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Unveiling the Green Bond Revolution: An E-Book for Finance Professionals

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Table of Contents

Overview of Green Bonds

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What are Green Bonds?

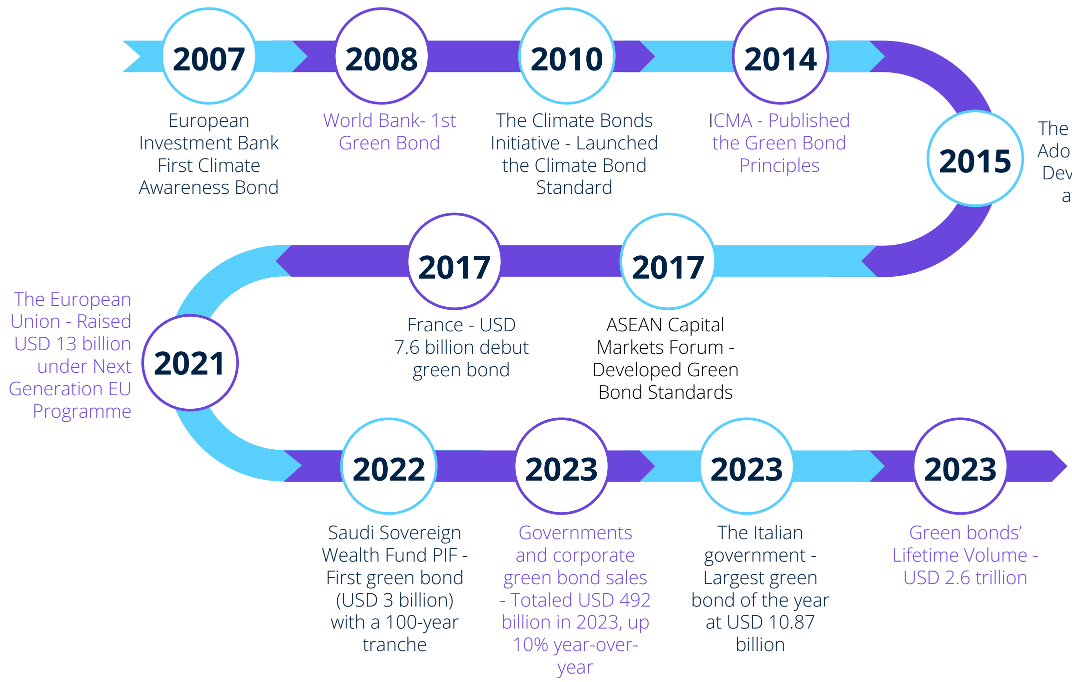
Green bonds have become immensely popular as investment options for environmentally conscious investors and as capital-raising mechanisms for governments, international banks as well as corporate to fund sustainable development. This e-book will delve into the green bond market's intricacies, tracing its origins, and how it's being shaped by strategies of institutional investors like sovereign wealth funds. You will also learn about the trends influencing the Middle Eastern debt market for green, social, sustainability and sustainability-linked (GSSS) or impact bonds. But first, let's define what comprises a green bond.

Green bonds, as the name suggests, are labelled fixed-income vehicles created to finance environmental projects. The bonds are backed by the issuer's assets and have a credit rating comparable to the issuing entity's other obligations. For example, Saudi Arabia's Public Investment Fund (PIF) issued a USD 5.5 billion green bond in February 2023. The bond carries the same rating from Moody's (A1) and Fitch (A+) as the country's overall credit standing. The key distinction is that the funds are earmarked for projects with environmental benefits, offering investors financial returns, improved Environmental, Social, and Governance (ESG) scores, and tax benefits. We will now take a quick look at how the idea of green bonds came into being.

How did Green Bonds Evolve: A Brief Timeline

The concept of a green bond evolved out of a rise in interest among institutional investors such as pension funds to allocate resources to projects that addressed the threat of climate change. The resulting discussion among banks, governments and corporate firms paved the way for different stakeholders to work together to address a common goal.

Evolution of Green Bonds: A Timeline



Who can Issue a Green Bond?

