

nuveen

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GLOBAL FIXED INCOME IMPACT STRATEGIES

Impact insights

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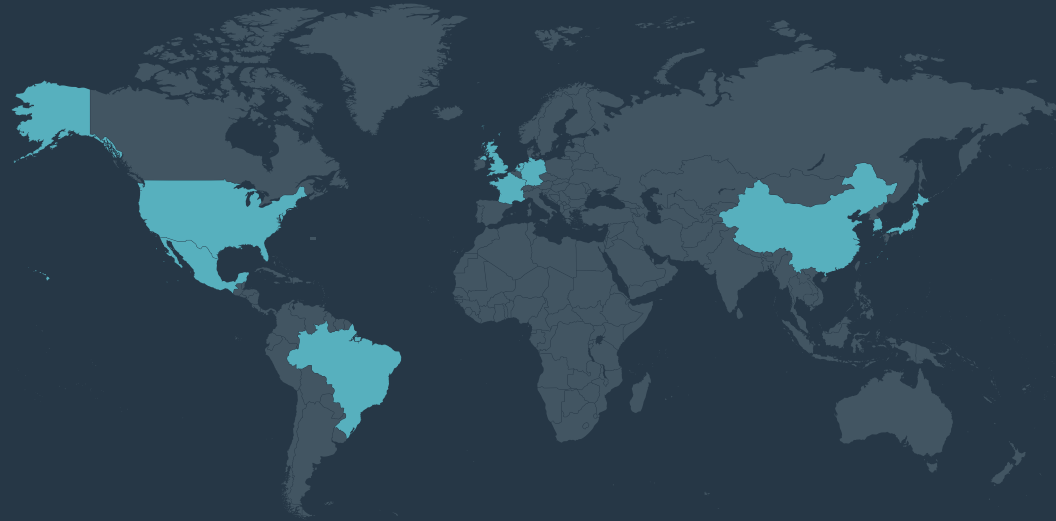
*Intentional, direct and
measurable outcomes*



Sustainable bond market trends

KEY TAKEAWAYS

U.S. dollar issuance remains broadly diversified across credit sectors, especially in the green bond market. Euro denominated issuance continues to tilt toward sovereign. The sustainable bond market provides opportunities for larger emerging market (EM) countries to issue securities that have components of both green and social bonds, underscoring the ability for one framework to reinforce the other. Overall, continued diversification and growing issuance trends allow for pure impact mandates to be managed relative to commonly used fixed income benchmarks.



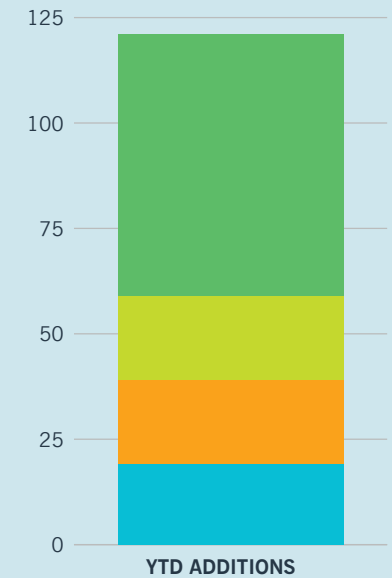
TOP ISSUING COUNTRIES AND ISSUERS IN 2023

Green bond market	U.S. 1. Fannie Mae 2. California Community Choice Financing Authority	Germany 1. Federal Republic of Germany 2. KfW	China 1. ISBC 2. Industrial Bank	France 1. Republic of France 2. Engie	U.K. 1. United Kingdom 2. Thames Water Utilities
Social bond market	South Korea 1. Korea Housing Finance Corporation 2. Industrial Bank of Korea	France 1. CADES 2. La Banque Postale	U.S. 1. Fannie Mae 2. Illinois Housing Development Authority	Japan 1. Japan Expressway Holding and Debt Repayment Agency 2. West Nippon Expressway	Netherlands 1. BNG Bank 2. Nederlandse Waterschapsbank NV
Sustainability bond market	U.S. 1. NYC Housing Development Corporation 2. PNC Financial Services Group	Mexico 1. United Mexican States 2. Comision Federal de Electricidad	France 1. Agence Française de Développement 2. Action Logement Services	Japan 1. Toyota 2. Japan International Cooperation Agency	Brazil 1. Brazil 2. Aegea

Source: Environmental Finance, Sustainable Bond Insight 2024.

