Daiwa Capital Markets

European Banks – Quarterly ESG Update (1Q24)

- Rate cuts and development of new market segments will support ESG bond market growth in 2024
- Blue and orange bonds have potential to leave their mark as growth parameters are in place. ESG ratings will soon be more highly regulated and transparent but not necessarily more comparable
- Primary market activity in 4Q23 benefitted from improved sentiment at quarter-end and into 2024. Upsized issuer funding plans for 2024 may have partially been offset by pre-funding in December
- Secondary market spreads held firm, benefitting from reduced volatility. Greeniums are consistently smaller than they used to be but can still be found

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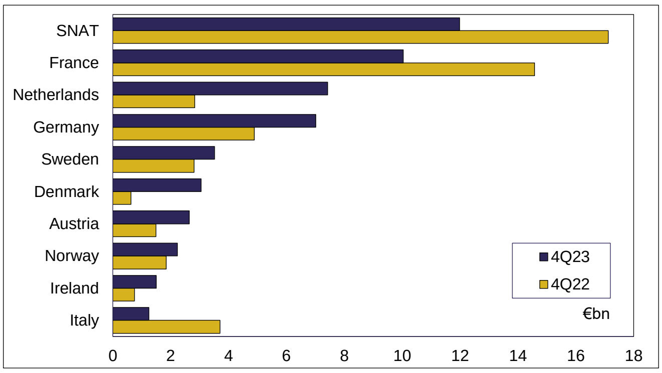
Overview: Ingredients present for ESG bond market growth in 2024

In 4Q23, global ESG bond issuance across all sectors – comprising green, social, sustainable and SLB bonds as well as ESG-labelled securitisations – declined again on a year-on-year basis to EUR192bn (-11% yoy). Excluding securitisations, the 4Q23 total was EUR180bn (-8.8% yoy). For the second quarter running, volumes declined overall with the strongest reductions among SLBs (-46.2% yoy) and social bonds (-38.5% yoy). But green bonds remained broadly flat (+0.6% yoy) and sustainability issuance saw a moderate increase (+4.4% yoy). A weaker than expected 2H23 meant that the total 2023 issuance volume of EUR1.0tr was flat against the previous year and 9% below the level in the record year of 2021.

In Europe, ESG-linked bond sales from SSAs and FIGs reached EUR54.5bn in 4Q23 according to Bloomberg data, down 13.7% yoy. Of that total, green bond sales amounted to EUR34.2bn (-4.4% yoy), sustainable bond volumes stood at EUR14.6bn (+145% yoy) and social bonds accounted for EUR5.7bn (-73.3% yoy). Entities from France, the Netherlands and Germany led European ESG debt issuance in 4Q23 alongside Supranationals. ESG-themed bonds issued by European financial institutions fell by EUR2.3bn from a year earlier to EUR21.7bn (-9.6% yoy). The drop among SSAs continues to be more pronounced as volumes fell by EUR6.3bn to EUR32.8bn (-16.1% yoy).

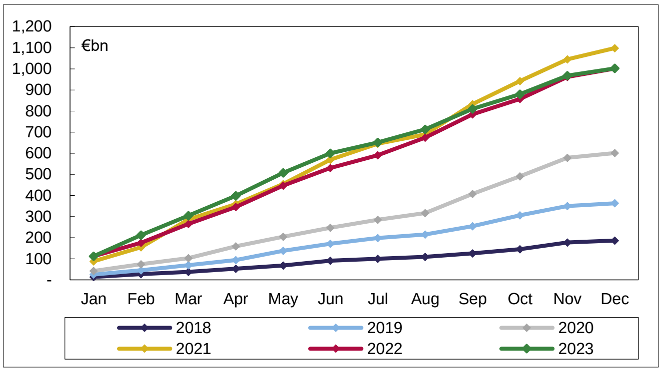
Looking ahead, we expect 2024 ESG debt issuance to stabilise from the lower than expected volumes seen throughout 2H23. We anticipate support from interest rate cuts and continued sustainable investment needs. We believe global volumes may reach some EUR1.05tr, slotting in above last year's figures but falling short of the record EUR1.1tr registered in 2021. In particular, growing policy support for issuer transition strategies could drive investment in new technologies for hard-to-abate sectors. Labelled issuance in these sectors is currently low but guidance on science-based decarbonisation pathways, as published by SBTi or Gfanz, can help provide more clarity on project eligibility. Furthermore, maturing ESG markets will likely seek growth in new or uncommon forms of labelled debt, for instance ocean-related finance (blue bonds) or gender equality bonds linked to the UN SDG 5 goal (orange bonds).

European ESG Bond Issuance by Country



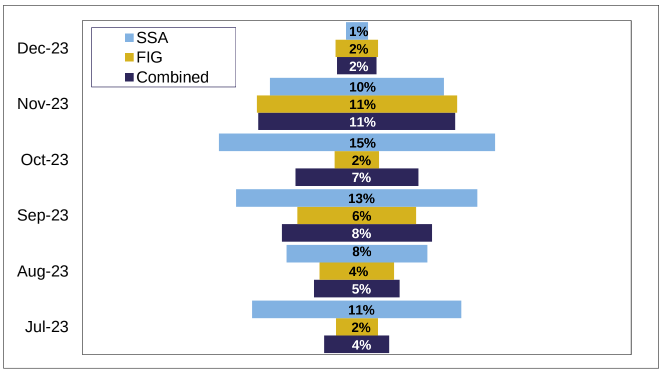
Source: Bloomberg; includes FIGs & SSAs; Daiwa Capital Markets Europe

