Morgan Stanley

INVESTMENT MANAGEMENT

ESG and Sovereign Fixed Income Investing: A Better Way

FIXED INCOME | GLOBAL FIXED INCOME TEAM | SUSTAINABILITY INSIGHT | 2019

As environmental, social and governance (ESG) factors become more broadly incorporated into investment decision-making, sovereign fixed income investors are grappling with the best way to benchmark and quantify these factors across a diverse group of countries. While some may use a simple approach of investing in countries with the highest third-party ESG ratings, we disagree. Instead, we think that this "paint-by-numbers" approach is systematically biased against developing countries, where the potential for ESG improvement is arguably greater, and would result in a pool of low yielding, highly correlated, and geographically concentrated countries. Morgan Stanley Investment Management has developed what we consider to be a better approach.

Morgan Stanley Investment Management (MSIM) has developed a framework for benchmarking sovereign ESG performance that allows investment teams to quantify and compare ESG factors across the entire array of emerging and developed markets—from Papua New Guinea to Portugal. By correcting for income-per-capita, and adding an MSIM analyst-driven momentum factor, our approach seeks to reward positive changes from countries with the greatest opportunity for ESG improvements. The result presents genuine opportunities for yield and diversification in portfolios in a manner consistent with ESG and sustainability goals. This

AUTHORS



JIM CARON

Managing Director

Global Fixed Income Team



TEAL EMERYVice President
Global Fixed Income Team



broad approach is a powerful component in our toolkit for integrating ESG factors into sovereign investing.

Why unadjusted third-party ESG ratings miss the mark

We use the underlying environmental, social and governance scores from MSCI as the basis for our benchmarking framework. The advantage of third-party ratings is that they provide a quantifiable measure using standardized methodology that covers nearly every country in the world, even the smallest frontier market bond issuers. However, we think that simply applying unadjusted third-party ESG ratings misses the mark.

First, a sovereign ESG benchmarking strategy that relies on unadjusted ESG scores is systematically biased against developing countries, where the potential for ESG improvements is greater. As shown in Display 1, a country's level of wealth has explained nearly 60% of the variation in MSCI's aggregate ESG scores.1 The direction of causality between wealth and ESG scores likely runs in both directions. Improvements in ESG factors may contribute to a better growth environment, causing wealth to increase. In the other direction, rich countries have more resources to spend on improvements in ESG factors.

Another useful lens through which to examine this problem is the top decile of investable countries² with the highest MSCI aggregate ESG scores. Of the 12 countries in the top 10% of highest unadjusted ESG scores, all are members of the Organization for Economic Co-

DISPLAY 1

Wealth has explained nearly 60% of the variation of MSCI's ESG scores



The index performance is provided for illustrative purposes only and is not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.** See Disclosure section for index definitions.

Source: IMF, MSCI, MSIM. Data as of July 2019.

operation and Development (OECD), which *The Economist* often refers to as a "club of mostly rich countries." All of the countries are in the top two deciles of global wealth, and five are in the top decile. There is also a problem of geographic concentration, as 9 of the 12 countries are in Western Europe. Given the level of wealth and resources in these countries, their bond markets are very low yielding when compared to the global opportunity set, and display a high degree of correlation.

A Better Way: The MSIM Approach

The MSIM approach rewards countries for positive ESG progress by incorporating timely expert judgment,

and corrects for the systematic bias against developing countries by controlling for a country's level of wealth. The result is a framework for quantifying ESG performance that we believe is more aligned with investors' sustainability goals, but also provides for genuine diversification⁵ and opportunities.

MSIM sovereign ESG scores start with the underlying environmental, social and governance scores provided by third parties. While our past research has primarily linked changes in governance to changes in asset prices, we choose to equally weight the environmental, social and governance scores for two reasons.⁶ First, we believe that this simple approach best fits investors' desire to incorporate

¹ We use the natural log of a country's GDP per capita at purchasing power parity (PPP) levels, as provided by the International Monetary Fund (IMF). The logarithmic transformation approximates percentage changes in wealth, and better accounts for the intuitive idea that a change from \$5,000 to \$10,000 per capita GDP is much more significant than a change from \$35,000 to \$40,000. We use PPP values because it helps account for differences in the cost of living in different countries. Our dataset includes 188 countries where we have both ESG ratings and wealth data.