121

impact securities added year-to-date across our impact portfolios



Source: Nuveen, 01 Jan 2024 through 30 June 2024.



Community and economic development

CASE STUDY: COUNTY OF FAIRFAX, VA



Creating community in Fairfax County

Fairfax County, located just outside of Washington, D.C., in northern Virginia, is the most populous county in the state. These bonds were issued for the construction of a 30,000 square foot, two-story community center integrated into the Dominion Square affordable housing project in Tysons, VA. The facility will include a gymnasium, kitchen, and a variety of multipurpose, meeting and community spaces. It will be available to all county residents, although it's anticipated that Dominion Square residents will be the primary users.

The Dominion Square project is the **first affordable multifamily housing development in Tysons** — a meaningful milestone in that Tysons is the 12th largest business district and the largest suburban business district in the country. To be built on the site of a former car dealership, the project will feature **more than 500 units targeting households earning 60% or less of the area median income (AMI)**. Integration of the community center is considered vital to the project's success, and the development process included three community engagement forums to receive feedback on the center and its role. Importantly, county programming for the center will likely be multigenerational, not exclusively youth-focused, to encourage broad participation. Fairfax County's Neighborhood and Community Services department maintains updated programming and activities for each of its community centers.



Renewable energy and climate change

CASE STUDY: HANWHA Q CELLS



Meeting the demand for solar energy

Hanwha Qcells, headquartered in Seoul, South Korea, is one of the world's top 10 producers of solar photovoltaic wafers and modules. These bonds were issued to finance the construction of a new 3.3-gigawatt (GW) solar panel manufacturing facility in the state of Georgia. It will produce essential components for developing the U.S. solar power industry. The new facility will be located near another Hanwha Qcells plant that opened in 2019 to manufacture 1.7 GW modules but recently expanded to 5.1 GW capacity. Together, the two facilities will be a significant driver of energy transition manufacturing in the southeastern United States.

According to the U.S. Energy Information Administration (EIA), U.S. **solar energy capacity is projected to grow 75% from 2023 to 2025**, placing it on par with wind power capacity, which is projected to grow only 11% over the same period. The growth in solar would equate to nearly **60 GW of new capacity over the next two years, representing a large percentage of global demand**. While Chinese solar manufacturing could potentially meet that demand, various political, legal and humanitarian considerations provide a strong incentive for the United States to “onshore” solar panel manufacturing. Between the 2019 plant opening, its expansion, and the new facility, Hanwha Qcells has demonstrated its commitment to the U.S. solar industry — especially considering that the original Georgia plant was built before additional solar manufacturing incentives became available under the Inflation Reduction Act (IRA) of 2022. The IRA is providing a catalyst to match EIA growth projections, and Qcells is positioning to meet that growth.

Q&A



Blended finance is a way to leverage balance sheet capital of philanthropic organizations, nonprofit actors, grant-makers, and change-seekers. It creates a liquid, public market security to help marshal millions and potentially billions of dollars to direct and measurable outcomes.

Q: In the context of impact bond investing, what is a blended finance transaction?

Blended finance combines capital from diverse sources, including governmental, commercial, and philanthropic organizations. The idea is for these entities to “de-risk” a debt instrument by providing partial or full guarantees of coupons or principal, or via insurance-like structures in case of issuer default. This de-risking creates a market-rate financing mechanism for impact investments whereby the providers of the capital in blended finance structures aim to increase their social and/or environmental impact by catalyzing larger, more diverse pools of capital from return-seeking bond market investors.

At Nuveen, helping negotiate and structure blended finance deals not only mitigates investment risk but also establishes connections with program/project managers, multilateral development banks (MDBs) and government officials. Through these professional relationships, Nuveen is able to gain reassurances about a project’s viability, impact and measurement methodology.

Q: What is a debt-for-nature swap (DNS)? Is there potential for blended finance outside of DNS?

A subset of blended finance solutions, DNS are debt restructurings through which sovereign issuers retire existing debt at a discount and issue new debt with substantially lower coupons, backed partly by highly rated third parties. This approach lowers the sovereign’s debt burden but requires a percentage of the savings to be spent on conservation efforts, biodiversity preservation and/or related enhancement projects. To date, such projects have been overseen by highly credible institutions like the World Bank or The Nature Conservancy (TNC). The DNS structure can enhance fiscal flexibility and benefit sovereigns with high debt burdens.

