the external review, both pre-issuance and post-allocation. There's also the element of regulation from ESMA and the expectation that it's

going to be a standardised product. Investors can also almost automatically assume that an EU GB will be compliant with whatever reporting they have to do against the Taxonomy.

One question we have frequently been asked focuses on the ability to use master frameworks for seamless access to the bond market and the level of detail issuers should expect to provide, either mandatorily or voluntarily, in their factsheets.

EF: What market potential do you see for EU GB issuance?

AC: The timing is interesting, because most large European financial and non-financial undertakings are now required to disclose their EU Taxonomy key performance indicators (KPIs); we believe that this can provide the right set-up for EU GB transactions, aligning company-level strategy and disclosure with a portfolio of EU GBs.

We cover just over 97% of green bonds larger than €250 million issued in Europe. We looked at entities with bonds demonstrating at least 25% alignment with the EU Taxonomy and found they accounted for approximately 26% of the European green bonds covered by Sustainable Fitch. If we narrowed the scope down to 100% alignment, they represented 21% of the green bond issuances in Europe covered by us. I would say that's a decent theoretical market for EU GBs.

But we have to keep in mind that there are extra requirements, particularly around disclosure, for EU GBs. Initially, we anticipate it will be the largest institutions that tap the market, to diversify their portfolio alongside more traditional green bonds. We would expect that, this year, many potential issuers will be assessing the market to gauge appetite and get familiar with the new standards prior to making a decision to issue an EU GB. ■

Antoine Corbin is co-head of EMEA ESG Ratings, and Saga Rad is an associate director, at Sustainable Fitch in London.

For further information, see: www.sustainablefitch.com



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Transition in the spotlight

Financing the transition of carbon-intensive companies towards net-zero business models remains a challenge for many investors. Use of proceeds bonds tend to favour discrete, deep green assets, while ESG ratings tend to score high-carbon businesses poorly.

To provide investors with a more nuanced perspective, Sustainable Fitch has introduced its Transition Assessment product.

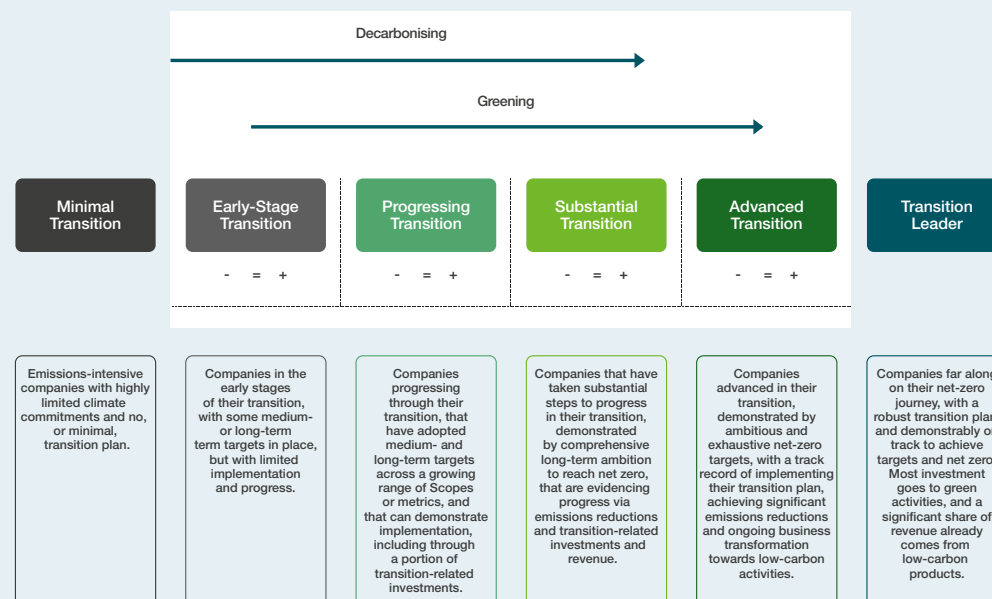
"It assesses how a company is aiming to transition its business through three main lenses," says Corbin. These are the emissions reductions the company has already achieved, its emissions reduction commitments, and the details of the financial efforts it is making to meet those commitments. Sustainable Fitch then offers a colour-coded assessment of the adequacy or otherwise of the company's transition strategy.

Corbin notes that the assessment can be used on a

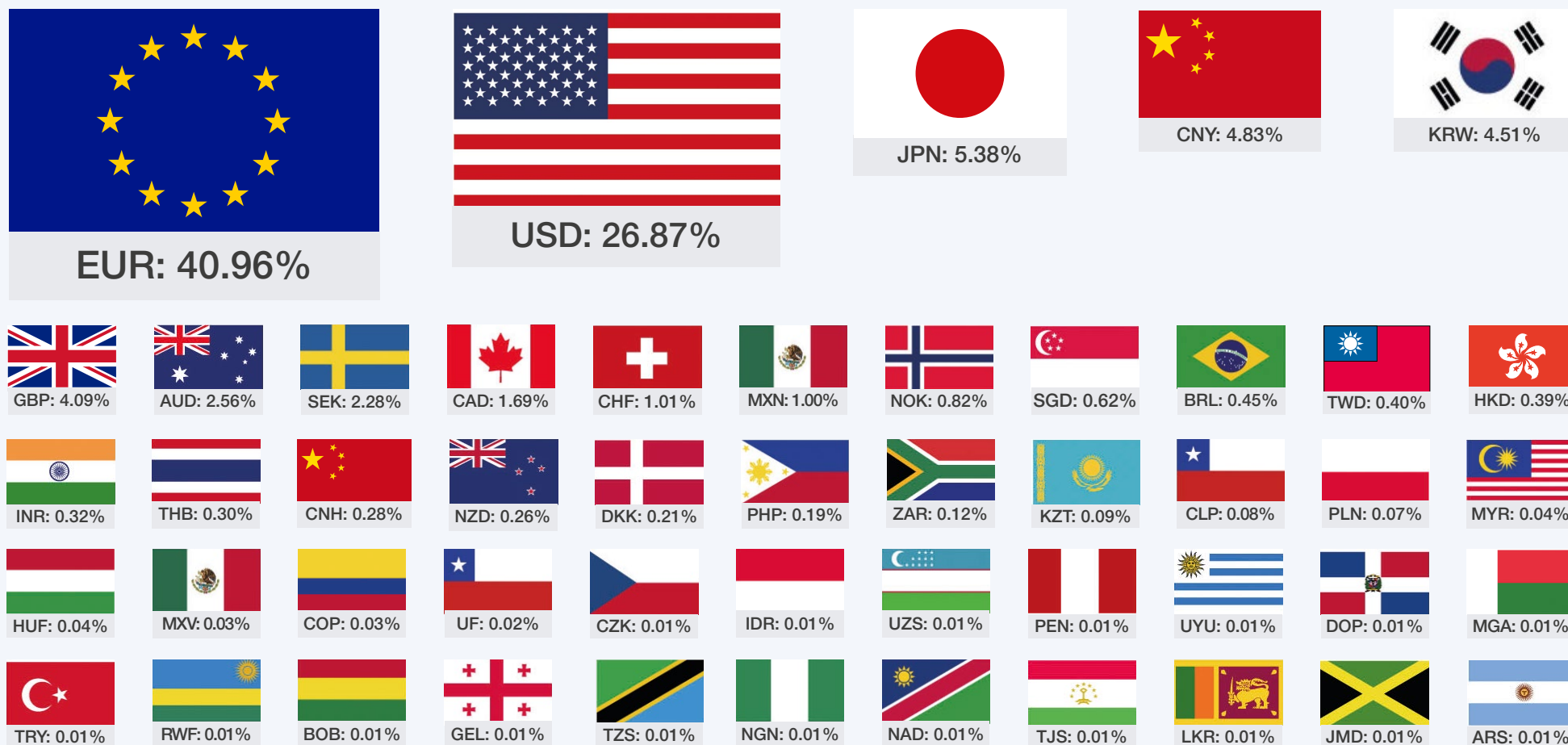
standalone basis to provide investors with an analysis of where a company stands in relation to transition, or it can be combined with raising green finance. "A company might have an SPO that focuses on the impact of a specific bond, alongside a Transition Assessment which places that green financing in the wider context of the corporate transition," he says.

