Sustainable Finance Newsletter Q4 2023

S&P Global Ratings

This report does not constitute a rating action

Second party opinions (no.)

19 Green SPOs	6 Sustainability SPOs	4 Social SPOs
7 Sus-Linked SPOs	1 Conceptual Alignment SPO	535+ Legacy Second party opinions

Data as of Dec. 31, 2023. Source: S&P Global Ratings.

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Key Takeaways

- Since we launched our integrated use-of-proceeds SPO approach, we have produced 37 second party opinions, of which 29 in fourth-quarter 2023. We also have more than 535 legacy SPOs.
- We now incorporate the Shades of Green approach and the Issuer Sustainability Context (ISC) into our use-of-proceeds SPOs.
- We recently released research discussing the needs and high-growth benefits of adaptation financing, notably for low- and middle-income countries.
- Sustainable debt issuance could reach the $1 trillion mark in 2024.

Credit Ratings Newsletter

After slowing down in second-half 2023, we expect GSSSB issuance to pick up and represent at least 12%-14% of overall bond issuance in 2024, approaching $1 trillion. The green bond market remains a vehicle of choice to support climate-resilient or low-carbon projects, while social or sustainability-labelled debt helps advance social objectives. Government issuance is robust and new sovereign or sub-sovereign SPOs testify to the alignment of authorities' green intentions and financing.

Meanwhile, new labelling, taxonomies, and guidelines continue to flourish, for example around climate transition. In the EU, companies are appearing to prepare for the launch of EU Green bonds and CSRD reporting requirements, while Japan and Singapore are setting their sights on transition financing.

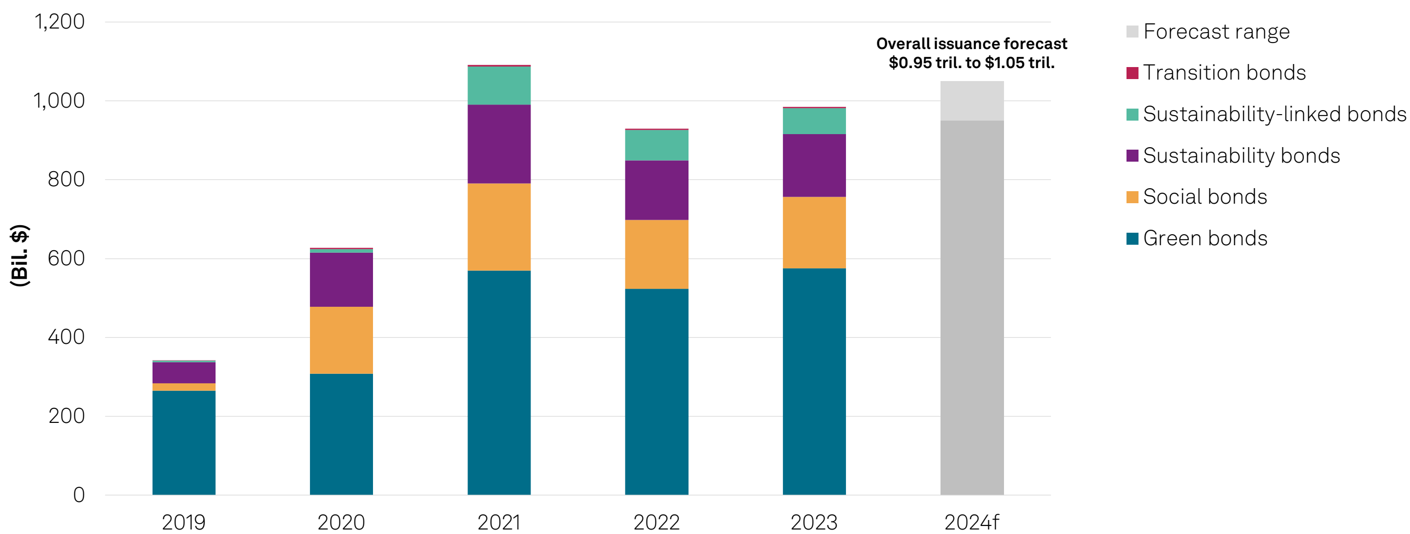
Labelled debt is far from including all projects that support climate transition and adaptation projects, however. China and the U.S. are notably underrepresented when it comes to green bonds; these represent less than 15% of both countries' total bond issuance against, for example, more than 70% of renewable energy capacity additions planned for the next six years. On the other hand, we continue to see social projects in U.S. issuers' social or sustainability frameworks.

Sustainable Bond Issuance To Approach $1 Trillion In 2024

We predict GSSSB issuance may likely rise only modestly in 2024 to between $0.95 trillion and $1.05 trillion. Total GSSSB issuance volume in 2023 was similar to that in 2022 ($0.93 trillion), though there were some notable differences in the profile and location of issuers. In 2024, with many major central banks nearing the end of their rate hike cycles, macroeconomic uncertainty and other external factors may hinder the degree to which the GSSSB market expands (see chart).

