SUSTAINABLE INVESTING & FIXED INCOME

A NOTE ON GLOBAL FIXED INCOME INVESTING, WITH IMPACT

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theAdvisory Investment Insights and Thoughts from Brown Advisory

The coupling of growing sustainability risks and low rates in developed markets that have been occurring for more than a decade places an enormous challenge for private and institutional investors utilising bond allocations to generate income and to manage overall portfolio volatility.

A global, sustainable and flexible approach to fixed income can offer investors access to a more attractive stream of income and risk-adjusted returns while simultaneously generating a positive impact on global sustainability. The approach is centred on three main features. First, integrating sustainability dimensions with fundamental bottom-up credit analysis helps provide a deeper understanding of potential investment risks without sacrificing total returns, whilst helping direct capital to issuers contributing positively to ESG matters. Second, adding depth and breadth to the investment opportunity set (including foreign countries, regions, sectors and currencies) increases the potential to generate higher income and realise diversification benefits. Third, an active approach (untethered to the benchmark) can provide the flexibility to allocate risk tactically to areas of the bond market with the most attractive risk-reward profiles (alpha) and customise solutions to better meet investors' goals. We discuss each feature below and present Brown Advisory's forthcoming new offering: a global sustainable fixed income strategy that can deliver consistent income and capital appreciation over a market cycle, while producing tangible positive environmental and social impact.

1. *We Believe that Sustainable Fixed Income is Poised to Deliver Better Investment Outcomes and Positive Global Impact*

There is an inherent asymmetry to fixed income bond performance: upside potential is limited, whilst downside risk in the event of default is meaningful. Integrating environmental, social, and governance (ESG) factors to security selection adds relevant information to help us make better long-term investment decisions. Reducing exposure to issuers with negative ESG features helps mitigate overall downside risk in the portfolio. A recent UN PRI report finds that "sovereigns with higher or improving aggregate ESG performance tend to have lower default risk, lower credit default swap spreads, and lower cost of debt."[1] A study by the University of Cambridge quantifies the impact of sustainability risks on sovereigns by simulating the effect of climate change on sovereign credit ratings for 108 countries under different global warming scenarios. The study finds that 63 countries could see downgrades of more than one notch by 2030 and the sovereign cost of debt increases may range between £16.0 billion and £149.5 billion a year, depending on the severity of climate change.[2] Corporations are also taking concrete actions, dedicating resources to address ESG risks and communicating these initiatives to the market to gain investor confidence. For example, in the aftermath of Hurricane Harvey in Texas in 2017, Hewlett Packard Enterprise moved all manufacturing operations out of the Houston area to locations less exposed to extreme weather, and has disclosed potential climate-related costs and risks in securities filings to reassure investors.[3]

Simultaneously, focusing on and supporting issuers that are opportunistically working to solve pressing environmental and social issues and/or have better governance structures helps align investments with sustainable initiatives and long-term trends toward a sustainable global economy. In conjunction with fundamental bottom-up credit analysis, the sustainability lens effects a meaningful improvement in the profile of fixed income allocations whilst actually improving investment outcomes.[4]

2. *Size, Breadth and Depth of the Global Market Increases Potential for Income and Diversification Benefits*

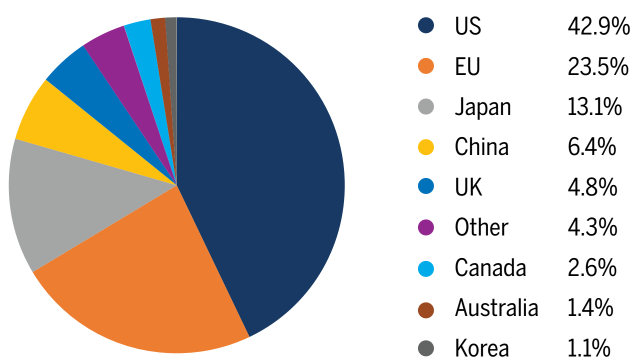
The global fixed income market has grown tremendously since 2000 in size, breadth and depth. The outstanding amount of global debt has grown from £0.9 trillion in 2000 to £100.0 trillion in 2020.[5] Notably, this growth was fuelled by a tremendous increase in issuance across all segments of the market, including a significant evolution and deepening of smaller segments, such as sustainable and emerging debt markets.