² Our complete dataset examines all 188 countries where we have both MSCI ESG scores, and wealth data from the IMF. We calculate the wealth, environmental, social and governance deciles on this full global dataset. We then identify the 121 countries with tradable debt as our opportunity set for this selection, meaning that there are 12 countries in the top decile of this investable universe.

³ The Organization for Economic Co-operation and Development is a think tank, commonly referred to by The Economist as a "club of rich countries". Source: https://www.economist.com/the-economist-explains/2017/07/05/what-is-the-oecd

⁴ See Display 2 for the full list.

⁵ Diversification does not eliminate the risk of loss.

⁶ See ESG: The Impact of Governance on Emerging Market External Debt Returns. MSCI's ESG scores assign a 50% weight to the governance pillar, and 25% weights to the social, and environmental pillars.

a more holistic sustainability factor into the investment process. Second, we have increased the weighting of the environmental score from 25% because the social and governance factors are so highly correlated with each other that we believe it makes sense to decrease their collective weight.⁷

Since we prioritize change at the margin for ESG factors, we adjust scores by a momentum factor. This factor consists of two parts. The first part is provided by a third party and is based on momentum in the existing data. The second part is a momentum factor based on an MSIM sovereign analyst's subjective analysis of the environmental, social, and governance developments in a country over the past 12-18 months. This is important both because we believe that change at the margin is often what moves asset prices, and the underlying data used by third parties often comes with a significant lag.8 These analyst-provided momentum scores can help incorporate key changes in a timelier manner, as well as allow for flexibility to incorporate expert views about the issues that matter in a given country that may not be fully reflected in the scoring methodology.

Finally, because sovereign ESG scores have been so highly correlated with a country's level of wealth, we normalize by GDP per capita using linear regression. The result is a score that allows us to quantitatively benchmark countries against their incomepredicted ESG performance.

DISPLAY 2 Comparison of Top Decile

MSCI Top Decile

COUNTRY	WEALTH DECILE		ENVIRONMENT DECILE	CONTINENT
Norway		10	10	Europe
Sweden		9	10	Europe
New Zealand		9	10	Oceania
Denmark		9	8	Europe
Iceland		10	10	Europe
Switzerland		10	7	Europe
Canada		9	10	Americas
Finland		9	9	Europe
Australia		9	10	Oceania
Austria		9	7	Europe
Luxembourg		10	4	Europe
Germany		10	4	Europe
Avg		9.4	8.3	

MSIM Top Decile

COUNTRY	WEALTH DECILE		ENVIRONMENT DECILE	CONTINENT
Norway	1	0	10	Europe
New Zealand		9	10	Oceania
Sweden		9	10	Europe
Brazil		6	10	Americas
Chile		7	9	Americas
Iceland	1	0	10	Europe
Denmark		9	8	Europe
Canada		9	10	Americas
Uzbekistan		4	4	Asia
Finland		9	9	Europe
Georgia		5	7	Asia
Australia		9	10	Oceania
Avg	8.	0	8.9	

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 do not remove the risk of loss.

⁷ The correlation of the social and governance scores is .82. A principal component analysis (PCA) of the environmental, social and governance scores shows the social and governance factors as highly correlated with the first principal component, explaining approximately 60% of the variance of the dataset. The environmental factor is highly correlated with the second principal component. The environmental score has low correlation to the social, governance and country wealth factors.

⁸ The underlying data sources for these scores come largely from NGOs and international organizations such as the World Bank. As an example, a key data source is the World Bank's World Governance Indicators, where scores for a given year are generally published in fall of the following year.

This approach has three key advantages in our opinion. The first is broad comparability. Portfolios may contain bonds from a wide array of sovereign issuers, and this framework affords the investment teams a consistent basis for benchmarking emerging and developed markets. Second, we believe there is a compelling sustainability and practical argument for using a framework that rewards improvements in ESG factors, even if coming from a low base—as is the case with most developing nations. Third, the MSIM approach results in a much more interesting and diverse opportunity set. As illustrated in Display 2, the top decile using the MSIM framework

is a geographically diverse group of emerging and developed markets, an important contrast to the geographically concentrated group of wealthy countries using the unadjusted ESG scores. This presents genuine opportunities for yield and diversification in portfolios in a manner consistent with ESG and sustainability goals.

