Morgan Stanley
INVESTMENT MANAGEMENT

ESG in Sovereign Fixed Income Investing: From Numbers to Narratives

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Since the establishment of our Sovereign ESG Methodology in 2019,[1] we have been evolving our approach to evaluating countries' sustainability performance to support our sovereign bond investment decision process. Our framework continues to aim to identify countries with leading ESG practices or positive improvement while avoiding systematic bias against developing countries through contexualizing countries' performance within their stage of development. We previously[2] highlighted the importance of a comprehensive assessment of sustainability momentum to address data lag and reward countries on a positive trajectory. In our revamped approach, we recognise the limitations of ESG data and stress the importance of supplementing it with qualitative insight and, where possible, active engagement with policymakers, to paint a more complete picture of a country's management of sustainability risks and opportunities. By accounting for regional dynamics, income disparities and policy contexts, we can support forward-looking investment decisions.

Unlocking ESG Opportunities in Sovereign Fixed Income

As fixed income investors, we view the integration of ESG factors into the evaluation of sovereign bonds—at both issuer and issuance levels—as a critical component of our investment process. We believe the integration is essential for assessing a bond's investment appeal for three key reasons:

- **RELATIONSHIP BETWEEN SOVEREIGN CREDIT RISK AND ESG PERFORMANCE:** Improving performance on material ESG factors may help reduce sovereign credit risk,[3] with evidence pointing to how countries with stronger ESG practices tend to

[1] Morgan Stanley Investment Management (MSIM) Fixed Income (2019), ESG and Sovereign Fixed Income Investing: A Better Way.

[2] MSIM Fixed Income (2023), ESG and Sovereign Fixed Income Investing: Identifying Opportunities, Correcting Biases.

[3] Gratcheva, E., Emery, T., and Wang, D. (2021), Demystifying Sovereign ESG.

DISPLAY 1

Examples of ESG Risk Materiality

	ESG IMPACT	ECONOMIC IMPACT
Increased drought in Sub-Saharan Africa	Crop failure and food insecurity	**Estimated climate adaptation cost of ~2-3% of the region's GDP**[4]
Severe flooding in South Brazil in 2024	Disrupted harvest and destroyed infrastructure	**Costed ~0.3% of the country's GDP in 2024**[5]
Potential collapse of wild pollination ecosystem in South Asia	Impacted food production given reliance on pollinated crops	**Forecasted ~6.5% contraction of annual GDP by 2030**[6]
Demographic changes in Europe	Lower production output and increased burden on social systems	**Expected 0.3-1.0% contraction of annual GDP of European G4 economies in coming decades**[7]

have lower default risk[8] and tighter credit spreads.[9] Some ESG factors may also affect an issuer's long-term growth, leading to a long-term effect on credit yield spreads.[10]

- **ASSESSING A COUNTRY'S ABILITY TO MANAGE MATERIAL ESG RISKS:** The physical and transitional impact of climate change can, over the long term, increase geopolitical and economic risks across both developed (DM) and emerging markets (EM). EM countries, which are typically more vulnerable to physical risks due to their geographical locations and less-advanced climate-resilient infrastructure, are likely to face significant climate risks, primarily in the form of natural disasters.[11] Globally, the degradation of ecosystems could result in a decline in global GDP of c.$3 trillion annually by 2030, underscoring the importance of pricing in a country's capacity to mitigate material ESG risks *(Display 1)*. Social factors, while less associated with one-time, extreme events, can also increase the risk profile of countries. Examples include the mismanagement of migration flows, demographic shifts, religious or ethnic differences, and inadequate health and education services.

- **COMMITMENT TO THE U.N. SUSTAINABLE DEVELOPMENT GOALS (SDGS):** National and global commitments towards the U.N. SDGs have mobilised investment towards countries' sustainable transformations. For instance, about half of the sovereign issuers in the Bloomberg Global Aggregate Index are now issuing labelled sustainable bonds.[12] Demonstratable alignment with the U.N. SDGs indicates that issuers are not only enhancing management of sustainability risks and opportunities, but also fostering economic and social development, ultimately enhancing the longer-term value of their bonds. For instance, our research shows that in certain

[4] NASA, *Earth Observatory* (February 2024), Severe Drought in Southern Africa.

[5] S&P 500 (July 2024), Floods in Brazil's Rio Grande do Sul State Disrupt Supply Chain.

[6] WorldBank (February 2021), Protecting Nature Could Avert Global Economic Losses of $2.7 Trillion Per Year.

[7] CEPR.org (September 10, 2024), Demographic change: Individual Blessing, but Headwinds for European Growth.

[8] MSIM Fixed Income (2023), ESG and Sovereign Fixed Income Investing: Identifying Opportunities, Correcting Biases.

[9] Rahman, L., Rosten, J., Monroy, P., Huang, S. (2021), Does ESG Matter for Sovereign Debt Investing?

[10] Gratcheva, E. and Gurhy, B. (2024), Sovereign Environmental, Social, and Governance (ESG) Investing: Chasing Elusive Sustainability.

[11] BMI, Fitch Solutions (2024), Country Key Themes For 2025: Climate Risks Will Shift, Reform Headwinds Will Rise.

[12] Bloomberg, as of December 2024.

Latin American and Sub-Saharan African countries, an SDG-focused budgetary process with allocations to sustainable solutions such as renewable energy, health care and education has led to positive macroeconomic impact and contributed to poverty reduction.