Rad points to a recent such assessment produced for ContourGlobal, a UK-based power generation business which recently published a green bond framework ahead of planned issuance. The company combined that with a Transition Assessment from Sustainable Fitch, which rated its transition as 'Substantial Transition'.

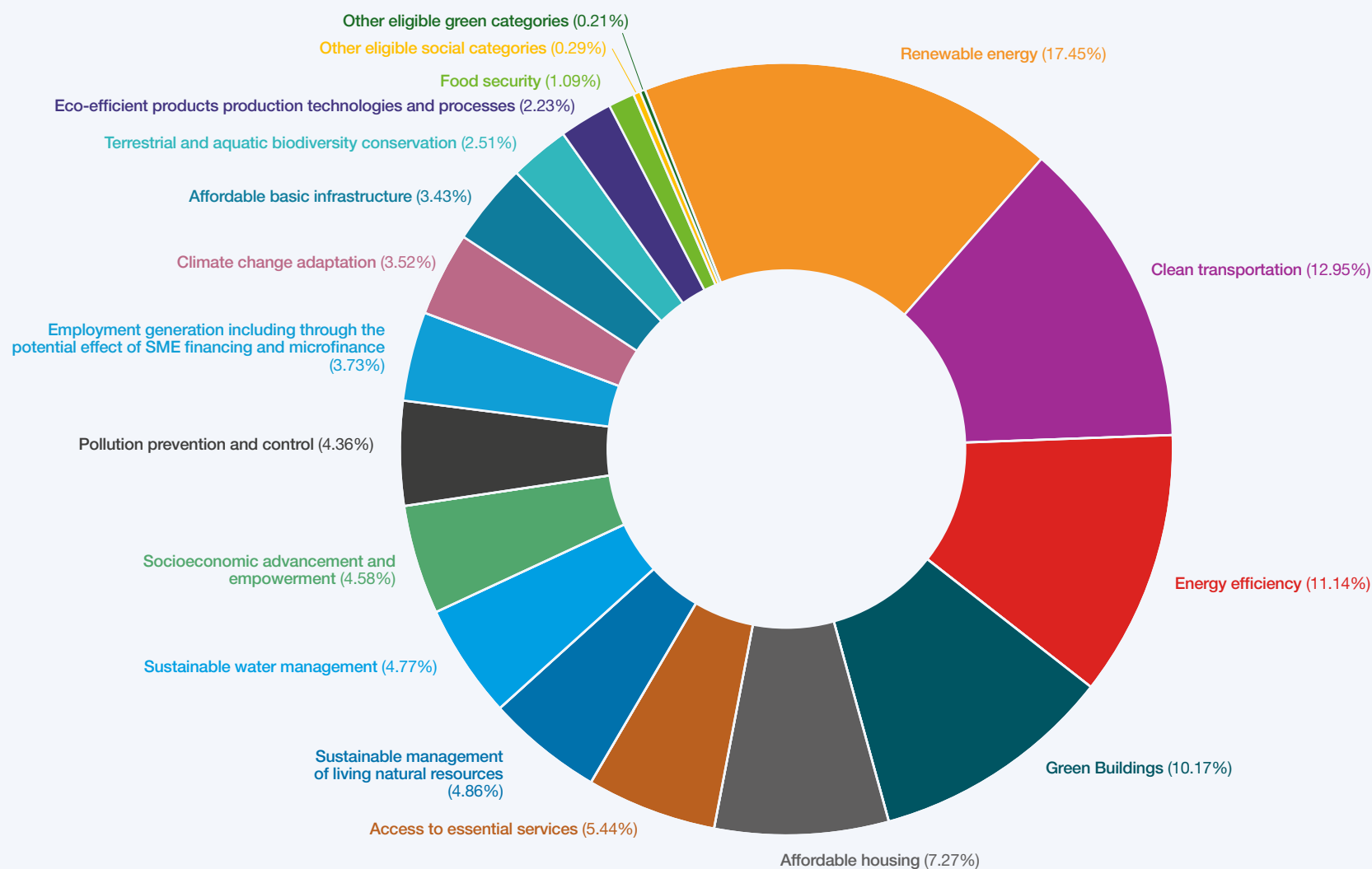
"It's useful to combine the Transition Assessment with other products," she says. "ContourGlobal has issued a green bond, and by also having a Transition assessment, this is a way to show its investors how the financed projects contribute to the company's decarbonisation."



In 2024, the euro and US dollar held steady as the most popular currencies to issue sustainable bonds in, with both their respective market shares staying within a percentage of the previous year. One notable change this year came from Japan and Korea swapping places, with Japan moving to third, with 5.38% up from fifth last year, where it accounted for 4.9%, compared to Korea moving from third largest currency with 5.71% in 2023 to the fifth largest with 4.51% market share. This is largely due to the Japanese government issuing numerous multi-billion dollar issuances.



Use of proceeds breakdown of bonds issued in 2024 by share of value



Methodology: the value of bonds with multiple use of proceeds was pro rated equally to each use of proceed.

Issuers are not committed to allocate to all framework use of proceeds equally, or at all. However, new post issuance allocation data shows which use of proceeds have the greatest discrepancy between pro rating based on framework citation and actual allocation as reported in impact and allocation reports.