Chart 1

S&P Global Ratings forecasts GSSSB issuance could reach $1.05 trillion in 2024



Excludes structured finance issuance. f--S&P Global Ratings forecast. GSSSB--Green, social, sustainability, and sustainability-linked bonds. Sources: Environmental Finance Bond Database. S&P Global Ratings.

A number of factors could underpin growth in GSSSB issuance. These include increased adoption of sustainable taxonomies and transparency initiatives, growth in issuance from emerging markets, and efforts to accelerate the energy transition. At the same time, certain macroeconomic factors could restrict issuance, including uncertainty associated with high interest rates and the possibility of wider economic slowdown in key regions such as Europe and Asia-Pacific. **Read full report >**

Second Party Opinions

(The Shades of Green team will continue to use its existing methodology for its company assessments, and impact reports, until the products are merged.)

Green SPOs again dominated the volumes of SPOs we provided in fourth-quarter 2023. This suggests continued support for green bond issuance in 2024 and beyond. Our integrated methodology allows us to assess green projects' differentiated environmental impacts by assigning a Shading, and to comment on a project's broader Issuer Sustainability Context (ISC). Sustainability-linked SPOs and issuance have meaningfully slowed, recently, although we still delivered seven sustainability-linked SPOs in fourth-quarter 2023. We see increasing interest in climate transition financing, including issuers seeking to demonstrate, along with the greenness of their projects, that they are adhering to Climate Transition Finance Handbook (CTFH) guidelines themselves. This may be particularly relevant for issuers in so-called "hard-to-abate" sectors such as cement or steel. The Monetary Authority of Singapore recently launched a multisector transition taxonomy to support issuance across eight focus sectors. Compared to green taxonomies, this adds “amber” projects that are considered an improvement over “brown” alternatives.

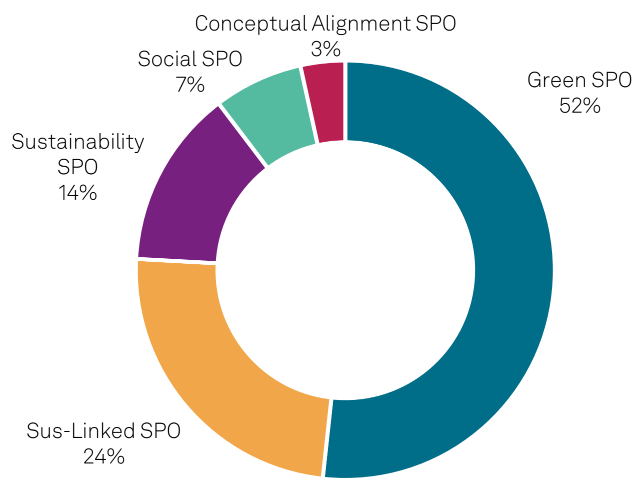
More and more issuers are requesting an EU Taxonomy alignment assessment for their projects, possibly in anticipation of issuance of EU Green Bonds (EuGB) or disclosure requirements under the Corporate Sustainability Reporting Directive (CSRD). Our SPOs with an EU Taxonomy alignment assessment screen all taxonomy-covered projects for their contribution to at least one of the EU’s environmental objectives, no harm to the other environmental objectives, and material safeguards at the broader issuer level. As a complement, our Issuer Sustainability Context assessment establishes the relationship between green or social projects’ objectives and the most material sustainability factors for the issuers, and deep dives into the issuer’s strategy and track record to tackle sustainability topics that the projects address. We also analyze how the issuer addresses risks that we believe the projects introduce, for example related to surrounding communities or local biodiversity.

Finally, in fourth-quarter 2023, we confidentially assigned our first conceptual alignment SPO, which analyzed a bank lending framework’s social and environmental projects using the same approach as for our other SPOs, except for management of proceeds, which we didn’t cover in the absence of an associated debt instrument.

Our core Shades of Green approach has been integrated into the new consolidated use-of-proceeds SPO suite as of July 27. In fourth-quarter 2023, green SPOs dominated our activity.