Cumulative annual sustainable debt transactions*



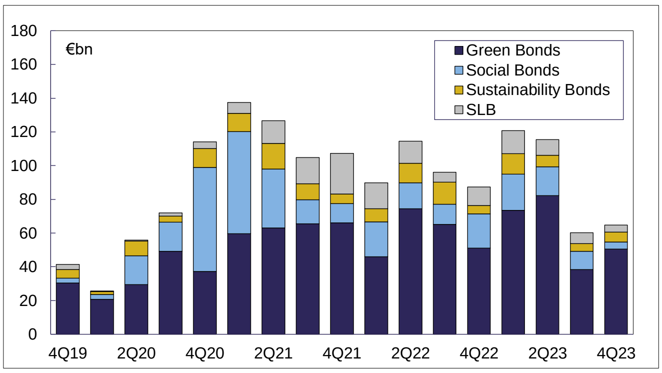
*Source: Bloomberg; FIG, SSA & Corporates; *excl. green, social and sustainability-linked loans; Daiwa Capital Markets Europe*

Proportion of ESG-themed debt to total issuance*



*Source: Bloomberg; *in EUR by European issuers; Daiwa Capital Markets Europe*

Quarterly European ESG Bond Issuance by Type



Source: Bloomberg; FIG, SSA & Corporates; Daiwa Capital Markets Europe

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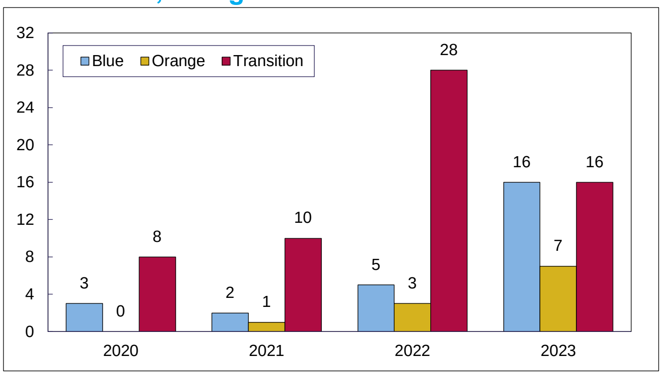
Select ESG growth drivers and regulations will shape 2024 sustainability landscape

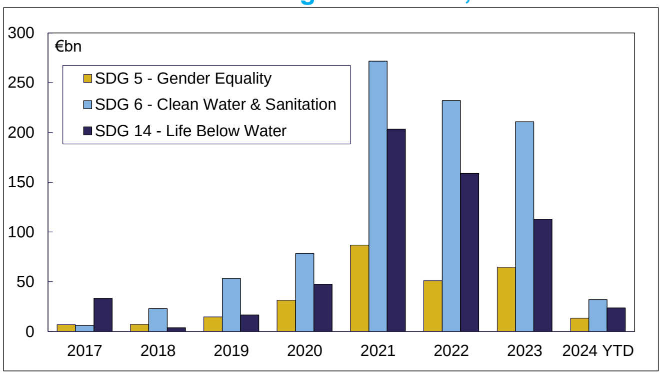
Sustainable debt markets are set to deepen in 2024 as increasingly new and innovative products and sector frameworks are being established. Particularly mature ESG markets lend themselves to this development as issuers and investors there continually seek a diverse range of projects to fund. In this context, we see so-called 'blue', 'orange', and 'climate transition' bonds as noteworthy instruments that could find their way to market in increasing numbers. Blue bonds, a sub-segment of green-labelled debt, are dedicated to conserving maritime resources, while also promoting related sustainable economic activities. To date, global blue bond issuance has been modest with volumes at USD6.8bn, a fraction of total sustainable debt. However, data from Fitch and Environmental Finance shows that the number of deals more than tripled last year. This was likely facilitated by the guidelines on blue-themed bonds, published in September 2023 by the International Capital Market Association (ICMA) that worked in conjunction with the International Finance Corporation (IFC) and the Asian Development Bank (ADB) to create a practitioner's guide to finance a sustainable ocean economy. This sub-segment is also gaining traction, as it supports biodiversity in the context of improved ocean health and also extends to freshwater health and climate resilience and adaptation.

Annual blue, orange & transitional bond issuance*



*Source: Sustainable Fitch, Environmental Finance; *Number of transactions*

Global ESG bonds citing UN SDGs 5, 6 & 14



Source: Bloomberg; Daiwa Capital Markets Europe

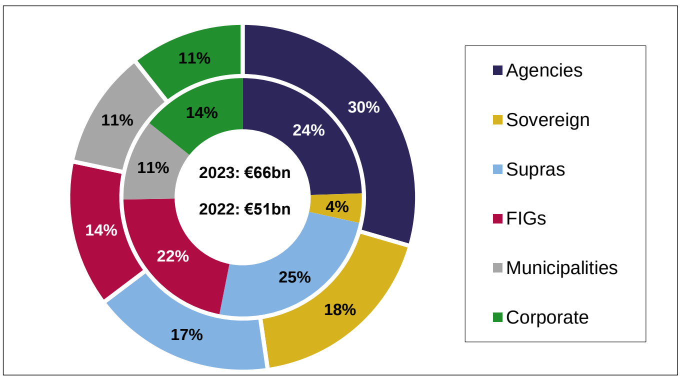
Blue bonds, could be more than just a drop in the ESG-ocean