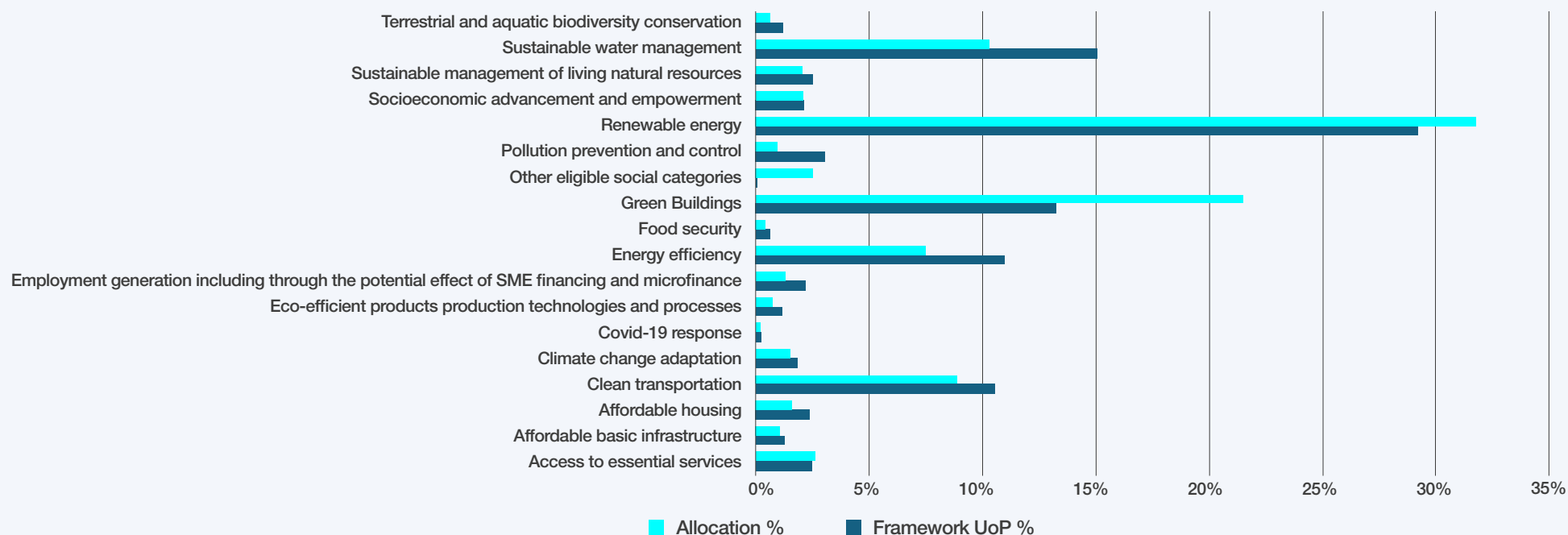
Green buildings, renewable energy and access to essential services have higher than averaged allocation, whilst sustainable water management, energy efficiency and clean transportation have less allocated than pro rata. Over one-third (40%) of bonds analysed did

not allocate to all use of proceeds outlined in their frameworks – largest spread 11 framework UoPs and one allocated UoP.

Allocation data explainer:

- Allocation data extracted from post issuance impact and allocation report
- Data displayed is based on a sample of 2,069 bonds
- Framework use of proceeds extracted from frameworks at point of issuance

Framework UoP pro rata % and post issuance allocation %



The UN Sustainable Development Goals most funded by sustainable bonds in 2023 remained the same as in 2022. Goal 7: Affordable and clean energy, Goal 11: Sustainable cities and communities, and Goal 13: Climate action were the most funded SDGs and accounted for 48% of SDG-aligned funding, which is slightly down from the 49.6% recorded in the previous year.

Green-aligned SDGs usually dominate SDG funding, however green-aligned SDGs increased their share even further in 2024 from 2023, which tracks with the dominance of green bonds this year. In particular Goal 12: Responsible consumption and production, Goal 14: Life on Water and Goal 15: Life on land all saw an increase in their share while social categories such as Goal 1: No poverty and Goal 3: Good health and well-being saw relatively significant drops in their share of SDG funding.



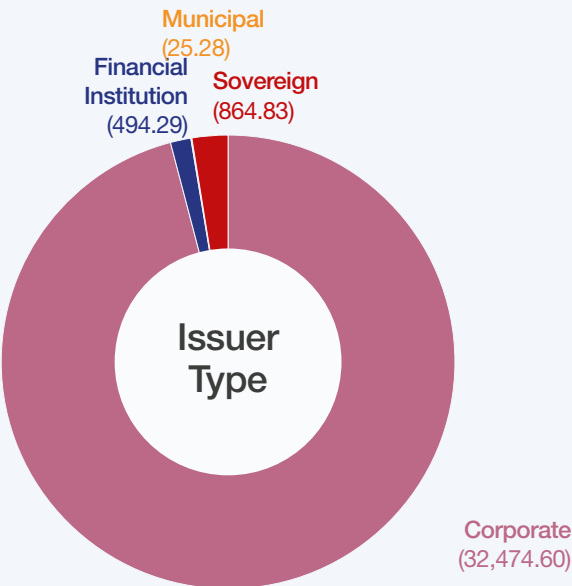
Methodology: the value of bonds with multiple SDGs was pro rated equally to each SDG.

2024 was a story of two halves for sustainable bond coupon rates. The first half of the year saw coupons edge up to an average of 5.06% in Q2 – the highest they have been during five-year period looked at in the below chart. After the second quarter there was a sharp decline in average coupon rates to 4.13% in Q3, falling further to 4% in Q4. Even with the decline in the second half of the year, average coupons for full year 2024 were the highest they have been over this five-year period.



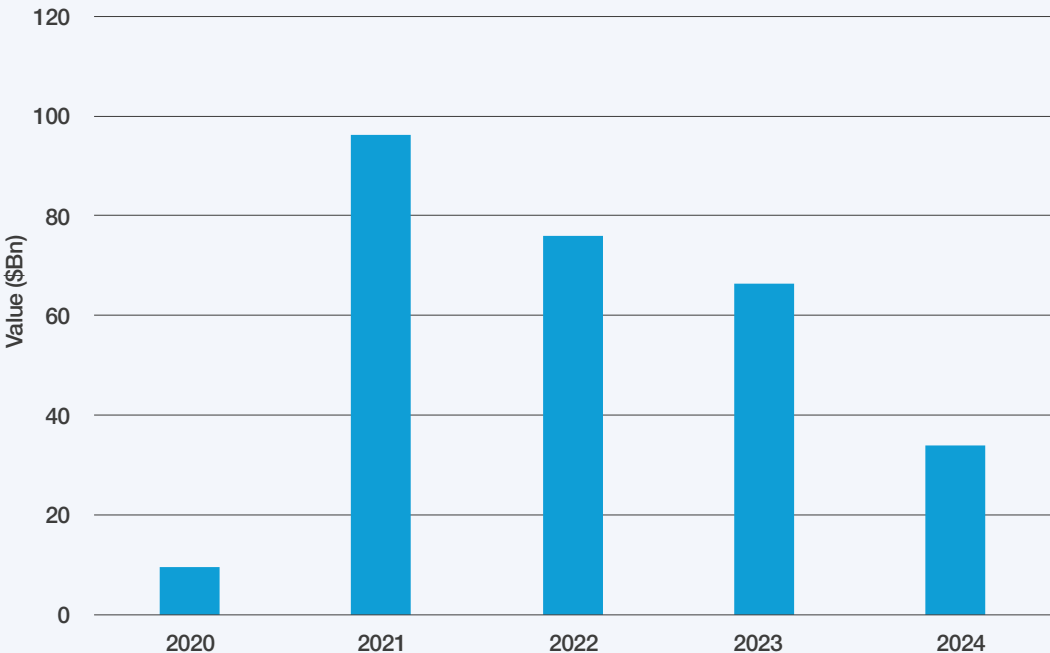
Average of coupon	
2020	2.69%
2021	2.55%
2022	3.73%
2023	4.37%
2024	4.54%

Issuer type breakdown of sustainability-linked bonds in 2024 (\$M)