Chart 2

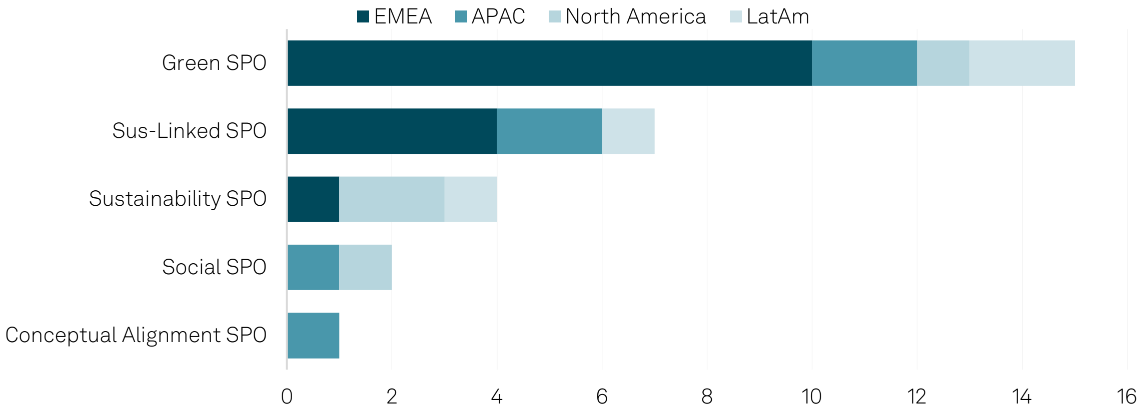
SPO distribution



Data for fourth-quarter 2023. Source: S&P Global Ratings.

Chart 3

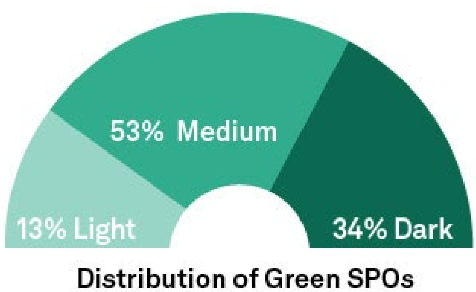
Distribution of all SPOs assessments across regions (no.)



Data for fourth-quarter 2023. Source: S&P Global Ratings.

Chart 4

Green SPOs distribution of assessments



Data for fourth-quarter 2023. Source: S&P Global Ratings.

We shaded the vast majority of the 15 green frameworks we assessed in fourth-quarter 2023 as Medium or Dark green, reflecting the large representation of low-carbon, climate-resilient (LCCR) projects (chart 4). We shaded more than 70 project categories across green and sustainability frameworks, with Dark/Medium shades attributed to renewable energy, clean transportation, and climate adaptation. There was a large representation of Light and Medium shades in the green buildings category (see chart 7).

Recent SPO examples span a range of issuer types and geographies.

We assessed the sovereign framework for the Government of Romania as Medium green. As is increasingly the case for sovereign frameworks, Romania has included climate adaptation projects, which we assessed as Dark green.

In our SPO on Saudi Awwal Bank's sustainable debt framework, we highlighted both the clear alignment of the social and green projects with the country-level objectives of the Kingdom of Saudi Arabia (KSA) and the critical dependency of many project categories on the achievement of KSA's 50% renewable energy target by 2030.

As an example, showing how our shading of green projects and our analysis of social projects can combine with external standards and guidelines, Grupo Energía Bogotá (GEB) S.A. ESP's Sustainable Financing Framework included a broad range of green and social projects, an EU taxonomy assessment, and a CTFH assessment. We noted that GEB's projects in renewable energy, the expansion of its electricity transmission and distribution (T&D) network, and projects enabling hydrogen integration are key to addressing the climate transition. The framework also includes biodiversity conservation projects in Colombia and Peru, which we shaded Dark green.

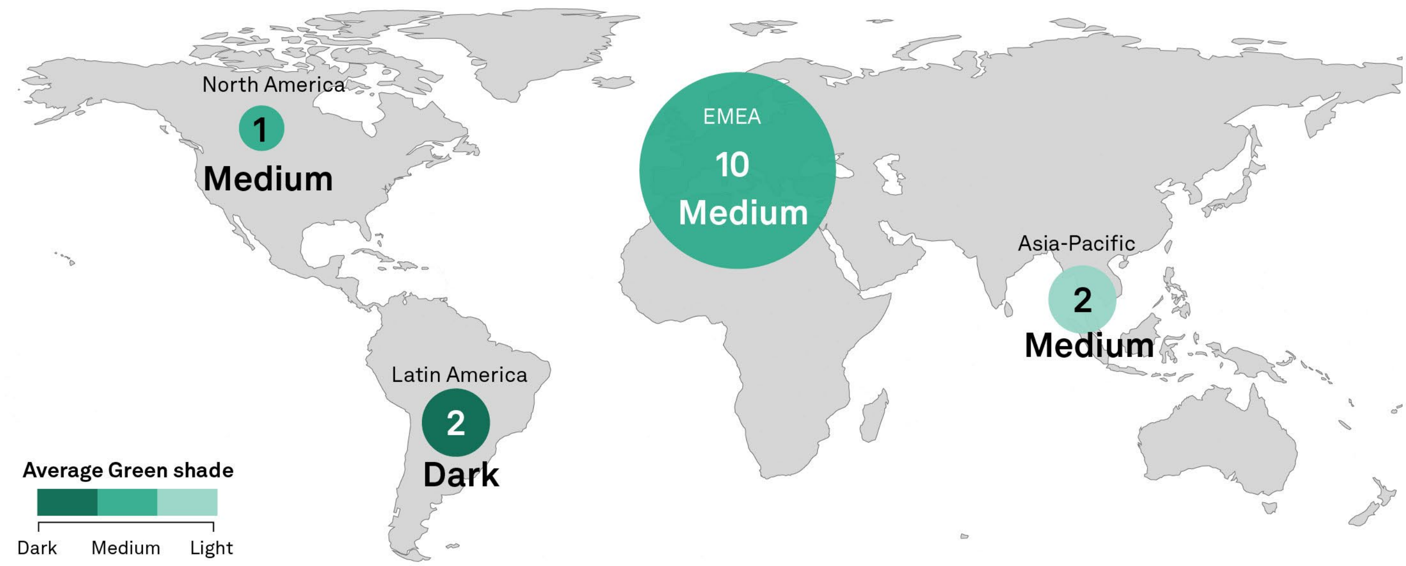
Our first nuclear power SPO under the new approach yielded a Medium green assessment for Bruce Power L.P.'s 2023 green financing framework, with most proceeds expected to be allocated to the