Understanding the Intrinsic Challenges in Sovereign ESG Analysis

Given the varied stages of development and unique challenges faced by nations, establishing a universal sustainability standard that can be fairly applied to all countries is difficult.[13]

INCOME BIAS IN ESG RATINGS: In most third-party ESG ratings, high-income countries tend to systematically receive better ESG scores, not necessarily due to stronger sustainability practices, but often as a function of data availability and institutional capacity. ESG scores, based on metrics like Rule of Law and Government Effectiveness, often correlate with income. This can lead to overestimating sustainability performance in wealthier countries and underestimating it in lower-income nations, potentially reinforcing capital allocation biases.

LACK OF QUALITY AND TIMELY DATA: Most of the global ESG datasets available from reputable institutions such as the World Bank and United Nations have at least two years of lag. Our framework's momentum factor partially mitigates this issue, but it cannot fully replace the need for high-quality, up-to-date data. In addition, the relevance of indicators varies depending on a country's demographics or geography, like how deforestation rates are less relevant for desert-covered nations. Hence, assessing the materiality of ESG indicators is paramount.

As a result, our proprietary Sovereign ESG Methodology seeks to provide a structured framework for analysis and comparison of countries' performance across income groups by:

1. Building a quantitative ESG scoring model that relies on a selection of financially material E, S and G indicators across economies;
2. Supplementing the quantitative analysis with a qualitative assessment of the country's sustainability momentum, as well as, where applicable, additional ESG factors more bespoke to the issuer.

In our view, our methodology allows us to address, at least in part, some of the challenges mentioned above. While technical, quantitative analysis provides a foundation, it must be enriched with tailored qualitative insights to capture the full complexity of the sovereign space.

Sovereign Fixed Income ESG Methodology

Our methodology consists of two elements: a quantitative ESG Scoring Framework that serves as a base for a Qualitative Assessment.

1. ADJUSTING FOR INCOME BIAS: OUR SOVEREIGN ESG SCORING FRAMEWORK

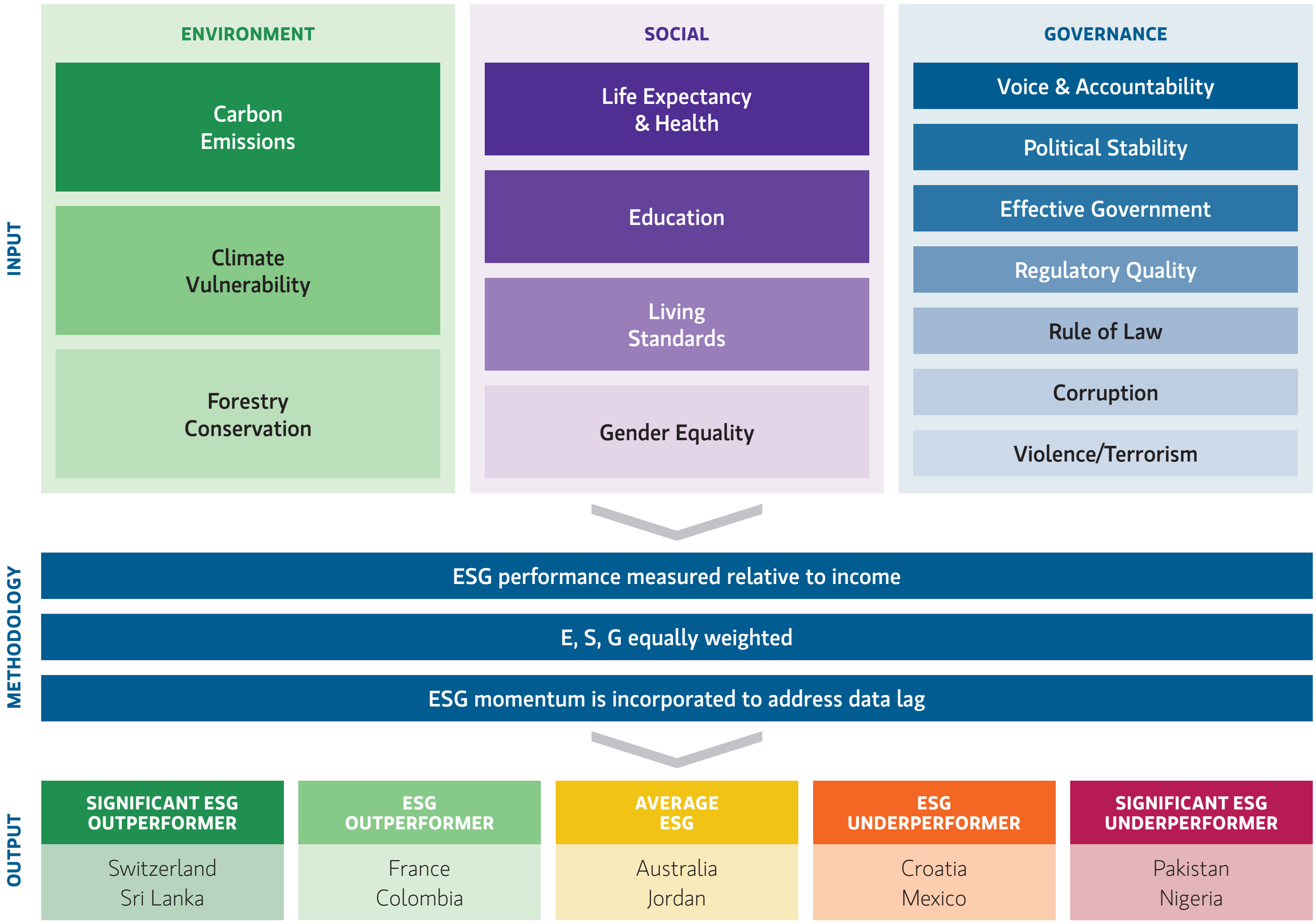
Using ESG data from independent third-party providers for 115 emerging and developed markets over a span of 20-plus years, we have conducted statistical analyses to identify the most relevant indicators for the E, S and G factors that underpin the economic progress and resilience of sovereign nations. Our framework aims to cover as many countries as possible, based on data availability, with a greater focus on those that are already debt issuers.