Green bonds, issued by organisations committed to environmental sustainability, are mainly sponsored by the public sector, including sovereign wealth funds, government agencies, and development banks. Sovereigns constitute 29% of green bond issuers, followed by government agencies at 25%, and development banks at 20%. To ensure transparency, issuers must report on project impacts regularly to meet norms like the Climate Bonds Standard and the Green Bond Principles (GBP). Certification is essential to assure investors of the bonds' authenticity and viability. The Climate Bonds Standard and the International Capital Market Association's GBP are prominent global standards verified by third parties like the Big 4 accounting firms and ratings agencies such as Moody's and S&P Global. These certifications validate whether the bonds meet climate-related criteria and adhere to accepted market principles.

Green Bond Principles for the Global Debt Market

The GBP make up a collection of guidelines to be followed as a voluntary framework by any organisation seeking to issue green bonds. The principles emphasise best practices, reporting matrix and transparency to track the performance of environmentally sound projects. The main points are how the proceeds are to be used and the criteria for selection of a project for green financing. Let us see in more detail how issuers are required to adhere to the GBP

Core Aspects	Key Points	Additional Details
Use of Proceeds	**Issuers of green bonds need to:** · Highlight specific and measurable environmental benefits of green projects for independent assessment · State clearly the proportion of funds for refinancing existing projects or funding a new portfolio	**Typical project initiatives include:** · Clean technology and transportation · Energy efficiency · Green infrastructure such as buildings · Renewable energy assets like wind farms and solar parks · Sustainable use of natural resources · Pollution prevention and reduction · Water and wastewater management · Climate change adaptation
Process for Project Evaluation and Selection	· Communicate the process to determine the project's eligibility for green financing · Inform about risks associated with the project(s)	**Issuers are also encouraged to:** · Disclose exclusion criteria along with certifications referenced in project selection · Initiate a process to identify factors that reduce material risks of social and/or environmental impacts

Types of Green Bonds:

The major categories of green bonds include Standard “Use of Proceeds”, Asset-Backed Securities (ABS), Project Bonds, Sustainability-linked and Sukuk etc.

Use of Proceeds

Sole focus on new green projects. Lenders have recourse to the issuer’s assets. Bonds have same rating as the issuer’s other obligations:

- Saudi sovereign wealth fund PIF has issued six green bonds as part of its Green Finance Framework - the first issuance in October 2022 totaled USD 3 billion and the second in February 2023 amounted to USD 5.5 billion
- ACWA Power of Energy Co.Ltd (funding contribution on green hydrogen project)
- Ar Rass Solar Energy Co. (financing the EPCO of the Ar Rass PV IPP)

Climate Bonds

A subset of green bonds with a specific focus on mitigating climate change. They often adhere to stricter criteria defined by organisations like the Climate Bonds Initiative:

- Masdar (Abu Dhabi) issued a USD 750 million, 10-year green bond. Follows Climate Bonds Initiative’s Solar and Wind Sector Criteria
- ACWA Power secures USD 2.2 billion loan to finance Al-Shuaibah 1 and 2 solar plants, powering 350,000 homes

Types of Green Bonds / Sukuk

Few Examples
ISSUERS
Governments | Corporate firms
Municipalities | Sovereign wealth funds
Development banks

Green Sukuk

Shari’ah-compliant financial instruments that are structured according to Islamic business principles to fund environment friendly projects. Sukuk holders own underlying assets (unlike bonds), offering proportional ownership for a set term:

- GCC green and sustainable bond/sukuk issuances surged from USD 8.5 billion in 2022 to over USD 10 billion by Q3 2023
- Saudi Electricity Company issued a 10-year unsecured green tranche worth USD 1.2 billion in April 2023
- Retail conglomerate Majid Al Futtaim Group, a pioneer in sustainable financing in the Middle East, issued its fourth green sukuk (USD 500 million) in May 2023

Project Bonds

Limited in scope to a specific green initiative. Lenders have recourse to assets associated only with the project:

- Sweihan PV Power Company (Abu Dhabi) issued USD 700.8 million in green project bonds
- This issuance marks a first: both the first MENA green project bond and the first UAE renewable energy bond sold to international investors

Overview of Green Bonds

According to spglobal.com, global green bond sales totaled USD 492.30 billion in 2023, up 10.3% from USD 446.18 billion in 2022 according to the Climate Bonds Initiative. Europe accounted for nearly half of the global growth and led the market's expansion. Europe's green bond issuance amounted to USD 243.75 billion while the Asia-Pacific region's issuance totaled USD 174.23 billion and North America's market size reached USD 62.96 billion.