In Europe, in an effort to improve investor awareness, the European Commission (EC) published its 'Blue Invest' report in 2023 with the aim of providing market participants with an overview of investment activities and opportunities in the EU's blue economy, which the EC sized at EUR182bn gross value added in 2020 (+20% since 2009). Interest in this field appears to remain strong as the report cited a survey whereby 87% of investors asked (87 in total) signalled interest to invest on average EUR124.5m into the blue economy by 2030. At scale, these figures could result in meaningful capital allocation to this segment. The Commission furthered its commitment to the blue economy during the COP28 conference, when it pledged EUR1bn to partnership initiatives designed to foster sustainable blue investments in non-EU countries that border the Mediterranean. However, there still remain considerable funding needs to meet the requirements of the blue economy. Globally, an estimated EUR147bn will be needed annually by 2030 to meet the UN's SDG 14 – Life Below Water. But currently only 14% of that total is being realised, leaving a significant funding gap. The UN itself describes SDG 14 as 'the most underfunded' goal, while underlining its importance in addressing climate change. According to Bloomberg data, global bond volumes citing maritime-related SDGs have experienced significant growth in recent years, but lost some of that momentum over the last two years. With the increasing number of policies and guidelines supporting sustainable blue activities we expect 2024 to be conductive for increased blue bond issuance.

'Orange' might become the new black

Another label that has been gaining momentum as of late is that of so-called orange bonds that focus on promoting gender equality and empowering women. Their name is derived from the orange colour of the UN SDG 5 – Gender Equality. The segment has significant potential as seen in the rise of bond proceeds that either fully or partially reference gender equality. In 2023 that figure rose to EUR65.6bn (+28% yoy) and YTD 2024 issuance has already almost eclipsed the 2019 total. One important catalyst for this development was the launch of the orange bond initiative in 2022, by the Impact Investment Exchange (IIX), a non-profit organisation. The initiative seeks to unlock USD10bn for gender-lens investing by 2030, aiming to empower 100 million females worldwide. Recent research by a variety of entities, such as the IMF, the European Institute for Gender Equality and Moody's have all concluded that improving gender equality has a strong positive impact on GDP growth and productivity. This growing recognition has had positive

Bonds referencing SDG 5 by issuer type



Source: Bloomberg; 2023 = outside; 2022 = inside; Daiwa Capital Markets Europe effects on the breadth of issuers looking to issue gender-related bonds. Data collated from Bloomberg shows that, in 2023, most of the issuance volume for bonds contributing to gender equality came from agencies (30%), sovereigns (18%), Supras (17%), FIGs (14%), municipalities (11%) and corporates (11%). The data shows that it's first and foremost SSAs leading the charge in promoting orange finance, with some geographies more prominently featured than others. In 2023, Europe accounted for 44% of issuance, followed by Supras (17%), South America (13%), Asia-Pacific (10%), North America (8%) and others (8%). Issuers from the Middle East and Africa were mostly absent and only partially listed among 'others'. But we deem emerging markets to have some of the greatest development potential for gender equality. To gauge interest in future issuance activity, the integration of these topics within policymakers' sustainable finance frameworks can be monitored.

A 'just transition' should seek to be equitable

Orange activities are firmly embedded within the social spectrum of ESG finance and therefore naturally intersect with concepts such as the 'just transition', which endorses the transition to a low-carbon economy in a socially responsible manner. The Global Green Growth Institute (GGGI) has shone a spotlight on women in this context, noting that women often have fewer social safeguards and are less likely to benefit from transitioning economies. The GGGI is an international, treaty-based, inter-governmental organisation dedicated to supporting and promoting inclusive and sustainable economic growth in developing countries. It reports that around 80% of people displaced by climate-related disasters are women, while informal employment remains prevalent in countries where climate impacts are most acute. In low-income countries, 92% of women find themselves in informal employment, making their situation particularly precarious. Acknowledging that women appear to be disproportionately affected by the transformative challenges presented by climate change means that the integration of those considerations into just transition funding strategies is even more important. Raising collective awareness of these issues may provide additional impetus for orange finance.

ESG ratings no longer the last frontier in Europe's sustainability landscape

The regulatory and ratings landscape for ESG investments has undergone some large changes in recent quarters. We are seeing enhanced transparency and standardisation being rolled out with the introduction of the UK's Sustainability Disclosure Requirements (SDR) and refinements to the EU's Sustainable Finance Disclosure Regulation (SFDR). These developments will help mitigate risks associated with greenwashing and reinforce investor confidence in ESG-labelled products. This will be furthered by decisions made at the highest European level regarding regulation on ESG ratings. From 2025 onwards, we expect to see significant changes to the way ESG rating providers are expected to operate in Europe in what has been a highly unregulated market so far. In June 2023, the European Commission made a proposal to improve the reliability and transparency of ESG ratings activities and in February the European Parliament and Council reached a provisional agreement. Notably, new organisational principles and clear rules on the prevention of conflicts of interest were agreed, meaning that rating agencies will be prevented from providing consulting services to investors as well as credit ratings. Moreover, ESG rating agencies will need to be authorised and supervised by the European Securities and Markets Authority (ESMA). Agencies established outside the EU that wish to operate in the EU will need to obtain an endorsement of their ESG ratings by an EU-authorised ESG rating provider or by an ESMA-approved competent national financial regulator.

Regulation will provide better understanding but not necessarily greater comparability

In 2H23 during the consultation phase of the new regulation, some important features were added that had been lacking in the original Commission proposal. This included the possibility for rating agencies to provide separate environmental, social, and governance ratings, or, if only a single score is provided, an explanation of the relative weighting of the three components. We deem this disaggregation of the rating components an important step towards transparency in the ratings process as it would make it more difficult for entities to hide bad scores for some components behind outstanding scores in others. The current regulation appears still to fall short in areas such as facilitating comparability between rating providers, despite it requiring rating providers to publish more granular information on their rating methodologies.