Our methodology integrates the following key elements:

1. **MATERIALITY-BASED SELECTION OF ESG FACTORS**, seeking to capture metrics pertaining to a country's usage of natural resources and climate change vulnerability, human development, quality of institutions, and rule of law across markets.
2. **ADJUSTMENTS OF OUR E, S, G SCORES BY GDP PER CAPITA** to help remove bias against emerging markets. By adjusting against GDP per capita, we believe we can control for the wealth and rank of each country based on their expected performance on ESG metrics relative to their income. While we initially considered segmenting countries by region, we ultimately deemed income groups to better capture similarities in institutional capacity and development challenges.
3. **INCORPORATION OF A MOMENTUM FACTOR** that combines our analysts' qualitative view with a quantitative assessment of a country's ESG performance.

[13] Gratcheva, E. and Gurhy, B. (2024), Sovereign Environmental, Social, and Governance (ESG) Investing: Chasing Elusive Sustainability.

DISPLAY 2
Sovereign ESG Scoring Framework



All information provided is for informational purposes only and should not be deemed as a recommendation to buy or sell securities in the countries referenced. The countries listed are a sample of past output of the framework, and do not necessarily reflect our current ESG outlook. Source: UN, the World Bank Group, the Emission Database for Global Atmospheric Research (EDGAR), the University of Notre Dame, MSIM as of March 2025.

Based on these steps, the output of our framework is a ranking of the countries into performance quintiles, for each income group, based on the GDP-adjusted scoring and forward-looking momentum elements described above *(Display 2)*.

2. CAPTURING COUNTRY-SPECIFIC NUANCES: OUR QUALITATIVE ASSESSMENT

The decision to develop our proprietary Sovereign ESG Methodology arose from the need to have a framework that captures both risk and opportunities. Still, quantitative models are inherently simplifications and should be interpreted with an understanding of their limitations. Therefore, the output from the ESG scoring framework presented above serves as a starting point to make a more thorough, qualitative assessment, helping inform our investment evaluations.

This qualitative assessment digs deeper into an expanded set of sustainability topics *(Display 3)*, covering multiple ESG sub-themes that are relevant for all countries but that can't be incorporated into the scoring model due to either limited availability of standardised data (e.g. energy mix) or because they are deemed material only for certain countries (e.g. water availability for countries with high percentages of desert area). These sub-themes were selected based on publicly available frameworks—including the World Bank's Sovereign ESG framework and the Assessing Sovereign Climate-related Opportunities and Risks (ASCOR)[14] framework—but our qualitative analysis is not limited by them as we retain flexibility to cover additional topics relevant for the country.

[14] ASCOR Project: Led by investors and asset owners, the framework aims to assess how countries are managing their low-carbon transition and exposure to climate risk.

DISPLAY 3

Example of Topics Covered in a Country's Qualitative Review

ENVIRONMENTAL	SOCIAL	GOVERNANCE
Nationally Determined Contributions	Demographics	Political Landscape
Emissions & Pollution	Education & Employment	Transfer of Power
Energy Use & Security	Health & Nutrition	Institutional Strength
Climate Risk & Resilience	Poverty & Inequality	Political Rights
Natural Capital Endowment & Management	Regional Conflicts	Civil Liberties
	Housing	Recent or Upcoming Elections

This represents how the portfolio management team generally implements its investment process under normal market conditions. ESG ratings are not intended as a recommendation and are subject to change. Ratings are relative and subjective and are not absolute standards of quality. Ratings apply only to portfolio holdings and do not remove the risk of loss. Source: Morgan Stanley Investment Management, as of June 30, 2025.

BRINGING IT ALL TOGETHER: OUR FINAL EVALUATION

Our Sovereign specialists within the ESG research team are responsible for bringing all pieces of the puzzle together into a final sustainability evaluation. Given the role of governments in ensuring the well-being of citizens through socio-economic development and stability, we believe that government representatives have an inherent incentive to adequately manage ESG risks and opportunities material to their countries' credit profiles.

Our goal is to identify countries that are either already performing well or demonstrating a strong, positive trend of improvement. After analysing the ESG scoring framework's output and completing the qualitative assessment, we ask ourselves three critical questions to make a final evaluation of the issuer (*Display 4*):

1. Does the country adhere to basic human rights standards?
2. How does the country's performance compare with peers'?
3. What is the direction of change?

The final product is a detailed evaluation summarising our analysts' views on E, S, G sub-themes for each country, highlighting their management of associated risks and opportunities.