Countries such as France, Germany, Italy, and the UK each issued more than USD 10 billion of sovereign green bonds in 2023. The green bond market itself is projected to reach USD 1.03 trillion by 2031, expanding at a compound annual growth rate (CAGR) of 10.1% from 2024 to 2031.

Green Bond Trends for 2024

Based on report published by sebgroup.com, the trend continued in the Q1 2024, when green bond issuance hit a record high of USD 207 billion. Among the top markets, green bonds in Europe (excluding the Nordics) grew by 29% year on year (Y-o-Y), totaling USD 94 billion.

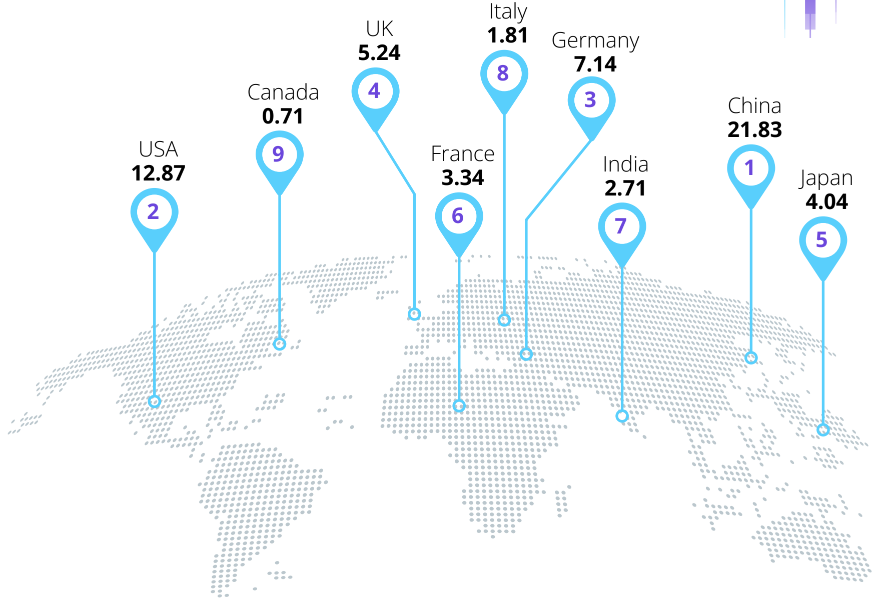
The Nomura Research Institute said that interest rates cuts in the U.S. and Europe are likely to create favourable conditions for investors as well as issuers in the green bond market. Citigroup expects the market to post record issuance in 2024 with borrowers primarily seeking funds for energy-transition plans.

New European Union (EU) standards are likely to further the green bond market's prospects in 2024. The new rules require deals to be aligned at least 85% with the EU's green taxonomy regulations. The norms seek to add more transparency as well as credibility and assist investors in measuring the environmental impact of issuers.

China's momentum in bond issuance is likely to be carried forward in 2024 as the country increasingly looks at green financing to achieve its sustainability goals. China and the EU are also working on a common taxonomy to define activities qualifying as green to boost cross-border issuances.

The Inflation Reduction Act in the U.S. has encouraged investments related to decarbonisation with companies such as auto manufacturers, energy utilities and asset managers seeking to benefit from tax credits for backing green projects. The investment has propelled the growth of the clean transport and renewable energy sectors.

Volume of Green Bond Issuance by World's Largest Economies inQ4 2023 - Value (SB)



Source: spglobal.com

In the first quarter of 2024, the Government of the Hong Kong Special Administrative Region of the People's Republic of China (HKSAR Government) issued digital green bond offerings amounting to approximately USD 766 million, as reported by ca-cib.com. The bond issuance was denominated in four currencies: Hong Kong dollar, US dollar, Renminbi, and the euro. The issuance marks the world's first multi-currency digital bond offering, and the second digital bond contribution after the HKSAR Government debuted with its tokenised green bond in 2023.

Among other key developments, the London Stock Exchange (LSE) witnessed the launch of the world's first green guarantee company (GGC). The GGC will provide guarantees for institutional investors seeking to buy green bonds issued on the LSE with a focus on African and Asian countries. It plans to provide up to USD 1 billion of guarantees for projects such as green infrastructure, renewable resources, alternative energy and clean transportation. The Development Guarantee Group and Cardano Development are among the promoters of this initiative.