The global sustainable debt market—comprising a diverse opportunity set in green, social and sustainability bonds, and nascent labels like sustainability-linked bonds—had a mere £0.05 billion in issuance in 2000 and reached £544.4 billion in 2020. Total issuance in the global sustainable debt market for the 2000-2020 period reached £1.8 trillion.[6] Likewise, emerging markets have grown exponentially across both corporate and sovereign debt, in local and foreign currency denominations. Total issuance of emerging market debt grew from £250.0 billion in 2000 to £17.4 trillion in 2020, a 70 times increase.[7] Developed market debt outstanding exhibited sustained growth over the 2000-2020 period as well, with corporate debt outstanding reaching £20.1 trillion and sovereign debt outstanding reaching £36.3 trillion, from £228.6 billion and £531.6 billion in 2000, respectively.[8]

The global sustainable fixed income opportunity set—including developed and emerging market sovereigns, investment grade and high yield corporate bonds, mortgage, and other asset-backed securities—affords investors access to a broader range of countries, asset classes, currencies, quality of investments, and thus, the potential to generate more robust portfolios with higher income and to realise diversification benefits. For example, a UK-based investor focused only on GBP-denominated bonds, would be limited to less than 5% of the global bond market and not participate in the larger and more liquid segments of the market (Exhibit 1).

Beyond labelled bonds, we believe that a much larger opportunity for

Exhibit 1: Composition of the global fixed income universe, by country

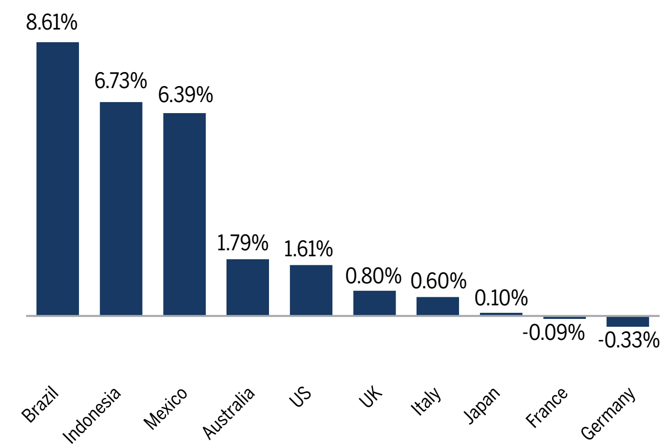


SOURCE: Bloomberg. Data as of March 15, 2021. Bloomberg Barclays Multiverse Index, % of market capitalisation.

sustainable investing exists in evaluating the products and services of a company, the characteristics of the business, and the commitment to making the transition to sustainable practices. Governments will likely continue to support sustainable debt market growth and development in the years ahead, as they heighten their focus on climate change and link economic recovery plans with sustainable development goals. Moody's recently stated that "this will be the year of green stimulus as major economies attempt to integrate their economic recovery and job creating initiatives with their longer-term efforts to reduce carbon emissions."[9] In fact, £470 billion of the approximately £1.7 trillion EU budget for 2021-2027 and COVID-19 recovery package approved in 2020 have been earmarked to green projects over the next seven years, and leaders have also agreed that funds not specifically earmarked for climate spending must "do no harm" to the EU's goal to become climate neutral by 2050. This is the largest single climate pledge ever made to date.[10] In addition, the Biden administration's £3.4 trillion COVID-19 recovery package is expected to allocate record spending to initiatives fighting climate change.[11]

With many Central Banks committed to extraordinary monetary easing while rates and credit spreads likely remain lower and tighter for even longer, increasing the yield of a fixed income portfolio may be particularly challenging for investors favouring domestic fixed income allocations. Investing in different regions and segments of the fixed income market can augment portfolio income and returns. For example, the range in the 10-year government bond yield for the major markets is quite broad, with Europe offering negative rates and emerging markets in the 5-9% range, on a currency unhedged basis (Exhibit 2).

Exhibit 2: 10-year government bond yield, largest ten markets



SOURCE: Bloomberg. Data as of March 15, 2021.

Variation in inflation, growth, monetary policy, corporate default rates and business cycles, among other global factors, results in divergences in performance across different regions and sectors of the fixed income market over time. Diversifying return sources may provide comparable returns to domestic bond markets with lower volatility, and even mitigate risks from overexposure to idiosyncratic country factors.