Given the unique nature of each sovereign’s natural resources — and the programs that would be most impactful for their specific needs — we expect only a handful of DNS to come to market each year. Yet as the complexity of conservation and biodiversity programs expands, so too do the innovative solutions and partnerships we’re seeing in blended finance transactions globally.

Learn more about past deals the team has participated in: [Seychelles](#)

Q&A (continued)

Q: What are the recent issuance trends for DNS? What does the pipeline look like?

The DNS structure is well-suited to support and finance marine area conservation and sustainable fishing innovations — and could be expanded to include other nature conservation outcomes as well. However, the programs are complex and difficult to design, monitor and execute, limiting the number of deals that can come to market in a given year. It's critical that underwriters and prospective investors keep potential issuer identities out of market view to avoid situations in which emerging market speculators bid up outstanding bonds ahead of the tender, thereby hindering the debt service relief the swap is designed to provide the sovereign issuer. Such speculation has a directly negative impact on the funding available for specific conservation efforts and ultimately on the fiscal stability of the country.

DEBT-FOR-NATURE SWAPS ISSUANCE

Country	Issuer name	Pricing date	Maturity	Amount issued	Sustainable funding unlocked	Key impact outcomes
Seychelles	Seychelles Conservation and Climate Adaptation Trust	10/2018	10/2028	USD 15mm*	USD 21mm over 10 years; plus USD 6.6mm at the end of 20 years	<ul style="list-style-type: none"> • Creation of marine spatial plans for entire exclusive economic zone w/ 30% marine protected area • USD 9mm blue grant fund to support capacity building • USD 12mm blue loan fund to fund private sector investment in blue economy • USD 6.6mm endowment
Belize	Platinum Securities KY	11/2021	10/2040	USD 364mm	USD 180mm over 20 years	<ul style="list-style-type: none"> • Commitment and funding to increase marine protected areas from 15.9% to 30%
Barbados	BB Blue Financing DAC	09/2022	09/2029	USD 24.42mm	USD 50mm over 15 years	<ul style="list-style-type: none"> • 600,000 km² of new ocean protection • Commitment and funding for 30% of marine area protected • 4mn km² under improved management
			09/2037	USD 48.84mm		
Ecuador	GPS Blue Financing DAC	05/2023	11/2041	USD 656mm	USD 325mm for marine conservation in Galapagos Islands over 18.5 years USD 5mm per year into future trust fund	<ul style="list-style-type: none"> • Improved management of Galapagos Marine Reserve • New 30,000 km² Hermandad Marine Reserve
Gabon	Gabon Blue Master Trust	08/2023	08/2038	USD 500mm	USD 125mm for marine conservation over 15 years	<ul style="list-style-type: none"> • Development and implementation of a marine protection, spatial planning and sustainable economic development project, working with the Nature Conservancy

* Based off a 2015 USD 21.6mm debt swap.

Q&A (continued)

Q: What are some things you look for when deciding whether to invest in a DNS?

Our impact team has assessed all five DNS deals to date and ultimately participated in three of them. DNS is not a “one size fits all” approach, as each of the five is structured differently. We seek programs that will endure, believing that the impact outcomes are just as important as risk-adjusted returns. While all five issuers display sound environmental policies generally, we evaluate the specific projects linked to the bond issuance, the caliber and credibility of the program managers, support from the government, and the reporting frameworks. Additionally, programs must be designed to last through multiple administrations. Two of the five DNS we analyzed did not satisfy our stringent criteria.

Critical to the success of these projects is not only the environmental impact, but also the social and economic benefits. We view them as the three sides of a triangle, each of which must reinforce the others. For example, with the Ecuador/Galapagos DNS, government officials and nongovernmental organizations (NGOs) negotiated directly with fisheries representatives to formulate a conservation plan. The plan was actionable and would accrue benefits to all parties through expanded conservation areas in one of the planet’s most important biosheds — while potentially opening up new, lucrative fishing markets in Europe. Importantly, these negotiations took place before the transaction was brought to investors, bolstering our confidence in stakeholder commitment during the due diligence process.

For more information, please visit us at [nuveen.com](https://www.nuveen.com)

The data shown is for all global fixed income accounts managed with an explicit impact objective, is provided for informational purposes only and may not reflect current positioning of the portfolio. The report represents bonds that are classified under the Strategy's proprietary impact framework and for which relevant data are available. All impact data are sourced from publicly available issuer disclosures at the bond or project level when possible, or the program or issuer level if not.

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