DISPLAY 4

Components of our Final Evaluation

COMMITMENT TO BASIC HUMAN RIGHTS

Minimum requirements include freedom of speech, press and assembly, as well as protection from arbitrary detention and torture.

DIRECTION OF CHANGE

We aim to capture opportunities. Countries face significant sustainability challenges, but we seek positive changes such as ambitious targets, clear paths to long-term goals, and governance reforms.

PERFORMANCE VS. PEERS

We compare the country in question to its income and regional peers, considering its available resources and specific challenges to ensure a fair analysis.

These evaluations help the fixed income investment teams make informed investment decisions. For example, if we observe two sovereigns with similar credit ratings trading at similar spreads, but one sovereign is considered an ESG outperformer while the other is underperforming, we may decide that valuations do not appropriately reflect the sustainability-related risks/opportunities and prefer to overweight the outperformer. On the other hand, if we see an ESG underperformer sovereign trading cheaply in the market, accompanied by strong positive sustainability momentum, we might have an opportunity to capture alpha, based on our belief that spreads should tighten as sustainability performance improves.

The evaluations help define our sovereign bond investable universe for certain fixed income products that apply screening or other sustainability criteria as part of their investment process.

Mapping Our Sovereign Sustainability Evaluations Coverage

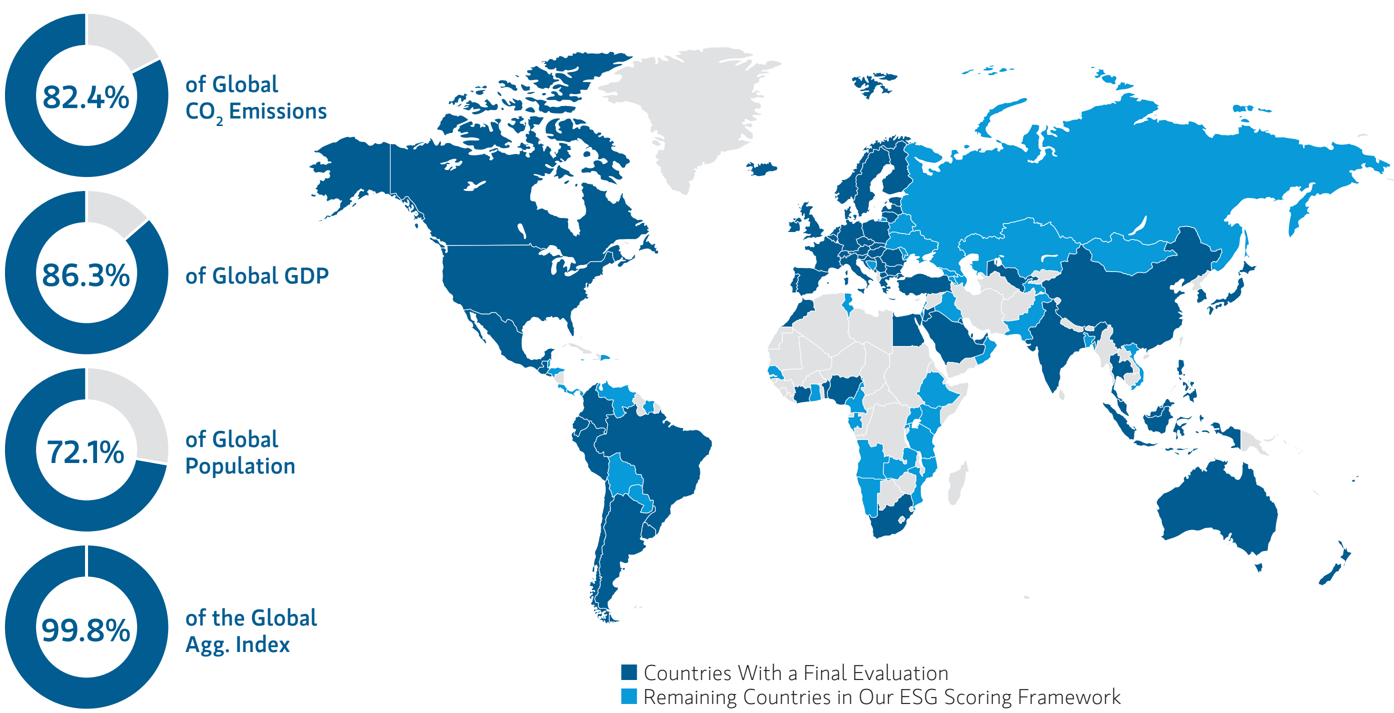
Of the 115 countries in our ESG Scoring Framework, we have prioritized having ESG evaluations for 75 *(Display 5)* that are either constituents of the Global Aggregate Index—given their importance as part of the fixed income investment universe—or off-benchmark issuers relevant for our portfolio managers. We complete additional sovereign assessments as needed or when a new country enters the sustainable bond market.

Evaluations are reconsidered every two years, but we retain flexibility to reassess more frequently to respond to any ad hoc significant events that may happen within a country, such as changes in administrations.