3. An Active and Flexible Approach Provides Flexibility to Capture Alpha and Customise Solutions

Fixed income benchmarks are flawed instruments, skewed to the most heavily-indebted companies and countries, resulting in uncomfortably high levels of interest rate risk. However, we believe that the breadth and depth of the global sustainable fixed income market provide fertile hunting grounds for portfolio managers to uncover alpha. Global fixed income includes a broad and diverse array of sectors covering a wide range of currencies, interest rates, countries, capital structures, credit and duration characteristics that, in turn, generate a broad range of returns as economic cycles and macroeconomic drivers move forward in an asynchronous way (Exhibit 3).

An active and dynamic asset allocation approach has the flexibility to allocate risk to broad sectors within the fixed income market with the highest alpha potential and to re-position its exposures as markets and sectors evolve. The ability to shift allocations opportunistically across market segments allows investors to access a more compelling stream of returns, than a more passive one that tracks or hugs a benchmark, and potentially capture additional alpha. Furthermore, the breadth and depth of the global fixed income market allows customized investment solutions to achieve specific goals such as income, capital appreciation, preservation of capital, impact, risk tolerance and liquidity needs.

BROWN ADVISORY GLOBAL SUSTAINABLE FIXED INCOME

A global sustainable fixed income approach opens up the world's bond markets for institutional investors. Brown Advisory's experienced team of fixed income portfolio managers seeks to bring to market a globally-diversified, dynamic, and sustainability-orientated strategy that we believe can deliver consistent income and capital appreciation over a market cycle, while producing tangible positive environmental and social impact. The strategy's main features are:

1. **Focus on Investment Outcomes and Sustainability Goals** by combining a proven global investment process with our proprietary ESG research methodology
2. **Global Opportunity Set** reflecting the size, breadth and depth of the global fixed income universe
3. **Dynamic Asset Allocation** across a broad range of sustainable debt securities, deviating from traditional benchmarks to capture alpha
4. **Enhanced Income Generation Potential** through exposure to a broader range of fixed income markets

Exhibit 3: Performance of fixed income sectors by calendar year, 2011 – 2020 (returns in %)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Best performers	Global xUS CMBS 11.0	Global High Yield 19.6	Global High Yield 7.3	US MBS 6.5	US MBS 1.6	Global High Yield 14.3	US CMBS 16.2	US MBS 1.0	Global High Yield 12.6	US MBS 3.8
	Global Inflation 10.2	EM Hard Currency 18.1	Pan-Euro Aggregate 5.0	Global Inflation 3.4	EM Hard Currency -0.2	EM Hard Currency 9.0	Global xUS ABS 16.0	Global Treasury -0.4	EM Hard Currency 12.1	Global High Yield 0.0
	Global xUS ABS 7.8	Global xUS CMBS 15.8	Global xUS ABS 3.4	Global Corporates 3.1	Global High Yield -2.7	Global Corporates 4.3	Pan-Euro Aggregate 14.1	EM Local Gov -0.9	Global Corporates 11.5	Global xUS CMBS -0.9
	US MBS 6.6	Pan-Euro Aggregate 12.3	Global xUS CMBS 2.5	EM Hard Currency 3.1	Global Aggregate -3.2	Global Inflation 3.9	EM Local Gov 10.7	Global Aggregate -1.2	Global xUS ABS 9.4	Global xUS ABS -0.9
	Global Treasury 6.3	Global xUS ABS 12.2	Global Corporates 0.3	EM Local Gov 3.0	Global Treasury -3.3	EM Local Gov 2.4	Global High Yield 10.4	EM Hard Currency -3.0	Global xUS CMBS 8.5	EM Local Gov -2.1
	EM Hard Currency 5.8	EM Local Gov 11.2	US MBS -1.6	Global xUS ABS 1.9	Global Corporates -3.6	Global Aggregate 2.1	EM Hard Currency 9.6	Global Corporates -3.6	Global Inflation 8.0	EM Hard Currency -2.2
	Global Aggregate 5.6	Global Corporates 11.2	Global Aggregate -2.6	Global xUS CMBS 1.2	EM Local Gov -3.6	US MBS 1.70	Global Corporates 9.1	Global High Yield -4.1	EM Local Gov 7.7	Global Corporates -2.4
	Global Corporates 4.3	Global Inflation 8.5	EM Hard Currency -2.7	Global Aggregate 0.6	Global Inflation -5.0	Global Treasury 1.7	Global Inflation 8.7	Global Inflation -4.1	Global Aggregate 6.8	Global Aggregate -2.6
	Global High Yield 3.1	Global Aggregate 4.3	Global Inflation -3.2	Global High Yield 0.0	Global xUS CMBS -6.1	Pan-Euro Aggregate -1.0	Global Aggregate 7.4	Pan-Euro Aggregate -4.7	US MBS 6.5	Pan-Euro Aggregate -3.1
	Pan-Euro Aggregate 2.1	US MBS 2.6	EM Local Gov -3.8	Global Treasury -0.8	Global xUS ABS -6.8	Global xUS ABS -5.8	Global Treasury 7.3	Global xUS CMBS -5.8	Global Treasury 5.6	Global Inflation -3.1
Worst performers	EM Local Gov 0.5	Global Treasury 1.8	Global Treasury -4.3	Pan-Euro Aggregate -1.3	Pan-Euro Aggregate -8.2	Global xUS CMBS -7.7	US MBS 2.6	Global xUS ABS -6.5	Pan-Euro Aggregate 5.3	Global Treasury -3.3