In conclusion, these requirements alone are unlikely to homogenise the ratings landscape as the current agreement doesn't explicitly state how ratings should be produced. Therefore, it remains to be seen if the enhanced disclosure on the methodology side could lead to closer alignment between providers. Looking ahead, the provisional agreement between the European Parliament and Council is subject to final approval before its formal adoption procedure. The regulation will start applying 18 months after its entry into force, meaning it will likely become applicable during the second half of 2025.

In the UK meanwhile, the Financial Conduct Authority (FCA) appointed ICMA and the International Regulatory Strategy Group (IRSG) to develop and launch a voluntary code of conduct for ESG ratings and data providers. The UK's voluntary approach follows recommendations from the global securities watchdog, the International Organization of Securities Commissions (IOSCO), providing guidelines on managing conflicts of interest and transparency over methodologies. The voluntary nature of the code and the fact that it was developed by market standard-setter ICMA may be a draw for many rating providers and could facilitate methodology-alignment, ultimately leading to more comparable ESG scores.

European primary markets in 4Q23

SSA - Top 10 European ESG Issuers FY23		
Issuers	Total Issued (€m)*	Average Tenor (years)
IBRD	41,101	7.9
CADES	22,203	5.3
EIB	12,353	8.3
KfW	11,517	4.8
Italy	10,000	8.5
Germany	9,750	20.0
AIIB	8,144	5.7
Austria	6,201	0.2
BNG Bank	5,227	12.2
Netherlands	4,982	20.2

*Source: Bloomberg; *Cumulative issuance 2023*

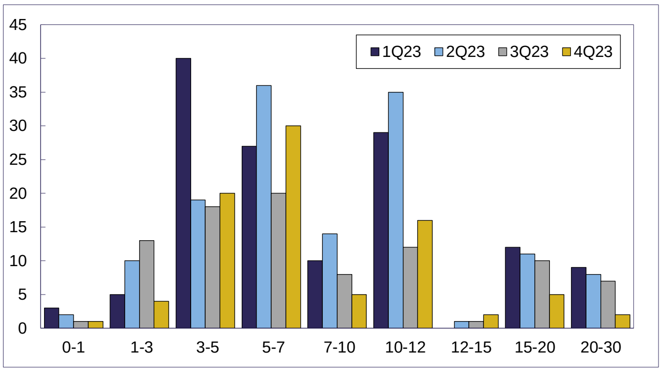
SSA ESG issuance volumes in 4Q23 reached EUR33bn, down 16% on the previous year, of which 49% had a green bond indicator, 40% were sustainability bonds, and 11% social bonds. There was no SLB issuance during the quarter, unchanged from the same period last year. Sustainability bond volumes experienced strong growth, tripling in volume to a total of EUR12.9bn. This brought the 2023 total to EUR79.6bn (+18% yoy). Although they are widely adopted, it was mainly supranational agencies as well as sovereigns that lead the way for sustainability bond issuance. Their capacity to address both green and social projects stems from the broad mandates and size of their issuers. The segment lends itself particularly well to these types of issuers as they seek to meet climate finance commitments while also improving living standards. We notice a greater diversity of issuance with participation from a wider array of issuing entities when compared to the social bond segment. SSA issuers raised EUR211bn in 2023, down 1% from a year ago. The average deal size of EUR382m was 8.2% smaller during 4Q23 than the same period a year earlier. The overall number of registered trades fell to 86 from 128.

On the whole, themed SSA bond issuance volumes fell during the quarter, but there were strong swings between categories. Issuance of green bonds, accounting for the largest share among SSAs in 4Q23, was broadly stable compared to the previous year (-1.1%). However, against the previous quarter, the EUR16.2bn in volume was up 115%, mainly driven by sizeable sovereign transactions. Sovereign bond yields fell from their elevated levels in the latter part of the quarter, which provided a favourable backdrop for issuance. Social bond volumes fell once more and below the levels of the previous quarter (-55.5% qoq to EUR3.6bn). 4Q23 SSA supply was focussed around the middle segment of the curve with the majority of deals carrying a 5-7-year tenor (35%) followed by 3-5 years (24%) and 10-12 years (19%). Looking at indicative 1Q24 data, we see that volumes were trailing 6.7% yoy as at mid-February. However, SSAs had a blistering start to the year with some EUR50bn in issuance in January alone (+38% yoy) as issuers were keen to take advantage of the more favourable funding environment set by rate-cut expectations and falling yields.

2024 funding plans

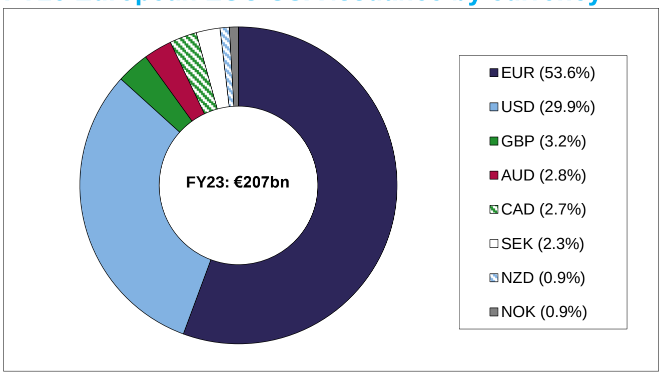
With 2024 primary market activity in full swing, issuer funding plans for the year give us an indication of what we can expect from the SSA sector as a whole, not only in terms of volumes but also in terms of funding priorities. Agence Française de Développement (AFD) for instance announced its plans to raise EUR9bn in 2024, up EUR1bn on last year. 43% of its 2023 public transactions were SDG bonds and this figure is set to increase to 50% this year. After raising a record amount last year, the Council of Europe Development Bank (CEB) is looking to fund EUR7bn in 2024, also EUR1bn more than its previous high. As one of the most prolific social bond issuers, CEB mostly places its bonds in euros or dollars and is also considering an inaugural sterling bond this year. Investor interest from Asia and South America appears to have increased for European SSAs due to the higher rates environment, while duration focused investors are taking more interest in 7-12 year tenors. However, not all issuers have seen their funding needs rise. The EU for example only plans to sell EUR75bn in 1H24, down from the EUR80bn it had announced for 1H23. Furthermore, the Commission announced that it will predominantly focus issuing NextGeneration EU (NGEU) green bonds via taps and only consider one new long-dated green bond, depending on market conditions.