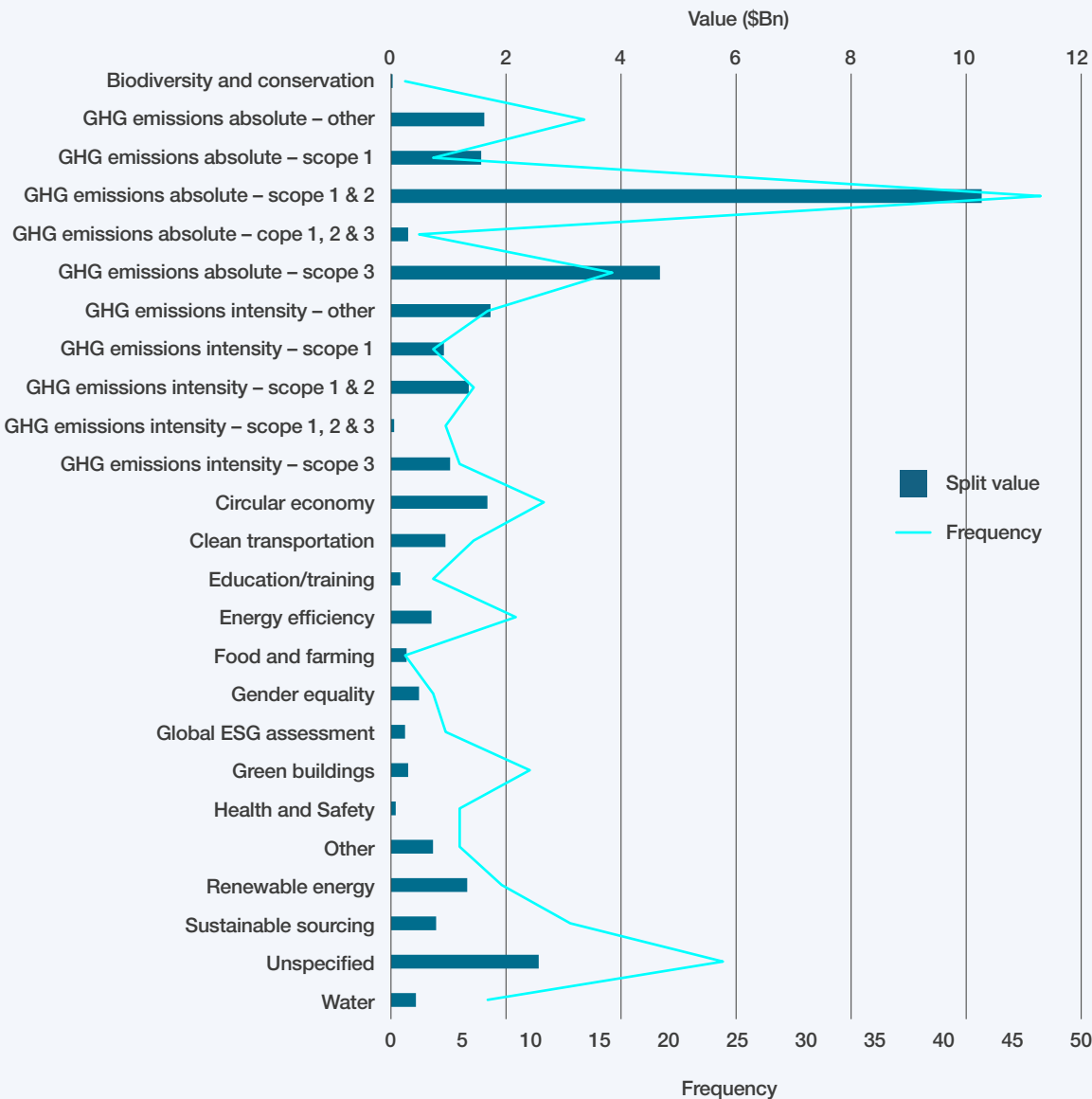
Methodology: the value of bonds with multiple KPIs was pro rated equally to each KPI.

Annual issuance of sustainability-linked bonds by value

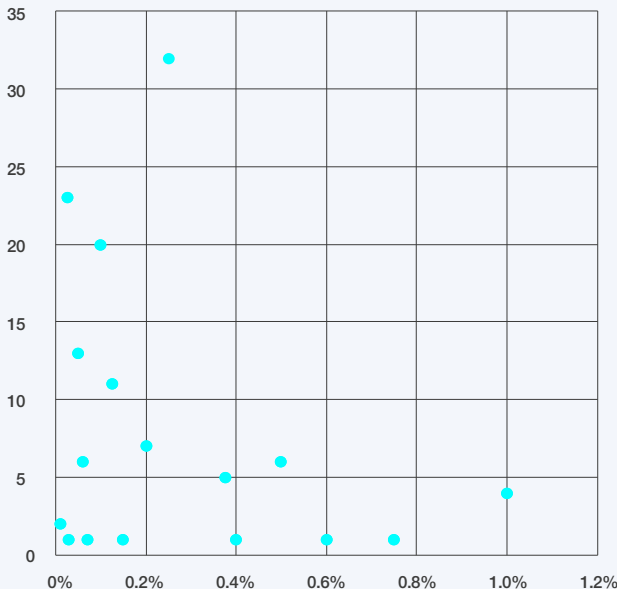


Sustainability-linked bonds have seen a sharp decline since all-time highs in 2021. The label saw a massive surge in issuance after ICMA published its Sustainability-Linked Bond Principles in June 2020 as clear guidance made it easier for new issuers to use the burgeoning label. However, a combination of rising interest rates, the reputational risk of missing targets and greenwashing accusations have led to the label falling out of favour with issuers and issuance declining consistently year-on-year, with 2024 seeing only a third of 2021's record \$96 billion issuance.

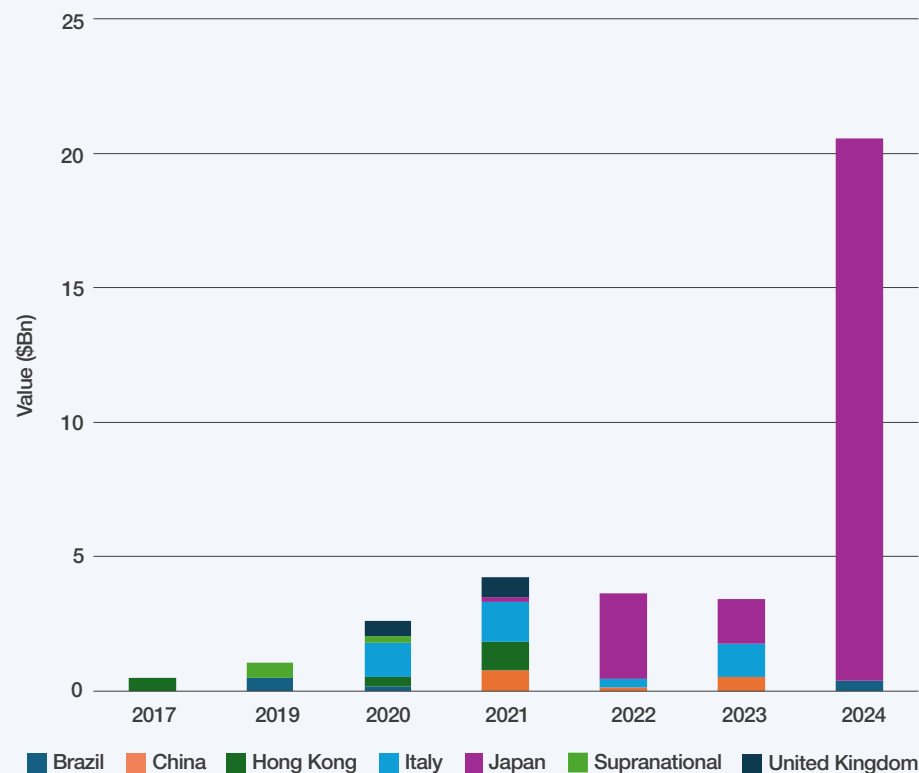
Breakdown of sustainability-linked bond KPIs by value and frequency in 2024