Canadian issuer's Life-Extension Program. Bruce Power has a 2027 net zero target for scope 1 and 2 emissions.

Our ISC analysis also highlighted the limited sustainability disclosures, targets, and strategies related to the green building frameworks issued by Chinese local government funding vehicles, for example Jinan Hi-tech Holding Group Co. Ltd.'s Green Finance Framework and Jinan Lixia Holding Group Co. Ltd.'s Green Finance Framework.

Chart 5

No. of Green framework assessments by region and average shade



Data for fourth-quarter 2023. Source: S&P Global Ratings.

Chart 6

No. of green frameworks analyzed by region/sector and average shade

Dark green | Medium green | Light green

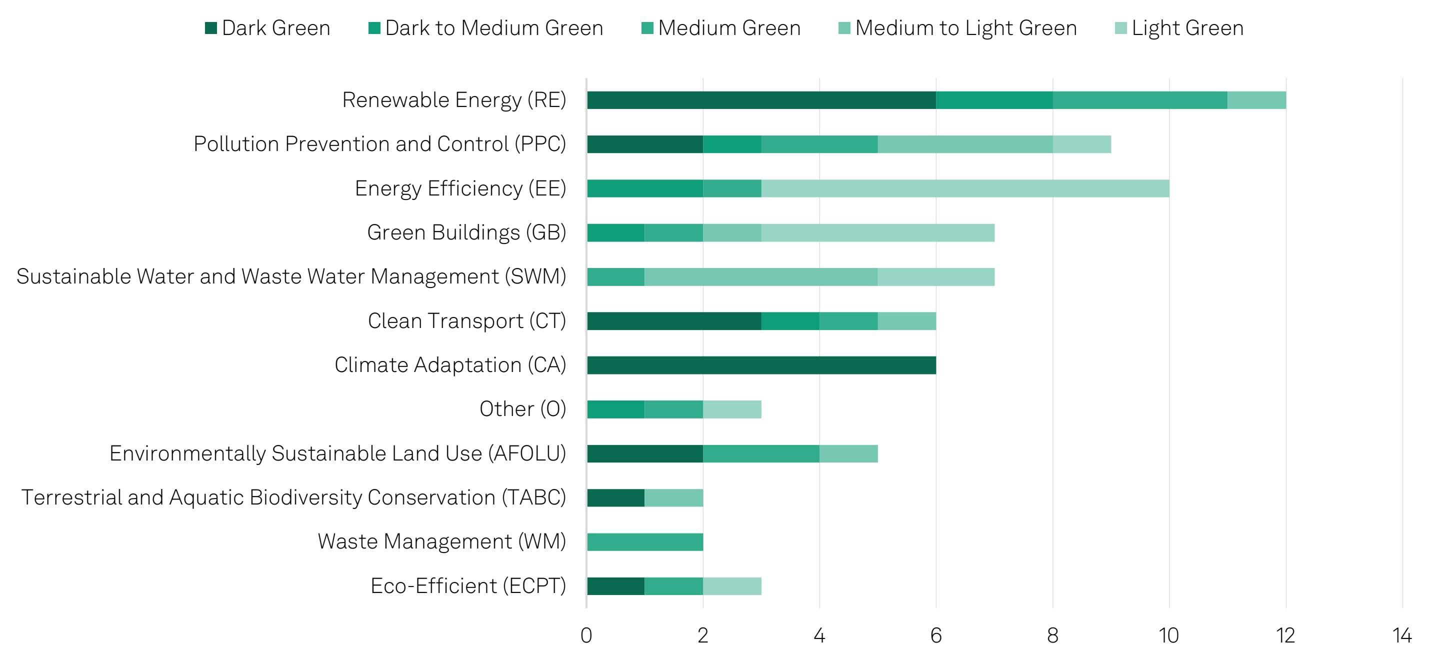
Sector	EMEA	APAC	LATAM	North America	Average shade
Forest and Paper Products	1				Dark green
Business and Consumer Services	1				Dark green
Utilities (Generation)	2		1	1	Dark green
Real Estate	1				Medium green
Transportation (Other)	1				Medium green
Utilities (Network)			1		Medium green
Capital Goods	1				Medium green
Public Finance	1				Medium green
Metals and Mining	1				Medium green