Conclusions

MSIM's sovereign ESG benchmarking framework is a helpful tool in a broader ESG toolkit. It allows investment teams to quantify and compare sovereign ESG performance on a portfolio level. It informs, but does not dictate,

the decision-making process. By controlling for wealth and incorporating a momentum factor, it rewards ESG improvements by countries with greater scope for such improvements.

We continue to develop and enhance our sovereign ESG toolkit. While the advantage of this benchmarking framework is its broad scope, our emerging and developed market investment teams continue to explore new alternative data sources that can help us achieve our goal of capturing greater real-time changes in ESG momentum that will better inform portfolio decisionmaking and asset price modeling.

Risk Considerations

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 may therefore be less than what you paid for them. Accordingly, you can lose money investing in this Portfolio. Please be aware that this Portfolio may be subject to certain additional risks. 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 the current rising interest-rate environment, bond prices may fall and may result in periods of volatility and increased portfolio redemptions. Longer-term securities may be more sensitive to interest rate changes. In a declining interest-rate environment, the portfolio may generate less income. 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. 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. High-yield securities ("junk bonds") are lower-rated securities that may have a higher degree of credit and liquidity risk. Public bank loans are subject to liquidity risk and the credit risks of lower-rated securities. Foreign securities are subject to currency, political, economic and market risks. The risks of investing in emerging-market countries are greater than risks associated with investments in foreign developed countries. Sovereign debt securities are subject to default risk. Derivative instruments may disproportionately increase losses and have a significant impact on performance. They also may be subject to counterparty, liquidity, valuation, correlation and market risks. Restricted and illiquid securities may be more difficult to sell and value than publicly traded securities (liquidity risk).

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.

IMPORTANT DISCLOSURES

Past performance is no guarantee of future results. The returns referred to in the commentary are those of representative indices and are not meant to depict the performance of a specific investment.

The views, opinions, forecasts and estimates expressed of the author or the investment team as of the date of preparation of this material and are subject to change at any time due to market, economic or other conditions. Furthermore, the views will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date of publication. The views expressed do not reflect the opinions of all portfolio managers at Morgan Stanley Investment Management (MSIM) or the views of the firm as a whole, and may not be reflected in all the strategies and products that the Firm offers.

Forecasts and/or estimates provided herein are subject to change and may not actually come to pass. Information regarding expected market returns and market outlooks is based on the research, analysis and opinions of the authors. These conclusions are speculative in nature and are not intended to predict the future performance of any specific Morgan Stanley Investment Management product.

Certain information herein is based on data obtained from third party sources believed to be reliable. However, we have not verified this information, and we make no representations whatsoever as to its accuracy or completeness.

This material is a general communication, which is not impartial, and all information provided has been prepared solely for informational and educational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. The information herein has not been based on a consideration of any individual investor circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

This communication is not a product of Morgan Stanley's Research Department and should not be regarded as a research recommendation. The information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

DISTRIBUTION

This communication is only intended for and will be only distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

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. Prior to investing, investors should carefully review the strategy's/product's relevant offering document. There are important differences in how the strategy is carried out in each of the investment vehicles.