DISPLAY 5

Countries With Sovereign ESG Evaluations

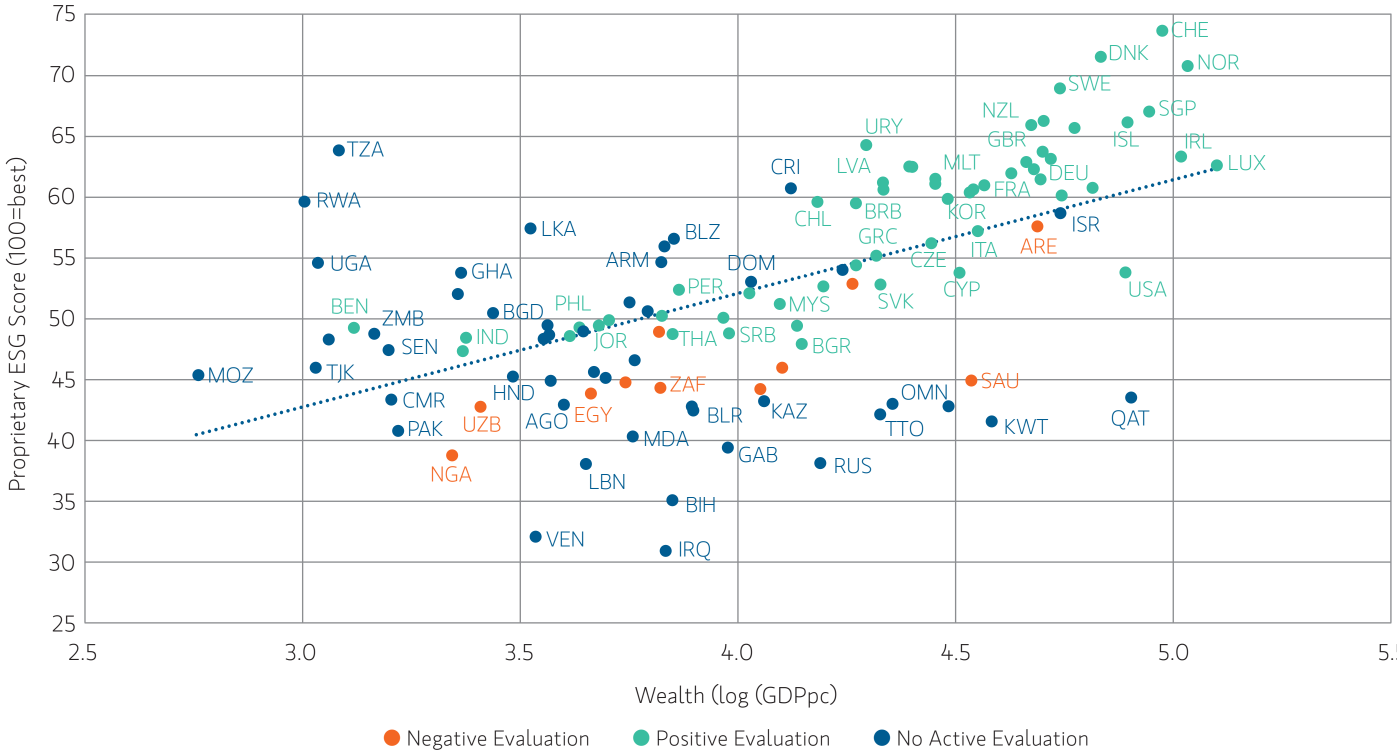
The 75 countries that currently have a Final Evaluation represent:



Source: Morgan Stanley Investment Management and EDGAR, as of March 31, 2025.

DISPLAY 6

Comparing ESG Scores and Income Levels



Source: Morgan Stanley Investment Management, as of December 12, 2024.

Key Observations From Our Methodology

FURTHER CORRECTING FOR BIAS AGAINST EMERGING MARKETS

DM countries typically have higher ESG scores due to better environmental and social standards, as well as more advanced government accountability mechanisms. *Display 7* shows the correlation between the ESG scores from our ESG Scoring Framework and income levels. Our research has shown that lower-income countries generally have lower ESG scores, whereas higher-income countries tend to have higher ESG scores. However, only focusing on absolute ESG performance can lead to excluding lower-rated countries regardless of their improvement potential, and, ultimately, to having poorly diversified portfolios.

Furthermore, countries with GDP levels near the scoring model's thresholds (based on World Bank income data) may be penalised. For example, a Latin American issuer, with GDP per capita just above the high-income threshold, underperforms compared to other high-income countries but performs in line with middle-income economies.

Our qualitative assessments place significant emphasis on momentum, particularly for EM countries, rewarding sovereigns that exhibit a strong positive trajectory. For example, a Latin American country recently had its social momentum changed from 'neutral' to 'positive' as union protests eased and poverty rates went on a downward trajectory. An African nation saw its environmental momentum also improve from 'neutral' to 'positive' as solar energy capacity significantly increased in about one year, contributing positively to the country's unreliable energy grid.

CASE STUDY 1

Spotlight on Momentum: Positive ESG Progress From a South Asian Nation

E Despite facing challenges on the decarbonisation front, with a relatively smaller income per capita compared to other high emitters, the issuer has made significant progress in increasing renewable energy efforts; aiming to double capacity within the next decade. This has improved electricity access and reduced emissions, demonstrating intention to balance social welfare with environmental responsibilities.

S Income inequality poses unique challenges for the issuer, mostly due to its population size; however, advancements in education and health care suggest positive social change.

G Government effectiveness has improved significantly, as evidenced by the successful rollout of a national ID program and increased policymaking efforts to reform insolvency and bankruptcy laws (although implementation has been relatively slow).

