

Investing with Impact | August 09, 2024

Green Bonds: ESG Labeled Fixed Income Solutions at a Glance



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This report was published by Morgan Stanley Wealth Management Investing with Impact with contributions from the Morgan Stanley Global Sustainability Office and Morgan Stanley Portfolio Solutions.

This report updates the report published on October 1, 2021. The original report was published on July 1, 2019.

Investors are increasingly allocating to fixed income instruments that can foster positive environmental and social impact and generate potential market-rate returns. Bond issuers are responding to this demand by providing environmental, social and governance (ESG) information that can help investors assess those risks and opportunities. While bond holders do not have voting rights, it is possible to intentionally support a variety of positive impact outcomes when lending money to corporations, municipalities and other issuers. Investors interested in holistically integrating sustainability and impact investing into a portfolio across all asset classes should understand the full spectrum of ESG-labeled fixed income solutions.

Defining Sustainable Investing

“To develop scalable finance solutions that deliver competitive financial returns, while driving positive environmental and social impact.”—Institute for Sustainable Investing, Morgan Stanley

Introduction

There are a variety of fixed income instruments with a focus on generating positive impact that investors have access to, ranging from corporations to sovereigns and municipalities. Broadly referred to as “ESG-labeled debt,” the largest and most well-established category is “green bonds,” but there are also social bonds, sustainability bonds, sustainability-linked bonds and blue bonds (see Exhibit 1). According to Bloomberg NEF research, green bonds represented almost 80% of the entire ESG-linked debt market in 2023 (see Exhibit 2).

Exhibit 1: ESG-Labeled Debt Categories

Green	Social	Sustainability	Sustainability-Linked
 Raise capital for projects with dedicated environmental benefits.	 Raise capital for projects with dedicated social benefits.	 Raise capital for projects with a mix of social and environmental benefits.	 Raise capital for general purposes with variable financial characteristics based on key performance indicators.
First issued in 2007	First issued in 2010	First issued in 2012	First issued in 2020

Source: Institute for Sustainable Investing, Morgan Stanley

Market Development

Green bonds are fixed income instruments for which the proceeds are specifically designated for projects with various climate mitigation and other environmental benefits. The widely accepted guidance for green bonds is defined by the Green Bond Principles (GBP), a division of the International Capital Market Association (ICMA)—a trade association of major lenders, investors, law firms and other capital market stakeholders. While not required legally, the GBP are intended for broad use by issuers to help enable new capital raising in projects with environmental benefits, and to lend transparency and credibility to their green bond issuance. These principles have four core components: use of proceeds; process for project evaluation and selection; management of proceeds; and reporting. Alternatively, the Climate Bond Standard and its accompanying Certification Scheme is a labeling option for issuers of bonds. Rating agencies and third-party verifications have also established standards in order to assess how the bond’s proceeds will be used. Green bond proceeds may fund projects from a variety of categories, including:

- Clean transportation such as mass-transit initiatives or clean-energy vehicles
- Energy efficiency work such as building improvements or smart grids (tech-enabled energy networks)
- Renewable energy projects

- Environmentally sustainable management, including agriculture and forestry
- Green buildings that meet recognized standards or certifications
- Pollution prevention and control
- Sustainable water and wastewater management

Green bonds are issued by traditional bond issuers, carry similar risks and potentially similar returns, and should be evaluated as a conventional bond investment. Importantly, returns are not dependent upon the success of the environmental project itself, but rather the full faith and credit of the underlying issuer. Investors of green bonds are not subject to any project risk of the underlying use of the bond’s proceeds. For portfolio asset allocation purposes, green bonds have a similar credit profile to a traditional bond of the same sub-asset class such as municipals or corporates.

What makes the bonds “green” is that the proceeds have a stated purpose that will seek to promote climate mitigation activities or other environmental sustainability projects. Upon sale, the issuer of a green bond will likely continuously monitor associated projects for compliance with the basic environmental outcomes they set forth. Although there is no requirement for outcomes reporting, often issuers will produce performance reports or conduct communications with investors.

The first green bonds were issued in 2007 by the European Investment Bank and the World Bank to respond to the European Union’s Energy Action Plan, which centered on renewable energy and energy efficiency targets. While supranational organizations were early adopters, Europe followed suit in 2010 with state-owned Norwegian lender, KBN, and the first corporate green bond was issued in late 2013 by Vasakronan, a Swedish real estate company.