Number of SSA transactions per tenor bucket



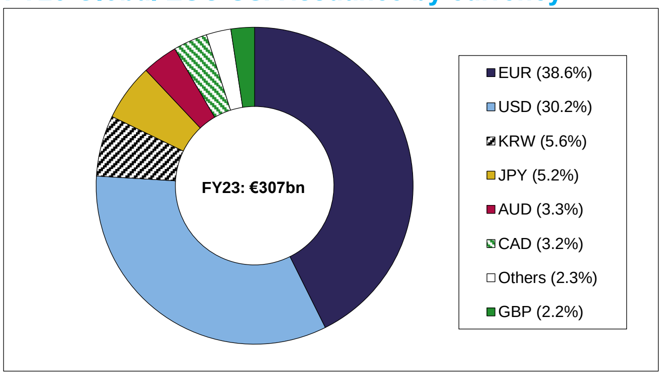
Source: Bloomberg; Daiwa Capital Markets Europe

FY23 European ESG SSA issuance by currency



Source: Bloomberg; Daiwa Capital Markets Europe

FY23 Global ESG SSA issuance by currency



Source: Bloomberg; Daiwa Capital Markets Europe

Total **FIG ESG** volumes in 4Q23 reached EUR21.6bn (-9.6% yoy). Primary market activity was skewed toward the middle of the quarter with November accounting for the bulk of all deals (50%), December (26%) being more active than usual despite the Christmas holidays and October (24%) experiencing a slump due to unfavourable market conditions. Markets continued to display sensitivity to monetary policy announcements and key data releases, as the 'higher for longer' rates expectations and accompanying higher yield persisted well into November. Average bond maturities were concentrated in the 3-5 year maturity bucket (39% of total), followed by 5-7 years (28%) and 1-3 years (19%). For 2024 issuance, we expect lenders to be subject to a series of conflicting factors. Banks are exposed to external factors such as an uncertain and slowing economic backdrop, challenging funding conditions and slowing business growth, which reduces funding requirements. On the other hand, the vast majority of large FIGs now have fully articulated net-zero targets (>80% worldwide) that ensure that the sector continues to pursue its sustainability strategies, facilitated by an evolving and maturing regulatory environment.

FIG - Top 10 European ESG Issuers FY23

Issuers	Total Issued (€m)*	Average Tenor (years)
Intesa	6,054	6.8
DNB Bank	3,894	5.2
ABN Amro	3,243	4.2
Danske Bank	2,725	5.2
Berlin Hyp	2,520	6.8
Bank of Ireland	2,250	6.5
Société Générale	2,158	4.0
Banco BPM	2,000	4.3
BNP Paribas	2,000	7.0
Bayern LB	1,950	6.5

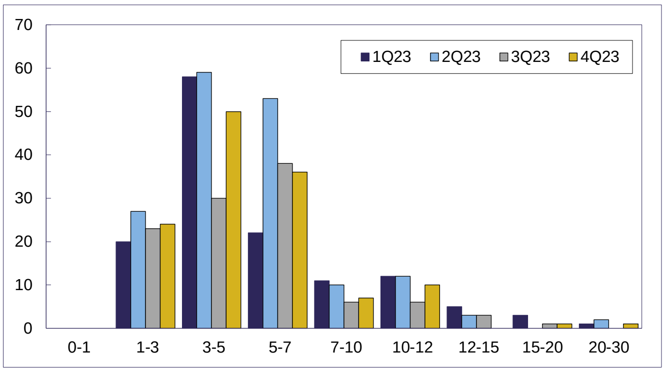
*Source: Bloomberg; *Cumulative issuance 2023*

ESG debt issuance among financial institutions remained robust throughout 2023 at EUR104.8bn, but ultimately trailed 2022 levels of EUR114.6bn. Indicative 1Q24 activity is promising as funding conditions have been more benign and volumes have already matched 4Q23 total issuance. Strong primary market activity at the beginning of 2024 also meant that volumes remained stable against the same period last year. We expect this trend to continue, supported by robust credit fundamentals seen in 4Q23 bank earnings. Most European banks continue to be well-capitalised and have enjoyed elevated profits in 2023, allowing them to face the rest of 2024 from a position of relative strength.