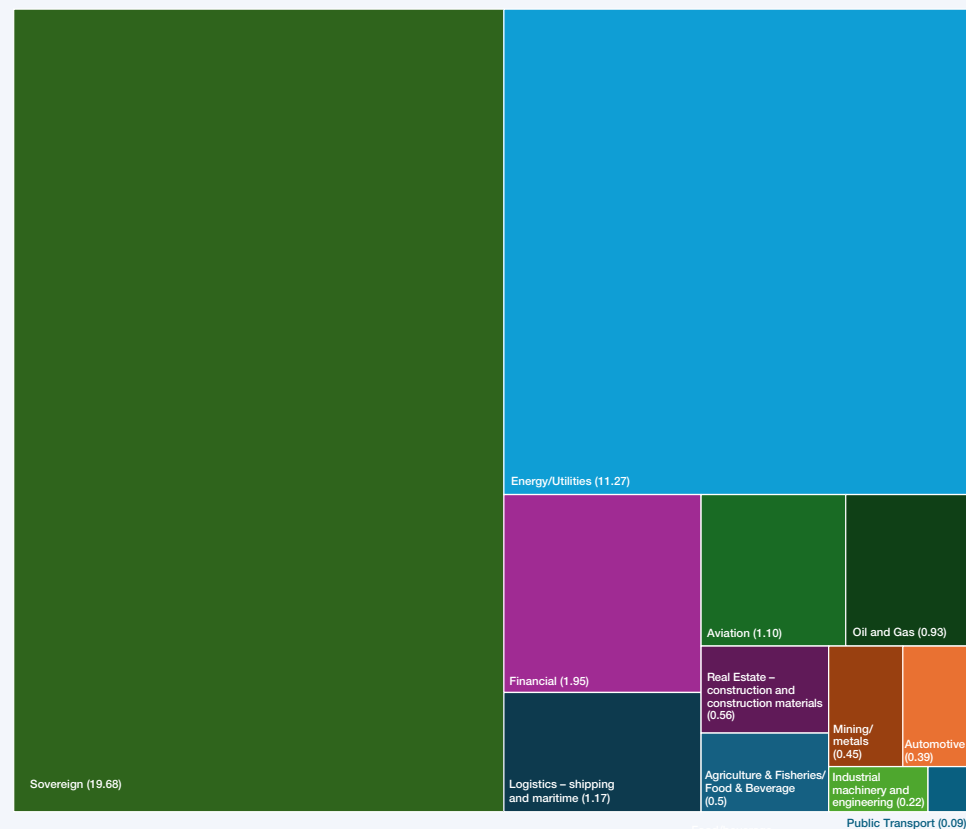
KPI step-up frequency in 2024



Annual issuance value of transition bonds by country



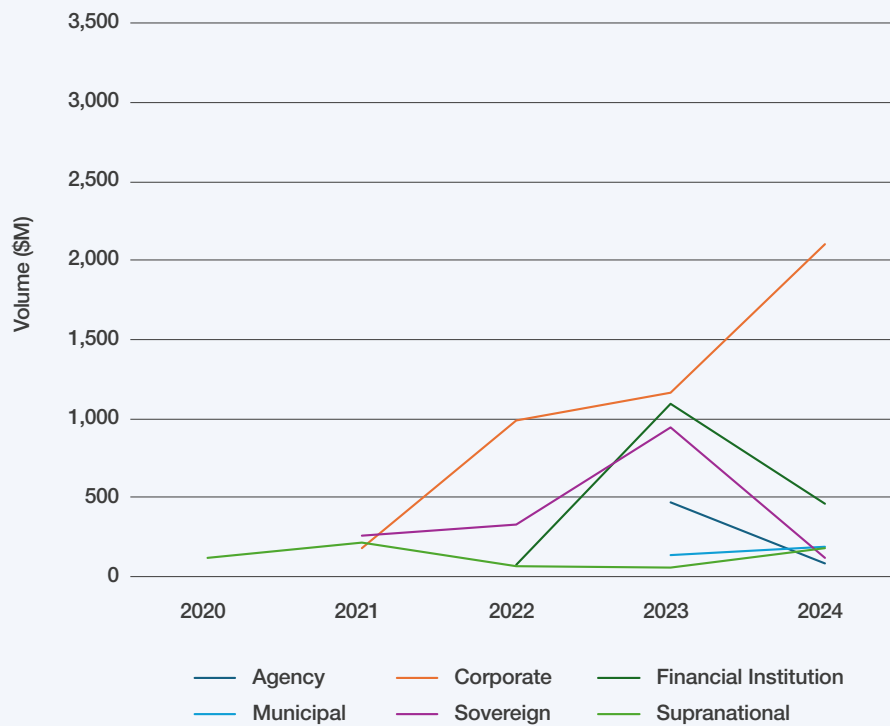
Transition bonds issuance by sector 2017-2024 (\$Bn)



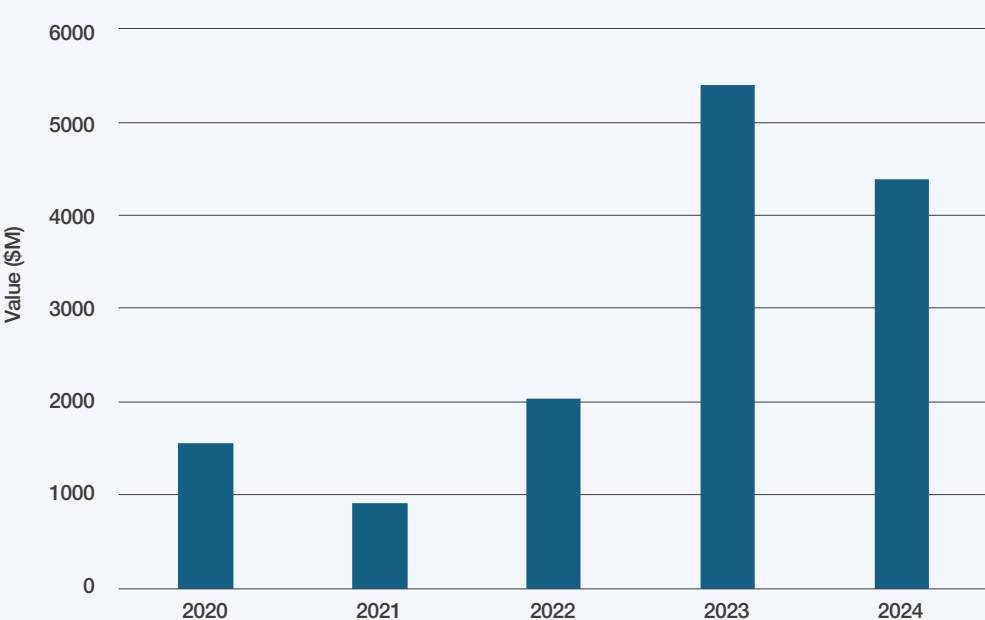
Transition bonds were a relatively niche label until recently, mired in controversy and lacking solid guidelines. In 2021, Japan published its Basic Guidelines on Climate Transition Finance which significantly boosted the Japanese transition bond market, making it the dominant country for transition bond issuance in 2022 and 2023, both in terms of volume and value. In 2024 that lead in the market has only expanded as the Japanese government debuted its sovereign transition bond worth just under JPY800 billion (\$5.3 billion) and continued on to issue a total of JPY2.65 trillion (\$17.4 billion) in transition bonds throughout the year.