Engineering and Construction	1	2			
Grand Total	10	2	2	1	

Data for fourth-quarter 2023. Source: S&P Global Ratings.

Chart 7

Project category green shade distribution



Data for fourth-quarter 2023. Source: S&P Global Ratings.

Investment in climate adaptation needs have high returns on growth

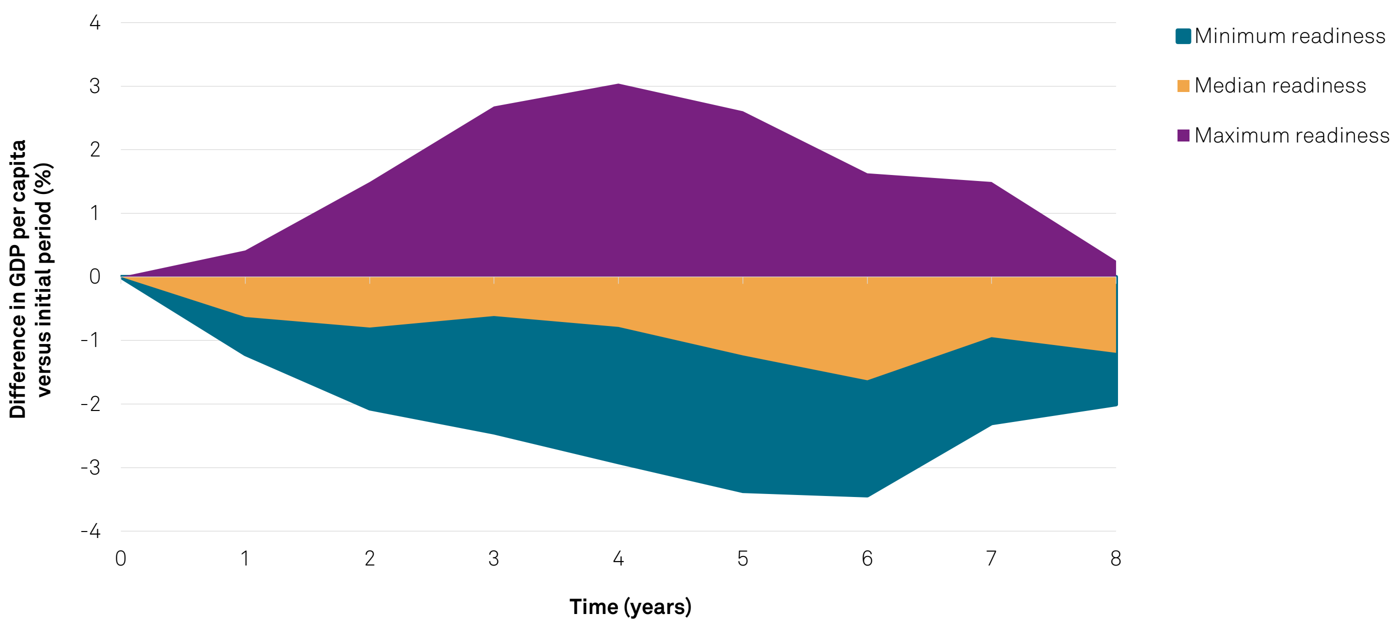
Climate mitigation is the best form of adaptation in the longer term. A quicker transition to net-zero will help avoid the worst-case scenarios of global warming, reducing the need to adapt. The prospects of net-zero by 2050 are fading, however, and there is increasing evidence that more warming will be associated with rising potential economic losses globally.

Where is climate adaptation finance missing?

Physical climate hazards increasingly affect economic activity and destroy capital. Chronic and acute physical risks reduce productivity, result in higher mortality rates and cause capital destruction. Lower- and lower-middle-income countries, often located in warmer climates, are more vulnerable to these shocks and are unprepared due to their economic structure, access to fewer resources and institutional weakness. Spillover effects of physical climate risks from one country to another, in the form of compounding or cascading events (when climate hazards compound with each other or with socioeconomic weakness and changes), are also increasingly likely. **Read full report >**

Chart 8

Countries with lower readiness display a long-lasting impact on GDP per capita



Sustainability Insights Research: Middle East Sustainable Bonds May Expand Further

Heightened exposure to climate change, as well as government initiatives and company pledges, will fuel sustainable, mostly green, bond issuances in the Middle East.