Key International Hubs for Green Financing

Global financial centers across market regions are competing for capital flows to establish green financing hubs following the 2015 Paris Agreement. Over 70 countries have pledged to the Conference of the Parties "COP21" climate change accords. The Asia Pacific region is pivotal in the global drive toward achieving net-zero standards. According to McKinsey, over 15 countries plus 670 regional companies have committed to emission reduction targets and are exploring opportunities in green technology. The market size for green and sustainable transactions in Asia is projected to reach USD 5 trillion by 2030. Currently, the Asia Pacific green bond market ranks second only to Europe. Notably, the Luxembourg Green Exchange (LGX) serves exclusively as a platform for issuers and investors in sustainable finance.

Global Green Finance Index – Top 5 financial centres for green bond issuance

Centre	Rank	Rating
London	1	648
Geneva	2	646
Zurich	3	644
New York	4	642
Singapore	5	641

Source: longfinance.net

Top Issuers in Q1 2024:

- **USD 1 billion:** Telecom giant Verizon Communications Inc. issued its sixth green bond in five years, raising USD 1 billion specifically for renewable energy investments
- **USD 3 billion:** Canada completed a USD 3 billion green bond transaction under an updated framework, allowing funds to be allocated towards nuclear power generation
- **USD 1.5 billion:** Brazilian energy company Raizen secured USD 1.5 billion to fund its initiative focused on producing biofuels from waste materials
- **USD 11 billion:** Japan introduced the world's first sovereign climate transition bond, approximately USD 11 billion USD. The initial tranche was auctioned in February to finance the country's Green Transformation program

Middle East and Africa Green Bond Market Landscape

The Middle East is undergoing a significant transformation in its financial sector, with a focus on sustainable investment strategies. Key initiatives include the creation of green project frameworks and the establishment of financial institutions to drive such initiatives. Notable projects like NEOM in Saudi Arabia and Masdar City in the UAE are contributing to this shift, alongside efforts to diversify energy sources. According to the World Bank, Middle Eastern countries are actively promoting sustainable finance through various measures, including environmental risk assessments and corporate sustainability reporting requirements.

In terms of green bond issuance, Saudi Arabia and the UAE stand out as leaders in the Middle East, accounting for over 90% of the region's market. The Emirates News Agency reports a significant surge in green bond issuances, with the region reaching USD 6.8 billion in 2023, marking a 40% rise over the previous year. Notably, the COP28 Climate Change Conference in Dubai in 2023 saw sustainable debt issuances totaling USD 7.95 billion, showcasing the region's commitment to environmental sustainability. The UAE, in particular, has seen remarkable growth, with sales totaling USD 10.7 billion till date. Emirates NBD has become the first financial institution to benefit from a fee waiver aimed at increasing sustainability-related debt security issuances in the UAE, with more institutions submitting applications to benefit from the scheme, announced by the Dubai Financial Services Authority.

Saudi Arabia has set ambitious sustainability goals, aiming for Net Zero Carbon emissions by 2060 and a reduction of annual CO2 emissions by 278 million tons by 2030. The country's Public Investment Fund (PIF) plays a crucial role in supporting these objectives by diversifying investments in sustainable sectors.

Through initiatives like the One Planet Sovereign Wealth Fund, Saudi Arabia has demonstrated a strong commitment to sustainable investments. The issuance of green bonds, such as a USD 3 billion listing on the London Stock Exchange in October 2022 and the recent USD 5.5 billion offering highlight its priority towards environmentally responsible activities. Qatar is gearing up to launch its inaugural green bond, marking its first venture into external debt issuance in four years. Meanwhile, Jordan is following suit, with the Jordan Kuwait Bank issuing its first green bond in March 2023. The issuance, totaling USD 50 million, is a private placement aimed at financing green projects and assets.

Moving to Africa, countries like Uganda and Nigeria are making strides in green finance. Uganda plans to issue green bonds to fund climate change adaptation programs, while Nigeria has been active in the green bond market since 2017. Notably, the Gombe State government recently listed a 30 billion naira (USD 21 million) green bond on the Nigerian Exchange. The proceeds will be used for key infrastructure projects as part of the country's Energy Transition Plan. Additionally, Burn Manufacturing secured 1.5 billion shilling (USD 10 million) in 2023 to finance clean cooking methods in Sub-Saharan Africa. Senegal and Ghana are actively advancing their efforts in sustainable financing. Senegal unveiled its sustainable financing framework in September 2023, supported by a partial credit guarantee of EUR 400 million (USD 433 million) from the African Development Bank. Ghana, on the other hand, is developing its local green bond market, seeking to diversify investment securities and facilitate its transition to a lower-carbon economy. The efforts underscore Africa's growing commitment to sustainable development and green investments.