That same year in the US, Massachusetts became the first municipality to issue a green bond with the proceeds earmarked to reducing the state’s energy consumption across 700 sites in the state as reported in a briefing paper by the Climate Bonds Initiative, a London-based international non-profit group. The Massachusetts offering signaled the high demand for these bonds, as it was oversubscribed by 30%, and eight of the 10 institutional investors had never bought the state’s bonds before, according to *Governing* magazine.

Within the US municipal bond market, green bond issuance rose to almost \$30 billion in 2023 from less than \$3 billion in 2013, according to Bloomberg.¹ While this only represents 7.3% of total municipal issuance, green bond share has continued to expand, surpassing social, sustainability, and sustainability-linked bond issuance for the first time since 2020. For example, California Community Choice Financing Authority alone issued \$5.94 billion via green bonds in 2023.

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Exhibit 2: Global ESG-Linked Debt Issuances Continue to Increase



Source: Bloomberg, Morgan Stanley Wealth Management Investing with Impact as of Dec. 2023

Further innovations have also taken place, with new frameworks created for sustainable investing and impact broadly that offer guidance for bond offerings including the following:

- The 2017 launch of the World Bank’s SDG-linked bonds that assess alignment with the United Nations’ Sustainable Development Goals (SDGs) and are aimed at addressing this common set of global sustainability challenges.
- The 2018 launch of water-themed bonds, or “blue bonds,” which finance marine and ocean-based projects contributing to positive environmental, economic or climate outcomes.
- The 2021 development of sustainability-linked bond criteria, designed to tie a bond’s coupon to sustainability performance targets rather than requiring specific use of proceeds for green or social projects. This led to increased diversity of ESG-labeled debt issuers, while the bonds provide further economic incentives for companies to reduce emissions in hard-to-abate industries. One example is the World Bank’s 2023 issuance of an emissions-reduction-linked note in Vietnam, with the coupon linked to the generation of verifiable carbon credits—highlighting an innovative intersection of sustainable finance and newer instruments like carbon offsets.
- The 2023 adoption of the European Green Bond Standard (EuGB), which will set requirements for the use of the EuGB designation and require disclosures for those not meeting EuGB standards. The objective of adopting the standard is to provide investors with greater transparency and potential protection from greenwashing.
- The first transition bond issuance from a sovereign nation, as Japan issued \$11 billion of climate transition bonds in February 2024.

Finally, in 2024, further innovation is expected in sustainability themes such as circular economy and nature and biodiversity, as well as in regard to some of the harder-to-abate industries like steel and cement.

The Current Green Bond Market

The green bond market continues to grow more and more robust. According to Bloomberg, global green bond issuance grew to more than \$651 billion in 2023 from just \$15 billion in 2013 (see Exhibit 2).

Investor demand has been a catalyst behind issuance growth, as has the recognition of the need to address climate change following the United Nations Framework Convention on Climate Change (“The Paris Agreement”) and the Task Force on Climate-Related Financial Disclosures (TCFD).

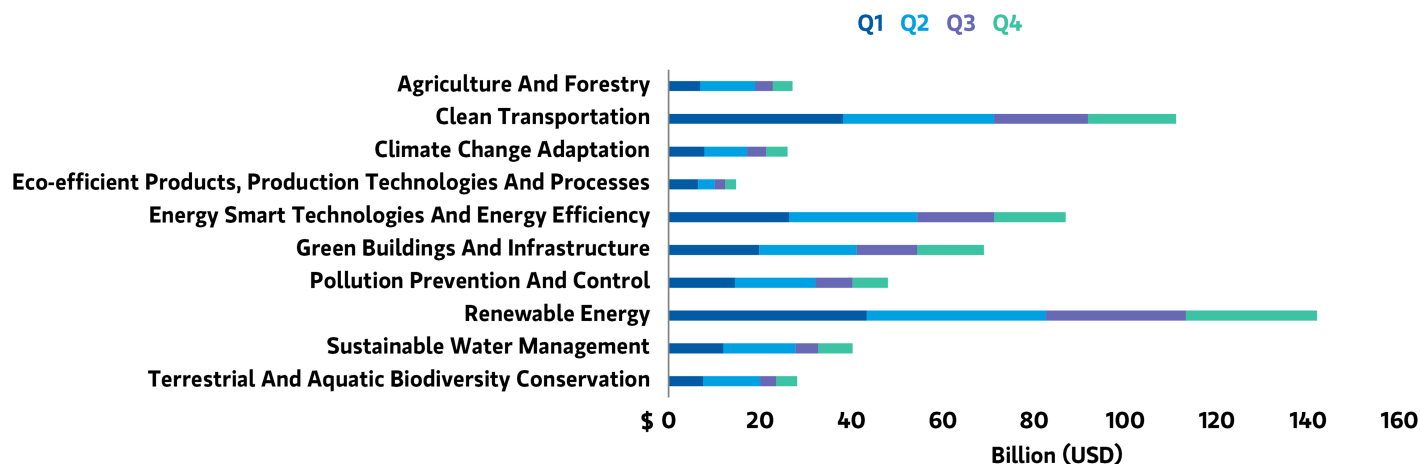
Morgan Stanley & Co. Research publishes a report called *ESG Bond Intel*. Highlights from the 2024 outlook piece, “In 2024, Will the Rubber Meet the Road?” include the following:

- Investors will look to measure the carbon impact of their green bond portfolios. An improving data landscape will help them better assess the merits of these bonds.
- While the transition theme is popular, the label is not. Green bonds will likely remain the label of choice, with year-over-year issuance rising 10%.
- Fund performance from 2023 shows that ESG-dedicated fixed income funds fared better than non-ESG funds, on average. Fund flows of green bonds also fared better than non-ESG funds, on average.
- Global and European green bond indexes likewise outperformed vanilla counterparts in 2023.
- There is likely to be mainstreaming of green finance in the financial system, as a result of both greater regulatory scrutiny and investor responses to climate change and the global pandemic.

Renewable energy continues to be the most prevalent among the green bonds categories, with \$31.8 billion of issuance in 2023. As the category continues to grow, however, diversification is increasing, with the clean transportation, energy smart technologies and energy efficiency, and green buildings and infrastructure sectors gaining share.

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Exhibit 3: 2023 Green Project Categories by Issuance Volume



Source: Bloomberg, Morgan Stanley Global Investment Office, Morgan Stanley Wealth Management Investing with Impact as of Dec. 31, 2023

Rating Agencies Recognize Green Bond Criteria

Most green bonds are investment grade securities and were not designed solely for purchase by sustainable and impact-oriented investors. Rating agencies now recognize that sustainability-related issues can present immediate and material risks, which can impact credit quality. When reviewing green bonds, the rating agencies will assess the bond's alignment with the Green Bond Principles, the integrity of its green credentials and its stated use of proceeds.

The major rating agencies—Moody's, S&P and Fitch—have established standards to assess an issuer's ability to manage the bond proceeds effectively and meet the stated green goals. Bonds can be certified if they adhere to the Climate Bonds Standard set forth by the CBI.

In early 2019, Fitch introduced ESG Relevance Scores that combine credit risk with sustainability risk. Importantly, the sustainability risk assessment is performed by the same analyst who assigns the public credit ratings rather than a separate team. S&P launched ESG Evaluation in April 2019, as a forward-looking, data-driven assessment of an issuer's ESG performance and preparation for future risks.

Municipal Green Bonds

The municipal bond market lends itself well to ESG-labeled bonds. States and local governments frequently access the capital markets to finance public works projects that provide a communal benefit. These initiatives often include the

construction, maintenance and management of schools, hospitals, and, most recently, efficient and climate change-resilient infrastructure. Municipal securities can also help investors meet financial objectives as they generally provide a reliable income stream that is often exempt from federal, state and local income taxation. Participants have a wide variety of credit qualities, coupon structures and final maturities, and can further target specific geographies or governmental entities that focus on impact themes.

S&P Global Ratings indicates that the US municipal green bond market is primarily focused on water infrastructure projects, sustainable transportation and green buildings. In comparison, the global public finance green bond market is driven largely by proceeds that finance low carbon and renewable energy sources.

While municipal green bonds have not presented any clear or consistent pricing incentives for issuers or investors, they do provide a platform for local governments to fund public policy initiatives that encourage the transition to a lower carbon economy. For example, in 2023, Minnesota and Michigan established clean electricity standards (CESs) requiring utilities to provide 100% clean electricity by 2040, which may cause existing electricity and utility companies to issue green bonds. Investors may further support a broader set of impact-related themes that extend beyond the traditional green bond definition by opting for dual-purpose initiatives that support community values such as education and healthy living (see Exhibit 4).