Blue bonds saw a slowdown in issuance in 2024, from annual issuance of \$5.4 billion in 2023 to \$4.4 billion in 2024. The drop primarily comes from a sharp decrease in sovereign and financial institutions, however growth in corporate blue bonds cushioned the decline in 2024 issuance. Corporates are now by far the largest issuer type of blue bonds, accounting for over 67% of blue bond issuance in 2024.

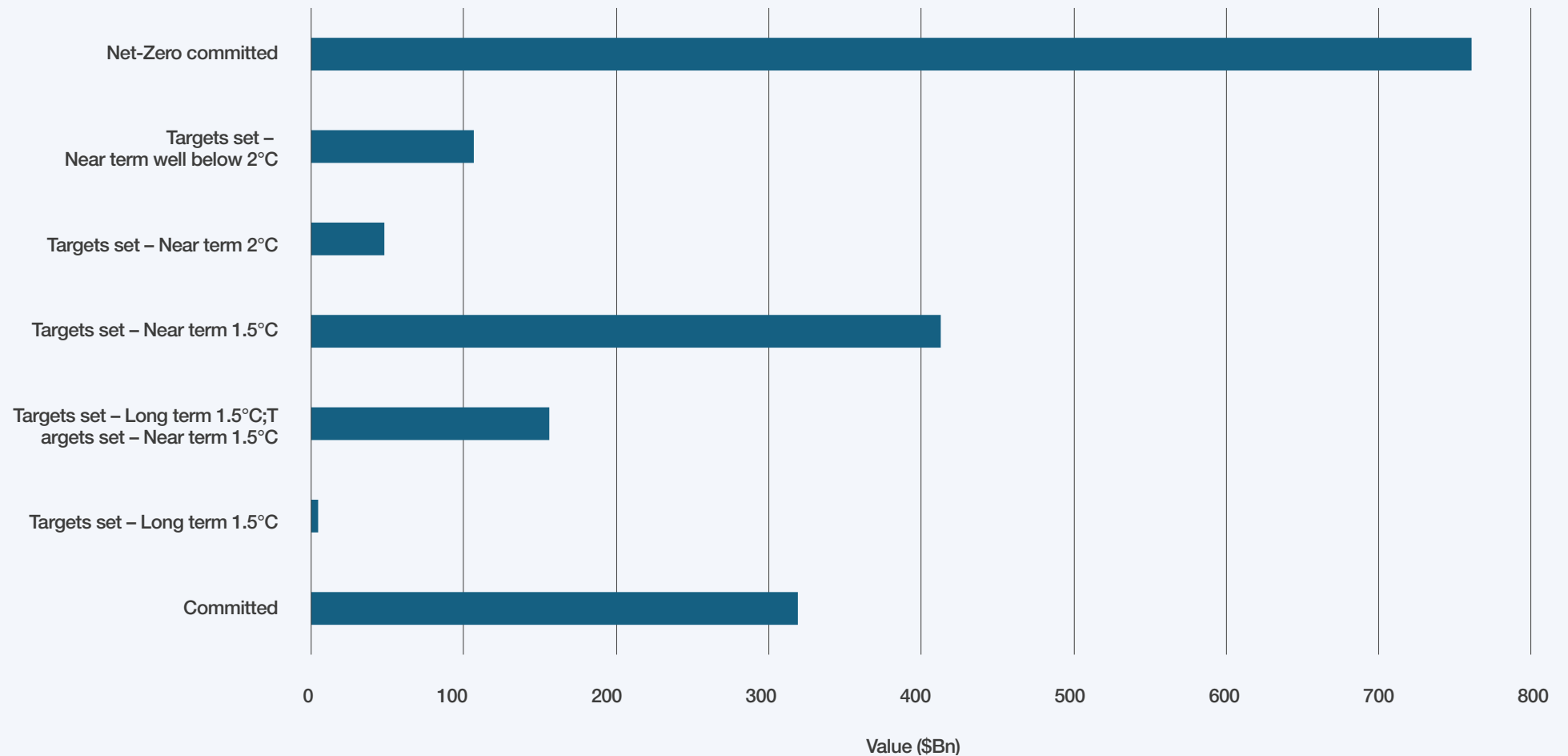
Blue bonds year-on-year issuance by issue type



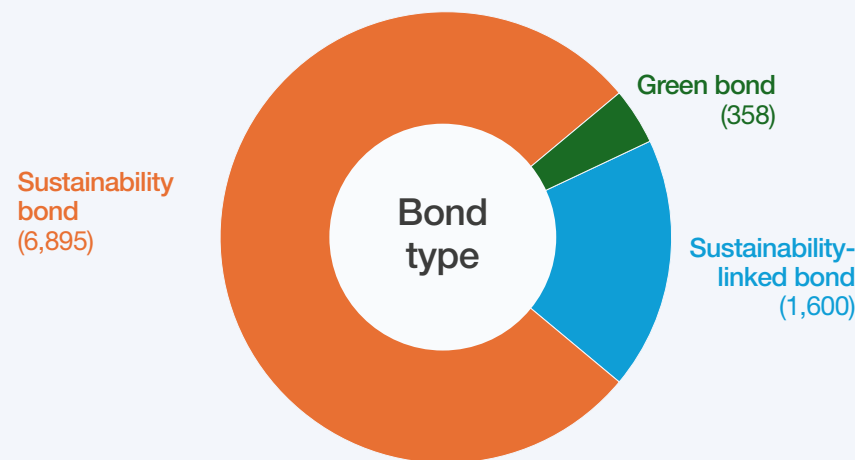
Blue bonds year-on-year issuance



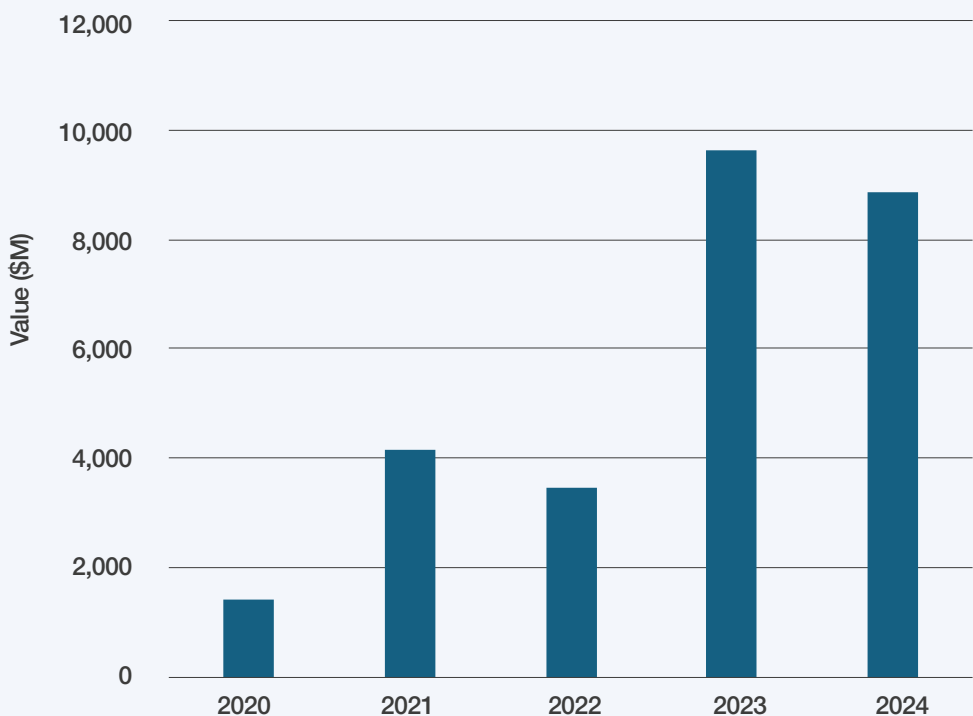
Value of issuance from SBTi aligned issuers (all time)