Middle East and Africa Green Bond Market Landscape

Green Bond Market: Key Players and the GSSSB market

As per data provided by green.earth, the UAE and Saudi Arabia have contributed to a surge of 155% in green social, sustainable, and sustainability-linked bond issuances totaling USD 24 billion annually in the Middle East. In 2023, the UAE recorded USD 7.95 billion in issuances, with notable debut issuers including DP World Sukuk, The Government of Sharjah, and Abu Dhabi National Energy (TAQA). Saudi Arabia followed closely, with 32% of the total regional volume, led by the Public Investment Fund (PIF). Predictions indicate a continued rise in green bond issuance in the Middle East driven by government initiatives. Green bonds are anticipated to account for 86% of GSSSB issuance. Sustainable debt volumes are projected to reach USD 19.4 billion in Q3 2023 in the Middle East.

According to Invesco's global sovereign asset management study, Middle Eastern sovereign wealth funds (SWFs) and central banks are prioritising green investments in alignment with environmental, social, and governance (ESG) policies. Over half of central banks and a quarter of SWFs are focusing on green infrastructure and bonds. More than 90% of SWFs and 22% of central banks have incorporated ESG policies into overall investment strategies. Despite the push towards green investments, concerns about greenwashing persist, prompting SWFs to take on the role of bond issuers rather than lenders. Additionally, transitioning investments towards an environment-focused strategy from a fossil fuel-dependent economy remains a challenge for some institutional investors in the region.

Understanding the Greenium Feature

Green bonds feature a greenium, indicating the yield difference between green and traditional bonds, ranging from 2 to 75 bps. The Federal Reserve notes an 8 bps lower credit spread for green corporate bonds. Investors are drawn to green bonds for their potential to enhance ESG performance and mitigate long-term risks. Augmented subscriptions highlight the demand-supply dynamics, reflecting its positive impact on the greenium value.

Green Bonds within the ESG Paradigm

ESG integration in fixed income investments has gained prominence, with portfolio managers acknowledging its significance. Senior institutional banking leaders currently try to strike a balance between ESG considerations and other priorities such as higher returns on investment and diversification. Analytical ESG investments are expected to rise as data availability improves with enhanced company reporting aligned with international frameworks. The development is likely to facilitate regular sustainability disclosures, aiding investors in assessing corporate ESG performance. ESG metrics also serve as vital nonfinancial indicators, evaluating companies' sustainable practices and providing insights into environmental impact, Corporate Social Responsibility (CSR), and internal governance. Investors leverage ESG metrics to gauge companies' risk quotient, influencing its ability to secure capital. By identifying growth opportunities and fostering innovation, ESG metrics enable businesses to adapt to evolving customer preferences and government regulations. The trend has also led to some questionable practices among companies such as making token allocations to environmental initiatives as a cover for more carbon-intensive operations. The trends have prompted investors to take a closer look and choose companies that plan to reduce their carbon footprint as a long-term goal instead of as a short-term solution. A counter concern is companies potentially having to allot funds to environmental measures despite being carbon neutral just to be eligible to receive investments from institutional players.

Trading Strategies in Green bonds

Buying, Selling or Holding? Trading in green bonds involves a combination of medium to long-term trades and technical strategies. A sound strategy aligns investor goals with market trends, interest rates, and economic indicators. The green bond market has progressed over the years, with a growing secondary market for bonds issued by sovereign wealth funds and governments. Investors can achieve a premium by selling into the secondary market according to the demand cycle.

Bond Trading Strategies: Strategies for investing in green bonds depend on market conditions, investor risk profiles, and investment objectives. The traditional "Buy and Hold" approach involves purchasing bonds and holding onto the investment until maturity to earn income from interest payments and potential capital appreciation. Diversification is another strategy, spreading risk by investing in bonds from different issuers, industries, and regions. For those looking to make a positive change, "Impact Investing" directs funds towards specific projects aligned with environmental values. "Duration Matching" aligns a bond's sensitivity to interest rate changes and the investment horizon.