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Exhibit 4: Impact Themes for Municipal Green Bonds

Carbon Reduction

Energy Efficient Public Transportation

Land Conservation

Renewable Infrastructure Systems

Resilience Bonds

Waste and Pollution Prevention

Water Delivery Improvement

Source: Morgan Stanley Institute for Sustainable Investing

Financial Performance

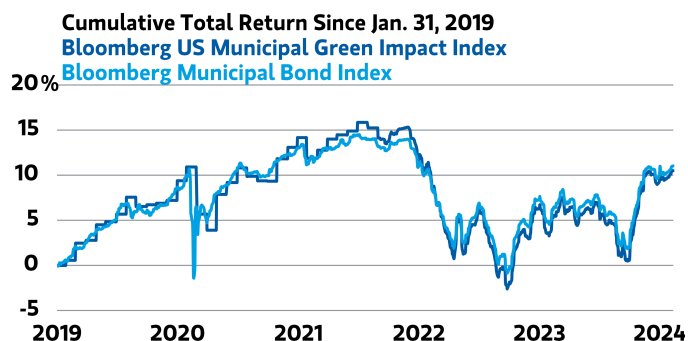
A 2023 report conducted by Morgan Stanley & Co. Research found that green bonds offer similar rates of return as conventional bonds, and in 2023, green bond ETFs outperformed their traditional counterparts². Most data suggests that there is no “green discount,” with green bonds performing similarly to comparably rated non-green bonds, according to Climate Bond's Initiative's semiannual reports on green bond pricing³. This isn't surprising, as green bonds have the same credit strength and financial structure of traditional bonds of the underlying issuer. An academic paper from Boston University Questrom School of Business found that corporate green bonds improve the issuing company's environmental footprint, contribute to long-term value creation, increase innovation and have a real demonstrated impact per the bond's stated purpose.

The latest report from Climate Bonds Initiative⁴, which analyzes 110-plus green bonds with a combined value of \$124.6 billion, found the following:

- Performance of green bonds primary issues was comparable to that of the broader market in the first half of 2023. Notably, 32% of green bond primary issuance achieved a “greenium,” otherwise known as a new issue concession.
- Green bonds were more frequently oversubscribed and exhibited larger spread compression than their vanilla counterparts. On average, 65% and 56% of green bonds were oversubscribed and achieved greater spread compression than non-ESG -linked respectively.
- Issuers generally acknowledge that the green label attracts a broader range of investors, enabling appealing diversification of the investor base. Furthermore, each subsequent deal attracts a larger number of dedicated investors, with 66% of deals recently allocated to investors describing themselves as green.
- Data thus far suggests a pricing differential in the secondary market, with green bonds trading at a slightly higher price. Seven and 28 days after pricing, more than half of green bonds had experienced more yield spread tightening than comparable vanilla baskets and indexes, on average.

Similar trends emerge when comparing the performance of green bond indexes and their traditional counterparts. The Bloomberg US Municipal Impact Index has performed in line with the Bloomberg Municipal Bond Index over the past five years (see Exhibit 5).

Exhibit 5: Green Bond Performance Has Shadowed That of the Broad Municipal Index



Source: Bloomberg as of March 12, 2024

Green bonds offer investors the opportunity to purchase traditional fixed income instruments to meet long-term financial goals while aligning with their environmental and social impact preferences (see Exhibit 6). As the projects associated with the bonds typically offer no additional risk to the investor, they can be allocated in a portfolio like their traditional counterparts.

For an issuer, green bonds signify that they are taking sustainability seriously and making investments in environmental practices, including a proactive approach to the risks associated with climate change, and thinking how their strategy, operations, and investments can be activated to address sustainability challenges over the long-term. As more companies and governments pledge to hit net-zero carbon, issuance of green bonds will likely continue to grow to support this transition.

Opportunities for Investors

Fixed income investments provide an opportunity to meet long-term financial goals and generate positive environmental and social impact. Green bonds offer investors the existing structure of a fixed income instrument while supporting climate-related or environmentally focused projects. Depending on the instrument, investors will often also benefit from the traditional income component of a bond. Although separately managed accounts, mutual funds and exchange-traded funds (ETFs) core bond offerings have for many years incorporated green bonds issuance in their portfolios, they are becoming more of a discreet asset class.