Record demand for duration comes late in the year

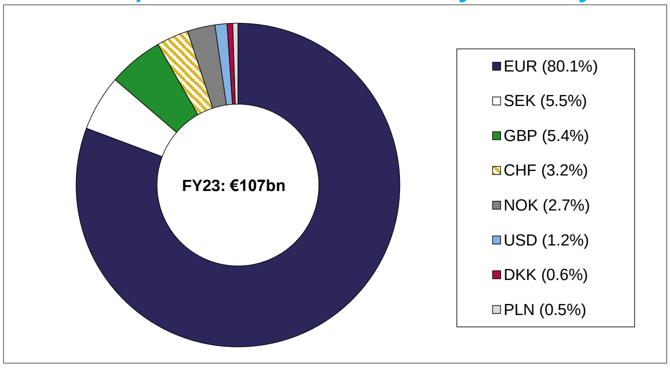
Labelled issuance from FIGs picked up sharply in November, increasing almost four-fold compared to October, illustrating the better funding conditions that led some issuers to bring forward a portion of their 2024 funding requirements. Moreover, in a sign of things to come in early 2024, the largest labelled FIG trade of 4Q23 happened to be a duration trade. Issuers started to opt for longer maturities as the funding environment improved, a trend that has persisted into this year. Notably, Crédit Agricole launched a SNP green deal for EUR1.25bn, carrying a 10-year maturity, which attracted the largest order book (4.6x deal size) for an unsecured euro denominated transaction in 2023. Several factors came together that made it garner so much interest. The green label was certainly a factor in driving additional demand as this was the first green senior unsecured bond issued by Crédit Agricole since 2019, attracting dedicated ESG investors. The less commonly used bullet structure also broadened the transaction's appeal as this is often preferred by real money investors over deals with call options. The sizeable book led to spread tightening of some 30bps to MS+135bps, leaving just a small 5bps concession on the table. The French bank also announced an interesting update to its green bond framework in November, as it is now in a position to allocate some of its use of proceeds towards financing nuclear energy projects. This aligned with the complementary delegated act of the EU taxonomy and it would appear that the framework represents a first among European FIGs. However, the issuer only expects limited uptake as parts of the investor base have exclusion criteria towards funding nuclear energy assets. Crédit Agricole already gained experience with nuclear projects under green labels when it signed a EUR1bn bilateral green loan in 2022 with EDF.

Number of FIG transactions per tenor bucket



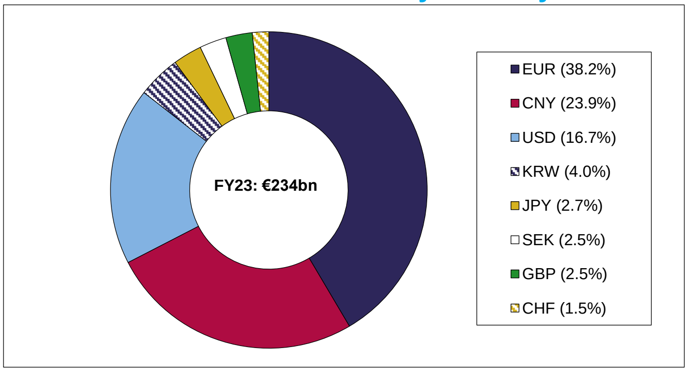
Source: Bloomberg; Daiwa Capital Markets Europe.

FY23 European ESG FIG issuance by currency



Source: Bloomberg; Daiwa Capital Markets Europe

FY23 Global ESG FIG issuance by currency



Source: Bloomberg; Daiwa Capital Markets Europe

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Key ESG Transactions 4Q23

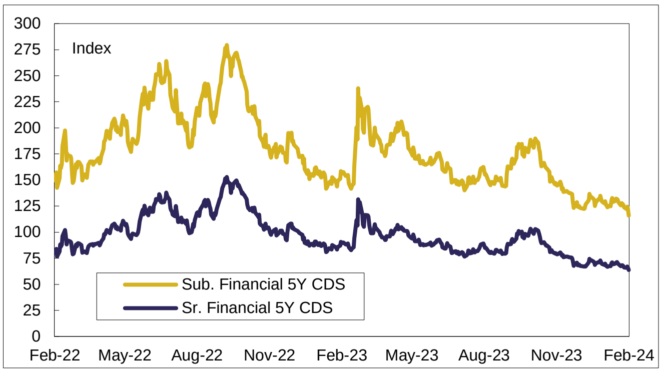
Bank	Rank	Amount	Maturity	IPT (bps)	Final Spread (bps)	Book Orders
SSA						
KfW	Sr. Unsecured (Green)	EUR3bn	7Y	MS - 1	MS - 2	>EUR4bn
IBRD	Sr. Unsecured (SDB)	USD3bn	10Y	SOFR MS + 57	SOFR MS + 56	>USD4.2bn
IDA	Sr. Unsecured (SDB)	USD2.5bn	5Y	SOFR MS + 45	SOFR MS + 44	>USD3.8bn
IDA	Sr. Unsecured (SDB)	GBP800m	8Y	G + 32	G + 32	>GBP920m
AFD	Sr. Unsecured (Sustainability)	USD1.5bn	2Y	SOFR MS + 42	SOFR MS + 40	>USD3.7bn
IFC	Sr. Unsecured (Social)	USD1.5bn	3Y	SOFR MS + 35	SOFR MS + 33	>USD6.7bn
Denmark	Sr. Unsecured (Social)	EUR500m	15Y	MS + 34	MS + 33	>EUR790m
BpiFrance	Sr. Unsecured (Social)	EUR1.25bn	4Y	FRTR + 41	FRTR + 39	>EUR2.9bn
Action Logement	Sr. Unsecured (Sustainability)	EUR1bn	15Y	OAT + 50	OAT + 49	>EUR2.1bn
Caffil	Covered Bond (Green)	EUR750m	5Y	MS + 38	MS + 32	>EUR3.5bn
Caffil	Covered Bond (Social)	EUR500m	5Y	MS + 39	MS + 34	>EUR1.3bn
Kommunekredit	Sr. Unsecured (Green)	USD750m	4Y	SOFR MS + 43	SOFR MS + 43	>USD960m
Oest. Kontrollbank	Sr. Unsecured (Sustainability)	EUR500m	5Y	MS + 2	MS + 2	>EUR365m
Caisse des Dépôts	Sr. Unsecured (Sustainability)	EUR500m	7Y	OAT + 30	OAT + 28	>EUR1.5bn
FIG (Senior)						
Crédit Agricole	SNP (Green)	EUR1.25bn	10Y	MS + 165/170	MS + 135	>EUR5.7bn
Société Générale	SP (Social)	EUR1bn	5Y	MS + 125/130	MS + 105	>EUR2.6bn
AIB Group	Sr. HoldCo (Green)	EUR750m	8NC7	MS + 225	MS + 200	>EUR1.4bn
UniCredit	SP (Green)	EUR750m	6.25NC5.25	MS + 180	MS + 150	>EUR1.15bn
Bank of Ireland	Sr. HoldCo (Green)	EUR750m	6NC5	MS + 190	MS + 155	>EUR3.1bn
DNB Bank	SNP (Green)	EUR750m	6NC5	MS + 155	MS + 130	>EUR2.2bn
Jyske Bank	SNP (Green)	EUR500m	6NC5	MS + 200	MS + 183	>EUR950m
Danske Bank	SNP (Green)	EUR500m	5NC4	MS + 165/170	MS + 135	>EUR2.75bn
SEB	SNP (Green)	EUR500m	5Y	MS + 140	MS + 110	>EUR2.1bn
BayernLB	SNP (Green)	EUR500m	Sep-2028	MS + 145	MS + 130	>EUR600m
Banco BPM	SP (Social)	EUR500m	4Y	MS + 190	MS + 155	>EUR1.9bn
LBBW	SNP (Green)	EUR500m	2Y	3mE + 90	3mE + 60	>EUR1.1bn
FIG (Subordinated)						
Nordea	Tier 2 (Green)	EUR500m	10.25NC5.25	MS + 215	MS + 185	>EUR2.1bn