The research draws on Environmental Finance's Bond Database of global GSSSB issuance for nonfinancial corporates, sovereigns and financial institutions, and international public finance issuers, but excludes structured finance issuers. We also gather non-GSSSB data from public sources, such as Bloomberg and C-Bonds.

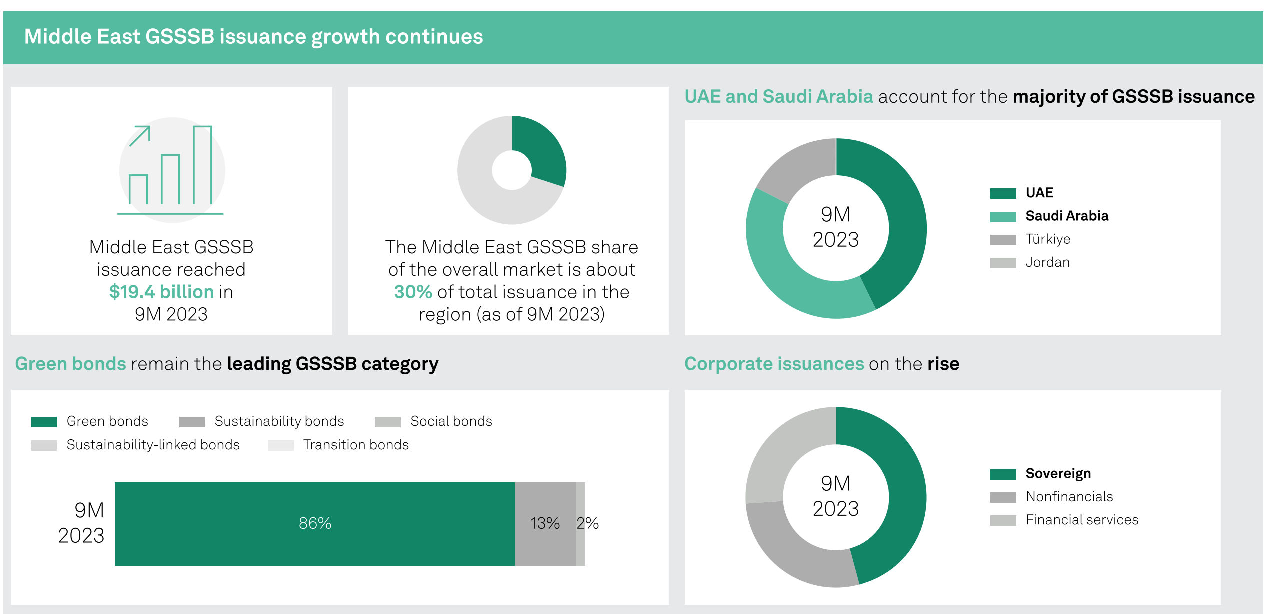
Key Takeaways

- GSSSB issuance in the Middle East should continue to increase in the coming years, supported by government initiatives and the relative nascency of certain markets.
- The UAE and Saudi Arabia will likely remain the leaders of the region's GSSSB market, particularly through green bonds, which we expect will continue driving regional issuance over the next three to five years.
- Gulf Cooperation Council (GCC) government-related entities (GREs) in fossil fuel dependent sectors are aligning strategies with national sustainability targets, but implementation may be delayed.
- The demand for GSSSB issuance in the region is sensitive to oil prices, inflation, and interest rates; these factors could impact funding and regulations.

Read full report >

Chart 9

Middle East GSSSB issuance growth continues



Source: S&P Global Ratings.

How Changing Workforce Dynamics May Affect U.S. Companies

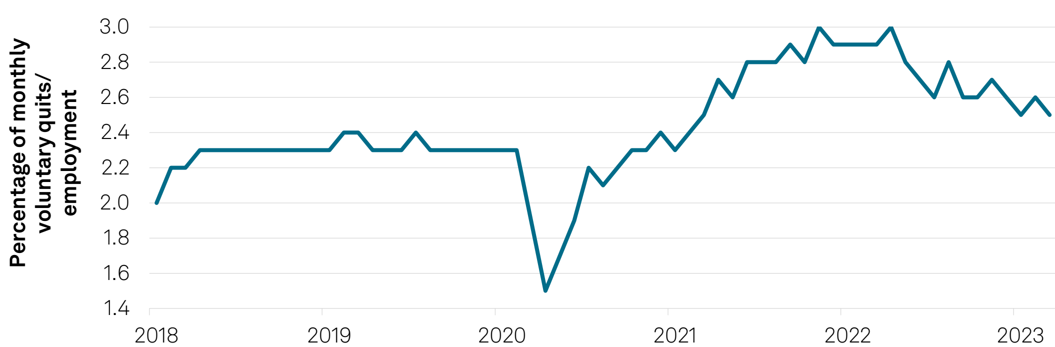
This research examines four key corporate workforce dynamics that emerged or intensified since the onset of the COVID-19 pandemic in the U.S.: voluntary employee exits, skills mismatches, demographic shifts, and working from home. The authors (hereafter, "we") explore how these trends, and depending on their importance (or materiality) to a sector, how they could affect operations, influence decision-making, and potentially impact the future financial performance of companies in the sector. We do so in part based on the experience of our sustainable finance team meeting with management teams in connection with over 200 ESG Evaluations, as well as our ongoing work in credit analysis.