Investors can also consider the "Yield Curve" which plots yields of bonds with different maturities. It allows investors to capitalise on potentially higher yields of long-term bonds. "Active Management" involves experienced investors buying and selling bonds based on market conditions, while "Green Bond ETFs" offer diversified exposure to the market through exchange-traded funds. These strategies cater to investors' preferences, depending on whether the objective is passive income, risk management, or active portfolio management.

Green bonds and Liquidity: Green bonds are perceived as less liquid than conventional ones, especially on the buy-side, due to high investor demand. However, analysis by the Climate Bonds Initiative (CBI) revealed that top green bonds maintain better liquidity in the secondary market compared to conventional debt. This provides investors with flexibility in investment strategy. Institutional investors are at present driving momentum in green bond trading, supporting a range of issuers from sovereigns to corporates for decarbonisation initiatives and clean energy transition. Euro-denominated green bonds are slightly more liquid than dollar-denominated ones, reflecting the current trend of a majority of green transactions being issued in the European market. According to financial consultant Prometeia, green bonds issued by governments and supranationals are more liquid encouraging the buy-and-hold strategy while corporate-issued bonds may experience tighter liquidity as well as volatility prompting the "sell" approach.

Green bond liquidity is directly linked to greenness ratings from second-party opinions (SPOs), issuer accountability, external verification and adherence to international ESG reporting standards. Central bank regulations also influence green bond liquidity, with corporate green bonds in Europe seeing surge in liquidity after the European Central Bank encouraged green debt issuance as part of its monetary policy. As the global green bond market grows, liquidity is expected to rise proportionately, driven by more secondary transactions. Compared to established markets, the Middle East's secondary market for green bonds remains limited. The relative illiquidity might favor large-scale institutional investors such as sovereign wealth funds to opt for a "buy-and-hold" approach over smaller investors. Wealth funds and pension funds often have a strong resource base to invest in the bonds with a long-term horizon in order to prioritise environmental impact. The strategy may not favour smaller firms or retail investors as frequent portfolio adjustments could impede cash flows and hamper overall profitability in the short-term.

Challenges and Risks in the Green Bond Market

Greenwashing
The main risk with green bonds is "greenwashing," where funds are allocated to projects claimed to be environmentally sustainable but don't align with stated benefits. This practice involves issuers making superficial environmental claims without tangible evidence or meaningful efforts

Missing the Big Picture
The perception of environmental responsibility varies among issuers and investors, leading to differences in what qualifies as "green." Results can also be contextual; clean transportation, for instance, may benefit end users, but sourcing raw materials like rare earths for electric vehicles could harm the environment elsewhere

Conflict of Interest
Green bond issuers often seek second-party opinions from reputable academic or research organisations specialising in sustainability. However, a conflict of interest may arise if the validating organisation is involved in creating bond issuance frameworks. There's an ethical dilemma if issuers portray these opinions as independent

Legal Accountability
Countries lacking proper regulatory oversight for green bonds may leave investors with no legal recourse if proceeds are misused. Regulations typically focus on consumer products, leaving financial products for institutional investors in a regulatory gray area

Future Trends in Green Bonds

In the dynamic landscape of green bonds, 2023 marked a significant shift as emerging markets played a more prominent role in ESG bond issuance. Notably, the Middle East saw a remarkable 149% surge, while Latin America experienced a 56% rise, based on information published by arabnews.com. In response to this momentum, regulatory frameworks are evolving. The Middle East, for instance, is moving towards mandatory ESG disclosure for listed entities, fostering transparency and accountability. Sovereign issuances in Saudi Arabia, primarily through the Public Investment Fund, have been pivotal in driving this growth.

Looking ahead, the green bond market is poised for further expansion, driven by government incentives and increasing demand for sustainable investments. Small and medium-sized enterprises, along with municipalities, are expected to enter the market, diversifying project financing and broadening investor opportunities. Additionally, standardisation efforts will enhance the market's scalability and credibility. Universal reporting standards and third-party certification are likely to boost transparency as well as accountability.

Integration is another key trend, as green bonds align more closely with climate risk mitigation and sustainability goals. Investors can anticipate combined portfolios that address environmental and social initiatives, directly contributing to the United Nations' Sustainable Development Goals. Ultimately, these trends signal a transformative shift towards a more sustainable and resilient financial ecosystem.