Since not all such nuances can be systematically corrected in a quantitative model, we think it is important to take them into consideration as part of our qualitative assessments, addressing any remaining bias against EM countries within the ESG Scoring Framework.

INCORPORATING REGIONAL CONSIDERATIONS

Accounting for regional differences is crucial when analysing countries' sustainability performance due to varied economic structures, environmental challenges, social priorities, customs, and governance practices across geographies. For instance, geographic vulnerabilities, such as extreme weather or resource constraints, affect sustainability risks and opportunities differently across regions.

For example, certain small European countries do not have enough land to be energy independent or to diversify their energy mix. Another example is Small Island Developing States (SIDS), which are typically characterised by small population size, remoteness from international markets, high transportation costs, vulnerability to exogenous economic shocks, and fragile land and marine ecosystems—all of which make them particularly vulnerable to biodiversity loss and climate change. Local customs and history also impact sustainability practices: for instance, gender inequality in the Middle East and Asia requires context-specific progress indicators as opposed to applying Western standards.

Display 7 underscores that income remains a significant determinant of sustainability progress. Latin America, Sub-Saharan Africa and South Asia mainly focus on providing basic services and addressing social issues, while developed markets like Europe and North America can afford to lead in sustainability. In sum, a one-size-fits-all approach may overlook important contextual factors affecting sustainability performance and policies.

DISPLAY 7

Regional ESG Trends

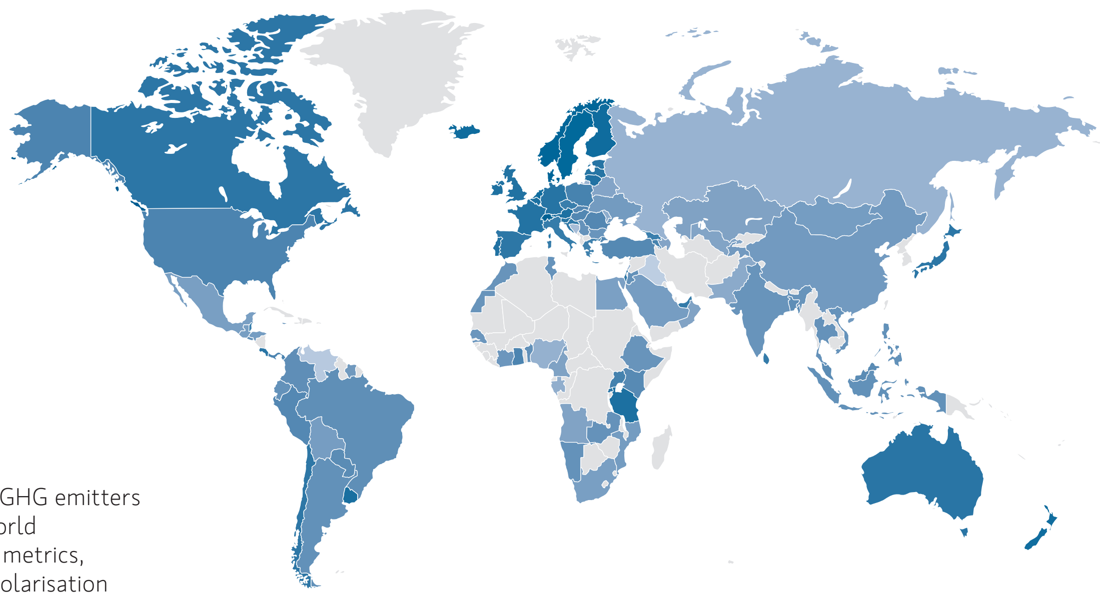
Middle East and North Africa
- Heavily reliant on oil, coupled with gender equality issues and governance concerns in some countries
- Broadly lagging other regions

Europe and Central Asia
- Broadly leading other regions on E, S, G

East Asia and Pacific
- Small high-income countries are progressing on E, despite S/G challenges, while larger ones see opposite trends
- Less differentiation across middle-low-income countries

ESG Score

High Low



U.S./Canada
- Two of the largest GHG emitters per capita in the world
- Strong governance metrics, despite increased polarisation

Latin America and the Caribbean
- More differentiation between peers on E
- Broadly more focused on social issues

Sub-Saharan Africa (limited coverage)
- High income inequality, weak basic services
- Political instability and corruption

South Asia (limited coverage)
- Environmental duty vs. social welfare
- Mixed governance performance

Source: Morgan Stanley Investment Management, as of May 2025.

Integrating Issuer and Issuance-Level Analysis

As noted in our "Sustainable Bond Evaluation Framework" whitepaper, a strong framework for assessing the details of green and other sustainable-labelled bond transactions[15] supplements our issuer-level analysis, described above, and informs investment decisions in our green bond and other sustainability-focused fixed income investment strategies.

Issuing green and other sustainable-labelled bonds allows sovereigns to diversify their investor base and access additional pockets of demand, in addition to, of course, funding environmental and/or social projects that are part of their budgets. The projects funded by these issuances not only demonstrate the country's commitment to the SDGs, but also closely align with their core responsibility to provide essential public services and promote long-term societal wellbeing. For sovereign green and sustainable bonds, we focus on the following considerations: *(Display 8)*

MATERIALITY OF ENVIRONMENTAL AND/OR SOCIAL ISSUES TO THE ISSUER STRATEGY: Green and sustainable bonds can help sovereign issuers raise additional and more diverse financing to support their environmental and social expenditure commitments. We find that in most cases, the projects selected to be financed via these labelled transactions are central to government industrial and social plans.