Source: BondRadar, Bloomberg; SDB=Sustainable Development Bond; Daiwa Capital Markets Europe

Secondary markets in 4Q23

As of end-February, CDS prices continued easing back to levels last seen in January 2022, as expectations of a monetary policy pivot remained much higher than in the autumn while US economic growth momentum remained firm. This outlook has arguably improved funding conditions as bond yields remain off their highs and risk indicators have come down. Since their latest peak at end-October 2023, the senior financials CDS index has tightened by 38bps while the subordinated price index has come down even more, by 70bps. Since the third quarter, the difference between the subordinated and senior indices has averaged some 66bps. This has now fallen below the five-year average, implying no fundamental price dislocation across debt classes in 2023

iTraxx Financials Index

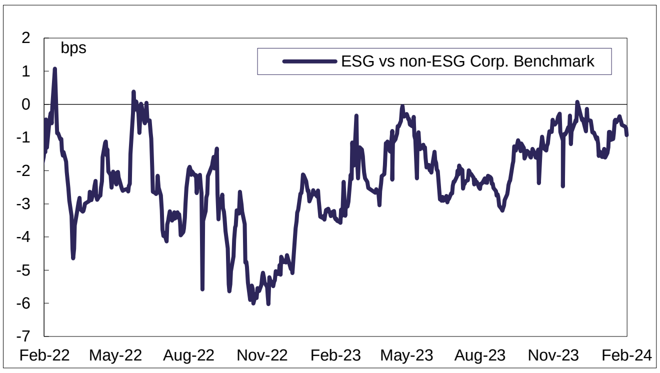


Source: Bloomberg; Data until 22.02.2024; Daiwa Capital Markets Europe

Greeniums still there, you just need to look for them

Volatility mostly eased towards the end of 4Q23 and has so far continued to do so into 2024. The option-adjusted spread (OAS) between the ESG and non-ESG themed indices continued to narrow from its most recent low-point in September. The median negative OAS differential between the ESG and non-ESG benchmark indices was –1.2bps, from -2.4bps in 3Q23 and -5bps in 4Q22. New deal data shows that SSA and FIG issuers are still achieving greeniums at launch, which tend to carry through into secondary trading. This benefit is often considered much less pronounced or non-existent in the dollar market as investors are less likely to pay up for it. But a recent trade by KfW demonstrated that the issuer managed to achieve a small 1bp greenium, the same it would have realised in euros. We saw the same greenium of 1bp achieved by the EIB when it placed its largest ever Climate Awareness bond in euros.

Spreads (OAS) of ESG vs non-ESG benchmarks

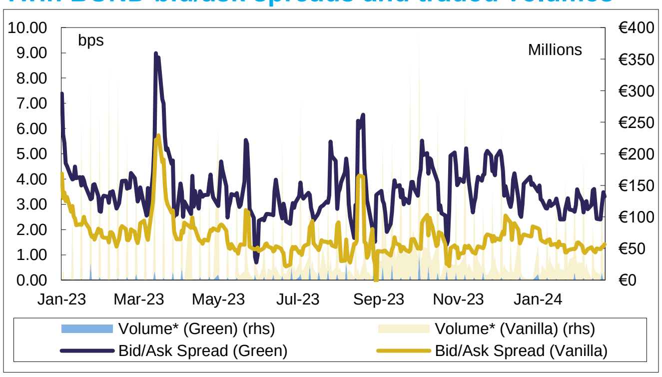


Source: Bloomberg; Barclays MSCI Euro-Corporate ESG Index vs Barclay Pan-European Aggregate Corporate Index; Data until 22.02.2024; Daiwa Capital Markets Europe