United Kingdom: Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA. Dubai: Morgan Stanley Investment Management Limited (Representative Office, Unit Precinct 3-7th Floor-Unit 701 and 702, Level 7, Gate Precinct Building 3, Dubai International Financial Centre, Dubai, 506501, United Arab Emirates. Telephone: +97 (0)14 709 7158). **Germany:** Morgan Stanley Investment Management Limited Niederlassung Deutschland Junghofstrasse 13-15 60311 Frankfurt $Deutschland \ (Gattung: Zweignieder lassung \ (FDI) \ gem. \ \S \ 53b \ KWG). \ \textbf{Ireland:}$ Morgan Stanley Investment Management (Ireland) Limited. Registered Office: The Observatory, 7-11 Sir John Rogerson's, Quay, Dublin 2, Ireland. Registered in Ireland under company number 616662. Authorised and regulated by Central Bank of Ireland. Italy: Morgan Stanley Investment Management Limited, Milan Branch (Sede Secondaria di Milano) is a branch of Morgan Stanley Investment Management Limited, a company registered in the U.K., authorised and regulated by the Financial Conduct Authority (FCA), and whose registered office is at 25 Cabot Square, Canary Wharf, London, E14 4QA. Morgan Stanley Investment Management Limited Milan Branch (Sede Secondaria di Milano) with seat in Palazzo Serbelloni Corso Venezia, 16 20121 Milano, Italy, is registered in Italy with company number and VAT number

08829360968. **The Netherlands:** Morgan Stanley Investment Management, Rembrandt Tower, 11th Floor Amstelplein 11096HA, Netherlands. Telephone: 31 2-0462-1300. Morgan Stanley Investment Management is a branch office of Morgan Stanley Investment Management Limited. Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority in the United Kingdom. **Switzerland:** Morgan Stanley & Co. International plc, London, Zurich Branchl Authorised and regulated by the Eidgenössische Finanzmarktaufsicht ("FINMA"). Registered with the Register of Commerce Zurich CHE-115.415.770. Registered Office: Beethovenstrasse 33, 8002 Zurich, Switzerland, Telephone +41 (0) 44 588 1000. Facsimile: +41 (0) 44 588 1074.

Hong Kong: This document has been issued by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to "professional investors" as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this document have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption is available under the relevant law, this document shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong. Singapore: This document should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore ("SFA"); (ii) to a "relevant person" (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. This material has not been reviewed by the Monetary Authority of Singapore. Australia: This publication is disseminated in Australia by Morgan Stanley Investment Management (Australia) Pty Limited ACN: 122040037, AFSL No. 314182, which accept responsibility for its contents. This publication, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

Japan: For professional investors, this document is circulated or distributed for informational purposes only. For those who are not professional investors, this document is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. ("MSIMJ")'s business with respect to discretionary investment management agreements ("IMA") and investment advisory agreements ("IAA"). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the contract multiplied by a certain rate (the upper limit is 2.16% per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This document is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: The Japan Securities Dealers Association, the Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.

U.S.: A separately managed account may not be suitable 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 manager, please refer to Form ADV Part 2.

Please consider the investment objective, risks, charges and expenses of the fund carefully before investing. The prospectus contains this and other information about the fund. To obtain a prospectus, download one at morganstanley.com/im or call 1-800-548-7786. Please read the prospectus carefully before investing.

Morgan Stanley Distribution, Inc. serves as the distributor for Morgan Stanley funds.

NOT FDIC INSURED | OFFER NO BANK GUARANTEE | MAY LOSE VALUE | NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY | NOT A DEPOSIT

IMPORTANT INFORMATION

EMEA: This communication has been issued by Morgan Stanley Investment Management Limited ("MSIM"). Authorised and regulated by the Financial Conduct Authority. Registered in England No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

The indexes are unmanaged and do not include any expenses, fees or sales charges. It is not possible to invest directly in an index. Any index referred to herein is the intellectual property (including registered trademarks) of the applicable licensor. Any product based on an index is in no way sponsored, endorsed, sold or promoted by the applicable licensor and it shall not have any liability with respect thereto.

MSIM has not authorised financial intermediaries to use and to distribute this document, unless such use and distribution is made in accordance with applicable law and regulation. Additionally, financial intermediaries are required to satisfy themselves that the information in this document is suitable for any person to whom they provide this document in view of that person's circumstances and purpose. MSIM shall not be liable for, and accepts no liability for, the use or misuse of this document by any such financial intermediary.

This document may be translated into other languages. Where such a translation is made this English version remains definitive. If there are any discrepancies between the English version and any version of this document in another language, the English version shall prevail.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without MSIM's express written consent.

Morgan Stanley Investment Management is the asset management division of Morgan Stanley.

All information contained herein is proprietary and is protected under copyright law.