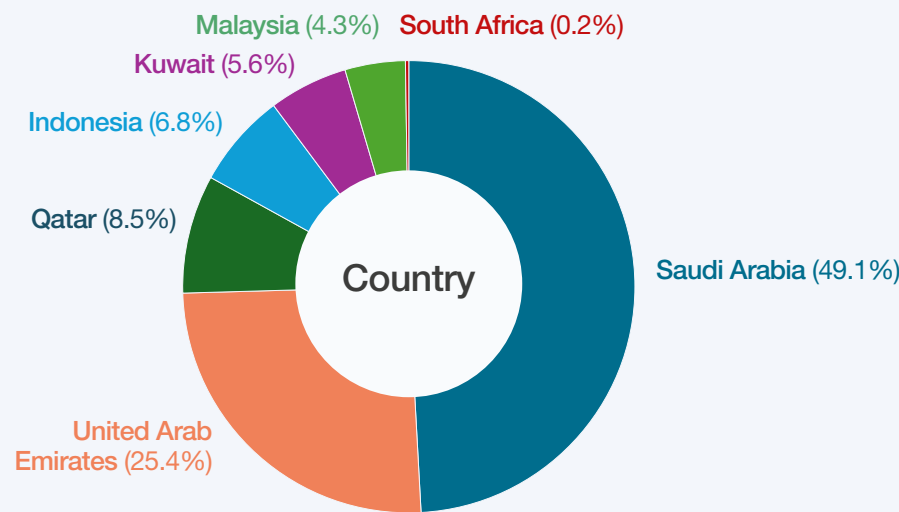
Breakdown of sustainable sukuk bond market 2024 (\$M)



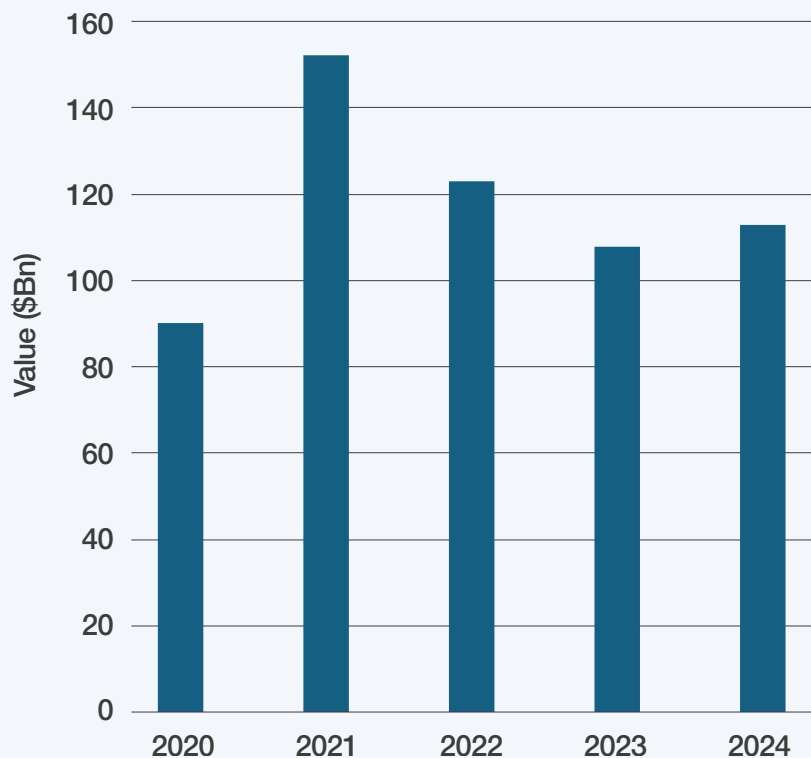
Sustainable sukuk issuance by year (\$M)



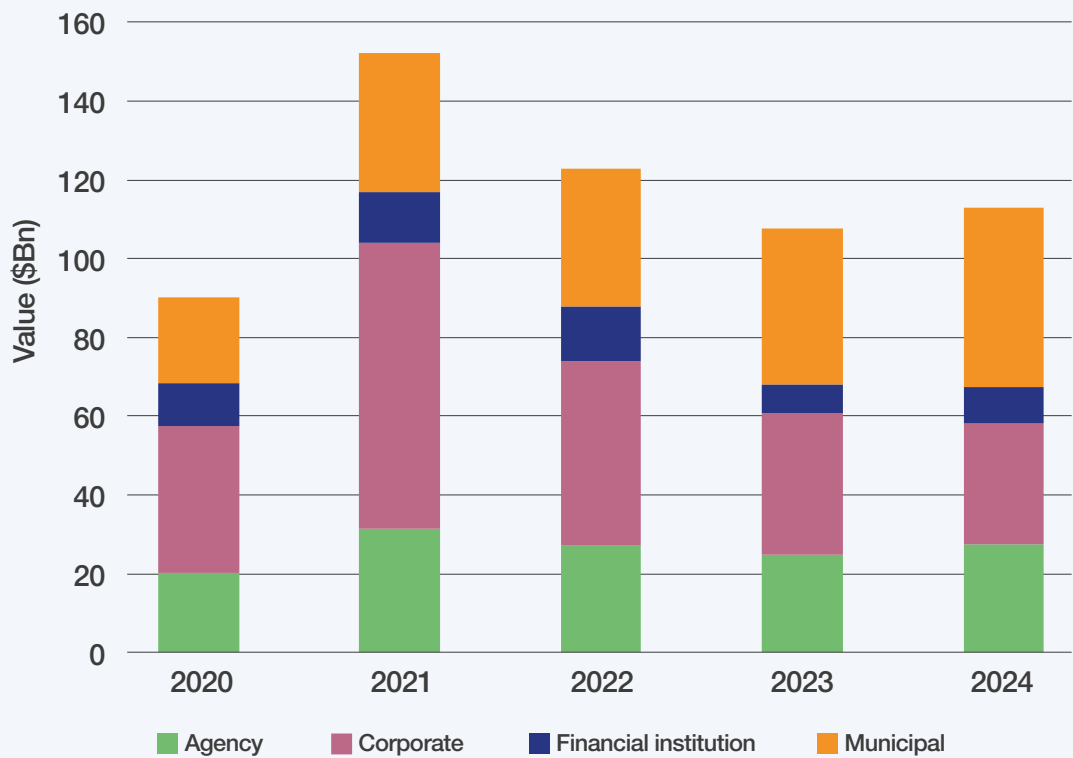
Breakdown of sustainable sukuk bond market by country