Key Takeaways

- Changing relationships between workers and employers in the U.S. and a sharp increase in voluntary employee turnover have resulted in a tight labor market. In some sectors it has been particularly difficult to attract and retain workers with specialized skills.
- Demographic shifts in the workplace accelerated during the first years of the pandemic, with younger people now making up a far more substantial portion of the U.S. workforce.
- Reimagining the workforce culture and employee experience remains a challenge for management teams in some sectors, mainly due to technological disruption and staff attitudes toward hybrid work.
- Sectoral characteristics influence how and the extent to which workforce issues could affect company operational and financial performance.
- Financial impacts of this workforce transformation have remained muted so far, though leaders in certain sectors are preparing for significant change.

Chart 8

U.S. worker quit rates remain elevated since their 2021 peaks



Source: U.S. Bureau of Labor Statistics; S&P Global Ratings

A sharp increase in voluntary turnover, first arising in the latter half of 2020, has compounded the challenges of a persistently tight labor market. According to a report from the World Economic Forum, employees across sectors left or changed jobs in record numbers during this period. The report also found companies of all sizes have had significant difficulty filling open positions. In the U.S., quit rates, which reflect the number of workers who voluntarily leave their jobs during a month, increased by 31% to 3.0% of total employment in November 2021 (see chart 2). The figure was up from 2.3% immediately before the pandemic in February 2020. Even though quit rates have moderated somewhat in 2023, they remain above their pre-pandemic levels. **Read full report >**

Lost Water: Challenges And Opportunities

Non-revenue water or "lost water" deters investment in water infrastructure, representing a global sustainability challenge.

In this research, S&P Global Ratings looks at water infrastructure challenges through the lens of non-revenue water (NRW), meaning water that a utility sources and treats, but for which it receives no financial compensation. We explore how water infrastructure is currently financed; whether there is a significant case for increasing investment in water infrastructure to reduce NRW for stakeholders and rated entities financing water infrastructure; and why underinvestment persists.

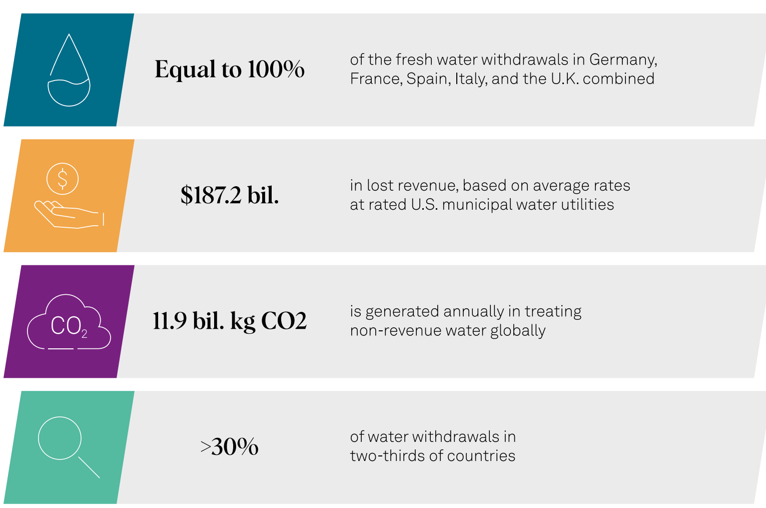
Key Takeaways

- NRW, or lost water, deters investment in water infrastructure assets. Analyzing NRW can provide valuable information about the infrastructure's performance, financial vulnerability, and governance in the sector.
- Reducing NRW can have many benefits, including increasing universal access to safe water, mitigating water stress, reducing the impacts of freshwater withdrawals on ecosystems, and mitigating global greenhouse gas emissions.
- Investment decisions made today could significantly affect future NRW rates, yet in many cases--particularly emerging markets--access to private-sector funding is limited and regulatory incentives are insufficient.
- High NRW rates may pose operating risks for water utilities. In severe cases, this could contribute to downgrades, but these have been rare among the utilities we rate.

Read full report >

Chart 9

About 126 billion cubic meters of water is lost every year



Source: S&P Global Ratings.