Bund greenium hold firm during quarter, bid-ask spreads narrow

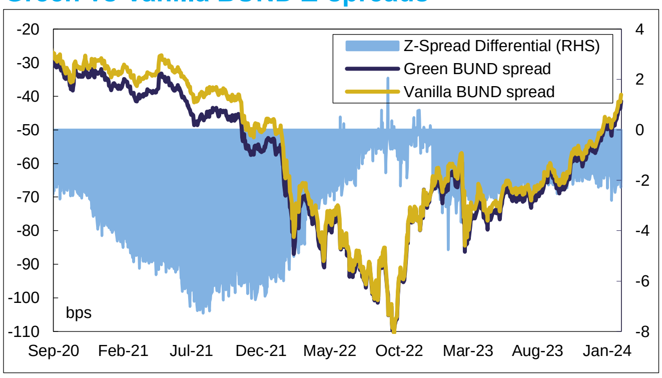
Average greeniums for liquid sovereigns such as German Bunds gave up some ground over the past quarter, but still retained a buffer over the equilibrium. The 4Q23 median spread differential of the German Twin Bunds was -1.9bps compared to -0.5bp one year prior, the latter influenced by higher volatility and less liquidity at the time. On a quarterly basis, spreads remained relatively stable (3Q23: -2.09bps; 2Q23: -2.54bps; 1Q23: -2.49bps; 4Q22: -0.50bps), and indicative fourth quarter data as at end-February showed that the spread differential remained stable at -1.9bps during the current quarter. Looking at the bid-ask spreads of the twin Bunds, we still find the green bond consistently wider. Based on Bloomberg data, we calculate that the 3-day rolling average spread over the past three months was 3.40bps for the green (previous reading: 3.66bps) and 1.55bps (1.46bps) for the conventional bond. With improved liquidity and less market volatility the average bid-ask spread differential between green and vanilla narrowed 37bps over the past three months.

Twin BUND bid/ask spreads and traded volumes



Source: Bloomberg; until 22.02.2024; Daiwa Capital Markets Europe

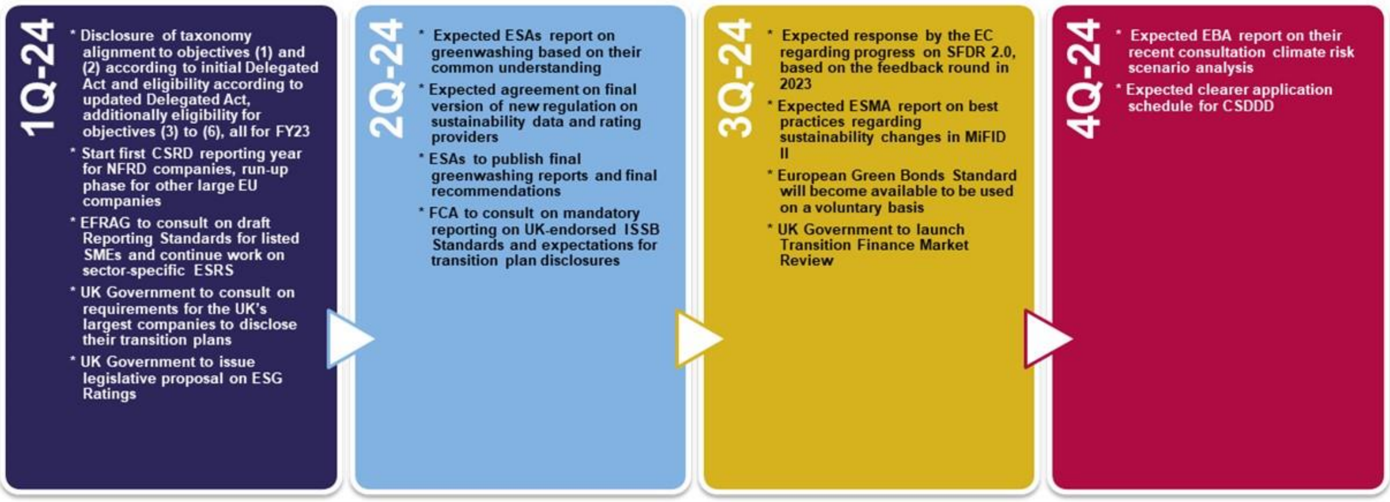
Green vs Vanilla BUND Z-spreads



Source: Bloomberg; until 22.02.2024; Germany Aug-2030 Twin; Daiwa Capital Markets Europe

Appendix:

Regulatory Timeline



Source: Association for Financial Markets in Europe (AFME)

Glossary Regulatory Abbreviations: (EC): European Commission; (ESA): European Supervisory Authority; (EFRAG): European Financial Reporting Advisory Group; (ESMA): European Securities and Markets Authority; (ISSB): International Sustainability Standards Board; (SRB): Sustainability Reporting Board; (SDR): Sustainability Disclosure Requirements; (RTS): Regulatory Technical Standards; (TSC): Technical Screening Criteria; (SFDR): Sustainable Finance Disclosure Regulation; (CSRD): Corporate Sustainability Reporting Directive; (CSDDD): Corporate Sustainability Due Diligence Directive; (IAASB): International Auditing and Assurance Standards Board; (TNFD): Taskforce on Nature-related Financial Disclosures; (FCA): Financial Conduct Authority; (DA): Delegated Acts; (NFRD): Non-Financial Reporting Directive; (PAI): Principle Adverse Impact;

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