Following the launch of the Bloomberg MSCI Global Green

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Bond Index, which tracks green bond mutual funds and green bond ETFs., investors have increased access to green bond investment opportunities, including the following:

- Investment strategies with some green bond exposure within a larger sustainability-linked fixed income mandate. For example, one core bond mutual fund offered through Investing with Impact, announced the investment of more than \$1 billion in green bonds whose proceeds support environmentally beneficial activities. This mutual fund is accessible in a fully diversified goals-based portfolio for \$10,000.
- ETFs or mutual funds that specifically target green funds, for example, an Investing with Impact core bond mutual fund that only invests in green bonds by targeting projects in renewable energy, climate change and natural resource solutions.

- Individual issuance opportunities as a part of a customized fixed income portfolio.

ESG-labeled fixed income offers an opportunity for investors who seek to match the sustainability preferences of their equity investments to the fixed income portion of their portfolio, while driving overall diversification, dampening risk, and emphasizing measurable investment outcomes.

Standards continue to improve, with greater transparency and issuance all pointing to continued growth for the sustainability linked fixed income market. As the market evolves, expect continued innovation from corporate, municipal, sovereign and supranational issuers.

Exhibit 6: There Are Multiple Ways to Access ESG-Labeled Bonds

	Corporates	Development Banks	Municipalities	Non Profits	Sovereigns
Issuers	Multinational corporations	Multilateral institutions such as the World Bank, the Inter-American Development Bank and the European Investment Bank	In the US specifically, state and local government entities	Organizations that support sustainability projects around the globe	Countries or local governments
Purpose	Support infrastructure projects, real estate development and energy management upgrades for buildings	Help foster sustainable development in developing economies	Public transportation upgrades or introduction, local infrastructure projects, and water management or distribution	Support sustainable development globally	Enable large-scale financing of sustainable projects, and funding for climate adaptation measures
What They Offer	Green, social, sustainability and SDG-linked bonds	Green, social, sustainability, blue and SDG-linked bonds	Green and sustainability bonds	Green, social, and sustainability bonds	Green bonds
Example	Alphabet issued \$5.75 billion worth of sustainability bonds, focused on environmental and social projects, and pandemic response	The World Bank sold its first blue bond in 2018 to support ocean resources, and issued \$8 billion in sustainability bonds to address the global pandemic	Los Angeles issued a \$450 million wastewater bond in 2017 to support system upgrades	In response to the global pandemic, the Ford Foundation issued a \$1 billion social bond (the first of its kind) to support and strengthen nonprofit organizations	Japan issued \$11 billion of climate transition bonds in 2024 — the first from a sovereign.
Investment Considerations	Typically investment grade corporate debt	Focus on funding projects in developing markets	Typically triple tax-exempt status and sustainability focus	Nonprofits can be first-time or infrequent issuers	Local or foreign-currency denominated
How to Invest	Individual bond offerings, mutual funds, exchange traded funds and separately managed accounts	Individual bond offerings, mutual funds, exchange traded funds and separately managed accounts	Individual bond offerings, mutual funds, exchange traded funds and separately managed accounts	Individual bond offerings, mutual funds, exchange traded funds and separately managed accounts	Mutual funds, exchange traded funds, and separately managed accounts

Source: Morgan Stanley Wealth Management Global Investment Office, Morgan Stanley Institute for Sustainable Investing

Endnotes

¹ Bloomberg Intelligence. "Sustainable Debt Outlook 2024." (January 2024)

² Morgan Stanley Research. "ESG Bond Intel: In 2024, Will the Rubber Meet the Road?" (January 2024)
<https://ny.matrix.ms.com/eqr/article/webapp/70eae24a-9547-11ee-b4b5-7bebeb0ccdd2?ch=rpint&sch=sr&sr=3#/section=5>

³ Climate Bonds Initiative. "Green Bond Pricing in the Primary Market H1 2023" (2023)
https://www.climatebonds.net/files/reports/cbi_pricing_h1_2023_01f.pdf

⁴ Climate Bonds Initiative. "Green Bond Pricing in the Primary Market H1 2023" (2023)
https://www.climatebonds.net/files/reports/cbi_pricing_h1_2023_01f.pdf

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Disclosure Section

The summary at the beginning of the report may have been generated with the assistance of artificial intelligence (AI).

Index Definitions

For other index, indicator and survey definitions referenced in this report please visit the following: <https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions>.

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CRC6498387 04/2024

RSI1723136170170 08/2024