Appendix

Latest public second party opinions (Aug.-Dec. 2023)

All reports are available for download here

Company	SPO type	Country	Issuer	Month	Report
Shriram Finance Ltd	Social	India	Financial Institution	Dec. 2023	Download
Mota-Engil	Sus-Linked	Portugal	Corporate	Dec. 2023	Download
Government of Romania	Green	Romania	Sovereign	Dec. 2023	Download
CAP Group	Sus-Linked	Italy	Corporate	Dec. 2023	Download
Cadeler	Green	Denmark	Corporate	Dec. 2023	Download
Stockholm Exergi	Green	Sweden	Corporate	Nov. 2023	Download
Bruce Power L.P.	Green	Canada	Corporate	Nov. 2023	Download
Vasakronan	Green	Sweden	Corporate	Nov. 2023	Download
Skanska AB (publ)	Green	Sweden	Corporate	Nov. 2023	Download
Solör Bioenergi Holding AB	Green	Sweden	Corporate	Nov. 2023	Download
UPM	Green	Finland	Corporate	Nov. 2023	Download
Alfa Proxima-X	Green	Hungary	Corporate	Nov. 2023	Download
Grupo Energía Bogotá (GEB) S.A.	Sustainability	Colombia	Corporate	Nov. 2023	Download
Integrated Wind Solutions	Green	Norway	Corporate	Nov. 2023	Download
Saudi Awwal Bank	Sustainability	Saudi Arabia	Financial Institution	Oct. 2023	Download
Cape Verde Airports	Sus-Linked	Cape Verde	Corporate	Oct. 2023	Download
Jinan Hi-tech Holding Group Co. Ltd.	Green	China	Local Government	Oct. 2023	Download
Rhode Island Housing and Mortgage Finance Corporation	Sustainability	United States	USPF	Oct. 2023	Download
NEPI Rockastle	Sus-Linked	Netherlands	Corporate	Oct. 2023	Download
Jinan Lixia Holding Group Co. Ltd.	Green	China	Local Government	Oct. 2023	Download
Massachusetts Housing Finance Agency	Sustainability	United States	USPF	Oct. 2023	Download
Tricolor Auto Acceptance	Social	United States	Financial Institution	Oct. 2023	Download
Concessionária de Saneamento do Amapá S.A.	Green	Brazil	Corporate	Oct. 2023	Download
Gansu Provincial Highway Aviation Tourism Investment Group Co. Ltd.	Green	China	Local Government	Sep. 2023	Download
Verd Boligkreditt	Green	Norway	Financial Institution	Sep. 2023	Download
Zhangzhou Jiulongjiang Group Co. Ltd.	Sustainability	China	Local Government	Sep. 2023	Download
Korea Land & Housing Corporation	Sustainability	The Republic of Korea	Corporate	Sep. 2023	Download
New York City	Social	United States	USPF	Sep. 2023	Download
Flekkefjord Sparebank	Green	Norway	Financial Institution	Sep. 2023	Download
Caritas Corporation	Social	United States	USPF	Aug. 2023	Download

N/A--Not applicable. Data as of Dec. 31, 2023. Source: S&P Global Ratings.

Related Research

- Sustainability Insights Research: Sustainable Bond Issuance To Approach $1 Trillion In 2024, Feb. 13, 2024
- Key 2024 sustainability trends driving the year ahead, Jan. 15, 2024
- Investment in climate adaptation needs have high returns on growth, Jan. 10, 2024
- Sustainability Insights: COP28: Top Five Takeaways, Dec. 18, 2023
- Lost GDP: Potential Impacts Of Physical Climate Risks, Nov. 27, 2023
- Sustainability Insights: Research: Middle East Sustainable Bonds May Expand Further, Nov. 14, 2023
- UN PRI Conference 2023: 5 Takeaways That Matter, Oct. 23, 2023
- Sustainability Insights Research: Lost Water: Challenges And Opportunities, Sep. 6, 2023
- Sustainability Insights: Research: How Changing Workforce Dynamics May Affect U.S. Companies, Aug. 1, 2023
- Use of Proceeds SPO Methodology, Jul. 27, 2023
- Analytical Approach: Shades Of Green Assessments, July 27, 2023
- Analytical Approach: Second Party Opinions: Use Of Proceeds, July 27, 2023
- S&P Global Highlights Interconnectedness Of Global Sustainability Challenges, June 28, 2023
- Sustainability Insights: Research: Carbon Capture, Removal, And Credits Pose Challenges For Companies, June 8, 2023
- Purchased Energy Emissions In Second Party Opinions And ESG Evaluations, Mar 23, 2023
- Sustainability Insights: Research: Latin America Sustainable Bond Issuance To Recover In 2023, Feb. 23, 2023
- Sustainability Insights: Research: Asia-Pacific Sustainable Bond Issuance To Increase In 2023, Feb. 14, 2023

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