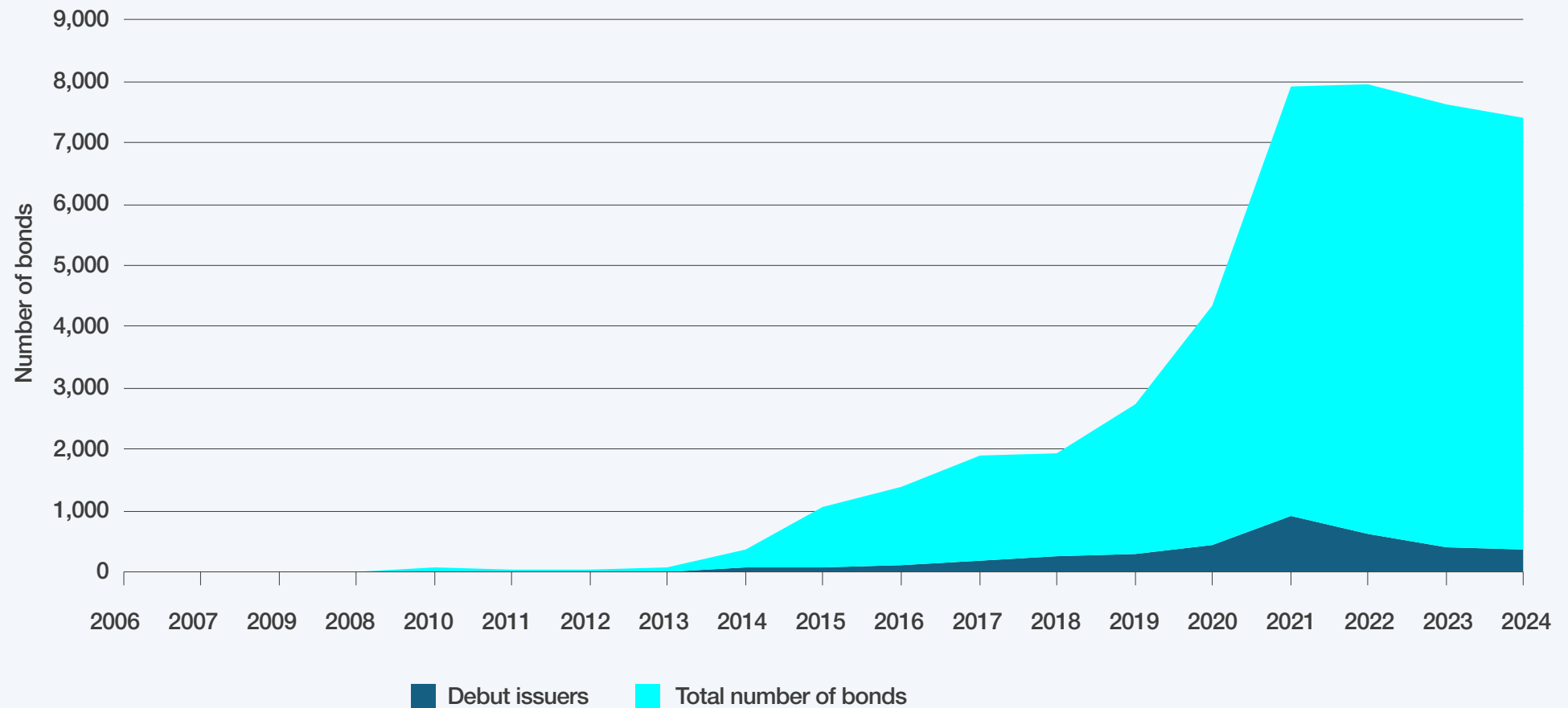
US sustainable bond issuance by year (\$Bn)



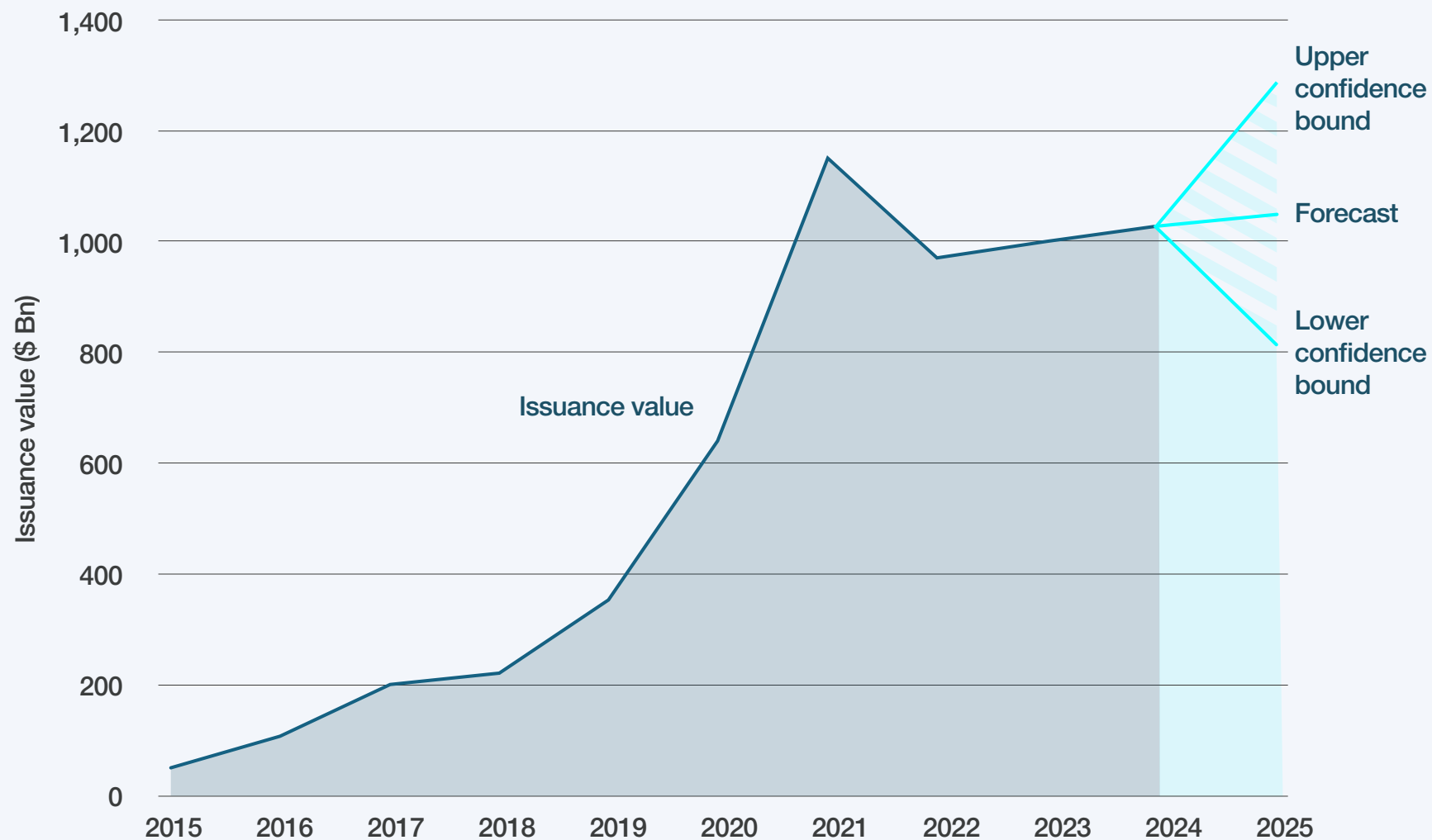
Breakdown of US issuance by issuer type (\$Bn)



Debut issuers vs number of sustainable bonds issued annually*



Methodology: excluding Fannie Mae issuances



Note: Lower and upper confidence bounds are accounting for the headwinds and tailwinds of the market, for complete methodology of *Environmental Finance's* market prediction please visit efdata.org

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1,000+
lead managers

4,800+
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* More data added daily – (figures correct January 2025)

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