LARGE POOLS OF ELIGIBLE EXPENDITURES AND DIVERSE PROJECT CATEGORIES: We recognise that, in line with the 17 U.N. SDGs, countries have multiple sustainability priorities and, as a result, may understandably include a broader set of project categories to be financed via green and sustainable bonds (unlike corporates, where we typically prefer a more focused eligibility criteria to demonstrate commitment to specific topics). Governments also tend to need additional flexibility to increase social spending during economic downturns, justifying a wide range of project categories in their sustainable financing frameworks to accommodate capital allocation changes over the bond's duration.

BUDGETARY LIMITATIONS THAT MIGHT PREVENT FINANCING OF PROJECTS WITH SUFFICIENT ADDITIONALITY: Some sovereign issuers may have a hard time finding enough eligible projects within a given category (e.g. renewable energy), as projects are often funded directly by states, development banks or corporates (e.g. through incentive schemes). This might prevent the federal government from using proceeds to fund projects that would have greater additionality to their ESG challenges. Recognising this limitation, we support the issuance of sovereign sustainable bonds allocating proceeds to both green and social projects.

GRANULARITY OF IMPACT REPORTING: Given extensive expenditure pools, we assess positively those sovereigns that publish detailed green or sustainable impact reports, acknowledging the challenges of aggregating data from different ministries and for large portfolios of projects.

COMMITMENT THROUGHOUT POLITICAL CYCLES: It is important to assess the likelihood that a sovereign's sustainable financing framework and related commitments will endure across multiple administrations. The governance mechanisms in place to select projects, manage proceeds and report on progress are important to ensure long-term credibility and compliance throughout the bond's duration.

[15] Sustainable bonds allow issuers to express commitment to a low-carbon economy, mitigate exposure to climate risk, and advance societal outcomes. Issuers of these bonds can leverage proceeds to fund relevant projects: green bonds finance projects with a positive environmental benefit, social bonds support social projects, and sustainability bonds cover both green and social projects.

DISPLAY 8

Sustainable Bond Evaluation Framework

Project Selection, Standards & Governance (20%)

- ✓ Alignment with ICMA, Climate Bonds Standard
- ✓ Definition of look-back periods, minimum safeguards
- ✓ Management of proceeds throughout the life of the bond – evaluate governance mechanisms in place to ensure compliance throughout the life of the note, across multiple administrations

Verification, Assurance & Reporting (30%)

- ✓ Quality and relevance of secondary party opinion
- ✓ Third-party assurance
- ✓ Granularity of Allocation & Impact Reporting – since sovereigns tend to have larger expenditure pools, we value issuers that provide detailed data

Profile & Fit (25%)

- ✓ Materiality of environmental and/or social issues to issuer – typically high for sovereigns given nature of the sector
- ✓ Ambition of Nationally Determined Contributions (NDCs) and performance towards targets – informed by the issuer-level ESG assessment

Project Impact (25%)

- ✓ Robustness of eligible project criteria
- ✓ Additionality of projects – specifically, whether projects address ESG challenges faced by the sovereign and whether they are delta meaningful

The "Profile & Fit" category within the Sustainable Bond Evaluation (*Display 8*) is informed by our issuer-level ESG analysis previously described. In other words, a country that performs well in our issuer-level assessment will most likely score well in the "Profile & Fit" category—to the extent that the selected green or social projects financed by the bond support the broader country-level agenda.

However, other components of the Sustainable Bond Evaluation focus on more technical aspects of a country's sustainable financing framework—such as the criteria for selecting projects financed by the bond and reporting on whether proceeds have actually been allocated—which are not usually considered in the issuer-level evaluation.

A sovereign issuer may have a negative issuer-level assessment but have a strong sustainable bond evaluation (*Case Study 2*). Conversely, a sovereign may score positively at the issuer level but fail to provide adequate assurances that proceeds from labelled sustainable bonds will be allocated to projects that contribute to addressing the most pressing sustainability issues within that country (*Case Study 3*).

CASE STUDY 2

Latin American Sovereign

ISSUER ASSESSMENT: NEGATIVE EVALUATION

- **Retrogressive climate action path**, with recent deceptively altered commitments to allow for less ambitious climate action
- Continued heavy investment in fossil fuels and strong **roadblocks to renewable energy** posed by the previous administration

SUSTAINABLE BOND: POSITIVE ASSESSMENT

- Robust **geospatial and social gap criteria** to determine project eligibility, increasing additionality of the bond
- Regular issuer in this market, with **timely allocation and reporting**
- Frequent **communication with investors** to improve framework

CASE STUDY 3

East Asian Sovereign

ISSUER ASSESSMENT: POSITIVE EVALUATION

- **Declining GHG emissions** amid more ambitious goals set
- **High-quality basic services**, despite population aging, mental health and gender inequality challenges
- **Strong governance framework** and effective policymaking

GREEN BOND: NEGATIVE ASSESSMENT

- Months after issuance, **all proceeds have not been allocated**
- Changes to allocation report during the note towards **less granularity**

Engaging With Sovereign Bond Issuers

We leverage our unique position as fixed income investors to conduct sustainability-focused engagement with sovereigns and government-related issuers. Our engagement efforts focus on fostering mutually-beneficial dialogue that allows sovereigns to explain their sustainability risk management strategies and enables us as investors to advocate for action. Steering away from politics, we focus on constructive discussions that go beyond election cycles and cover long-term challenges and solutions. While we reckon that influencing change in sovereign behaviour is dependent on many factors beyond investor engagement, we see success as:

- Receiving access to policymakers within an investee sovereign issuer and having informative conversations about the country's sustainability risks and opportunities;
- Appraising and monitoring the country's progress and momentum (or lack thereof) in their climate transition journey to help inform our internal research and investment decisions; and
- Developing and encouraging best practices with regards to sovereign sustainability policies and sovereign sustainable bond issuance.

As mentioned in our [Fixed Income Engagement Report], in the 12-month period between July 2023 and June 2024, we engaged with ~15 unique sovereigns, supranationals and agencies (SSAs), completing over two times the number of engagements as we did in the same period the year before.

We are part of the Principles for Responsible Investment (PRI)-led initiative on Sovereign Engagement on Climate Change, alongside 26 other investors, and we have been engaging with various stakeholders in the Australian government for over two years. In August 2024, members of the initiative had nearly a week of in-person meetings with Australian policymakers in Canberra, Sydney and Brisbane. The roadshow aimed to highlight investor and portfolio interests in developing Australia's next NDC, establishing a scientifically supported 2035 emissions-reduction target and creating comprehensive sector decarbonisation pathways.

Overall, we find engagements helpful to complement our qualitative assessments of a country's management of sustainability risks and opportunities, enhancing our credit research process.

Fixed Income ESG SSA Research Analyst, Mariana Jordao, at the Australian Parliament on August 21, 2024

Conclusion

Assessing sovereigns for sustainability performance and ambition demands a rigorous, multifaceted approach. While technical, quantitative analysis provides a foundation, it must be enriched with tailored qualitative insights to capture the full complexity of the sovereign space. In addition, truly forward-looking investment strategies require an appreciation of regional differences and income disparities—not just to mitigate risks, but to uncover opportunities in an evolving global landscape. By integrating these elements, we believe we can more accurately price the potential impact of ESG factors and enhance our investment decision-making process.

We will continue to monitor developments in the sovereign ESG market—including advancements in third-party datasets, industry collaboration and other trends—to further refine and strengthen our approach.

Risk Considerations

ESG ratings are relative and subjective and are not absolute standards of quality. Ratings apply only to portfolio holdings and do not remove the risk of loss. There is no assurance that a portfolio will achieve its investment objective. Portfolios are subject to **market risk**, which is the possibility that the market values of securities owned by the portfolio will decline and that the value of portfolio shares may therefore be less than what you paid for them. Market values can change daily due to economic and other events (e.g. natural disasters, health crises, terrorism, conflicts and social unrest) that affect markets, countries, companies or governments. It is difficult to predict the timing, duration, and potential adverse effects (e.g. portfolio liquidity) of events. **ESG Strategies** that incorporate impact investing and/or Environmental, Social and Governance (ESG) factors could result in relative investment performance deviating from other strategies or broad market benchmarks, depending on whether such sectors or investments are in or out of favor in the market. As a result, there is no assurance ESG strategies could result in more favorable investment performance. **Fixed-income securities** are subject to the ability of an issuer to make timely principal and interest payments (credit risk), changes in interest rates (interest rate risk), the creditworthiness of the issuer and general market liquidity (market risk). In a rising interest-rate environment, bond prices may fall and may result in periods of volatility and increased portfolio redemptions. In a declining interest-rate environment, the portfolio may generate less income. **Longer-term securities** may be more sensitive to interest rate changes. Certain **U.S. government securities** purchased by the strategy, such as those issued by Fannie Mae and Freddie Mac, are not backed by the full faith and credit of the U.S. It is possible that these issuers will not have the funds to meet their payment obligations in the future. Public bank loans are subject to liquidity risk and the credit risks of lower-rated securities. **High-yield securities (junk bonds)** are lower-rated securities that may have a higher degree of credit and liquidity risk. **Sovereign debt securities** are subject to default risk. **Mortgage- and asset-backed securities** are sensitive to early prepayment risk and a higher risk of default, and may be hard to value and difficult to sell (**liquidity risk**). They are also subject to credit, market and interest rate risks. **Municipal securities** are subject to early redemption risk and sensitive to tax, legislative and political changes. The **currency market** is highly volatile. Prices in these markets are influenced by, among other things, changing supply and demand for a particular currency; trade; fiscal, money and domestic or foreign exchange control programs and policies; and changes in domestic and foreign interest rates. Investments in **foreign markets** entail special risks such as currency, political, economic and market risks. The risks of investing in **emerging market** countries are greater than the risks generally associated with foreign investments. **Derivative instruments** may disproportionately increase losses and have a significant impact on performance. They also may be subject to counterparty, liquidity, valuation, and correlation and market risks. **Restricted and illiquid securities** may be more difficult to sell and value than publicly traded securities (liquidity risk). Due to the possibility that prepayments will alter the cash flows on **collateralized mortgage obligations (CMOs)**, it is not possible to determine in advance their final maturity date or average life. In addition, if the collateral securing the CMOs or any third-party guarantees are insufficient to make payments, the portfolio could sustain a loss.

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market.

A separately managed account may not be appropriate for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required.

For important information about the investment managers, please refer to Form ADV Part 2.

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