SOURCE: SOURCE: FactSet. Data as of December 31, 2020. Bloomberg Barclays Indices: Global xUS CMBS – Bloomberg Barclays Global ex US CMBS Index; Global Inflation – Bloomberg Barclays Global Inflation Linked Index; Global xUS ABS – Bloomberg Barclays Global ex US ABS Index; US MBS – Bloomberg Barclays US MBS Index; Global Treasury – Bloomberg Barclays Global Treasury Index; EM Hard Currency – Bloomberg Barclays Emerging Markets USD Aggregate Index; Global Aggregate – Bloomberg Barclays Global Aggregate Bond Index; Global Corporates – Bloomberg Barclays Aggregate Corporates Index; Global High Yield – Bloomberg Barclays Global High Yield Index; Pan-Euro Aggregate – Bloomberg Barclays Pan-European Aggregate Bond Index; EM Local Gov – Bloomberg Barclays Emerging Markets Local Currency Government Index.

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An investor cannot invest directly into an Index. Definitions of indices used are below.

The **Bloomberg Barclays Emerging Markets USD Aggregate Index** is a flagship hard currency Emerging Markets debt benchmark that includes fixed and floating US dollar- denominated debt issues from sovereign, quasi-sovereign, and corporate EM issuers. Country eligibility and classification as Emerging Markets is rules-based and reviewed annually using World Bank income group and International Monetary Fund (IMF) country classifications. This index was previously called Bloomberg Barclays US EM Index, and history is available back to 1993.

The **Bloomberg Barclays Emerging Markets Local Currency Government Index** is a flagship index that measures the performance of local currency Emerging Markets (EM) debt. Classification as an EM is rules-based and reviewed annually using World Bank income group, International Monetary Fund (IMF) country classification and additional considerations such as market size and investability.

The **Bloomberg Barclays Global Treasury Index** tracks fixed-rate, local currency government debt of investment grade countries, including both developed and emerging markets. The index represents the treasury sector of the Global Aggregate Index and contains issues from 37 countries denominated in 24 currencies. The three major components of this index are the US Treasury Index, the Pan-European Treasury Index and the Asian-Pacific Treasury Index, in addition to Canadian, Chilean, Israeli, Mexican, South African and Turkish government bonds. The index was created in 1992, with history available from January 1, 1987.

The **Bloomberg Barclays Global Aggregate Bond Index** is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitised fixed-rate bonds from both developed and emerging market issuers. There are four regional aggregate benchmarks that largely comprise the Global Aggregate Index: the US Aggregate (USD 300mm), the Pan-European Aggregate, the Asian-Pacific Aggregate, and the Canadian Aggregate Indices. The Global Aggregate Index also includes Eurodollar, Euro-Yen, and 144A Index-eligible securities, and debt from five local currency markets not tracked by the regional aggregate benchmarks (CLP, MXN, ZAR, ILS and TY). A component of the Multiverse Index, the Global Aggregate was created in 2000, with index history backfilled to January 1, 1990.

The **Bloomberg Barclays Global Aggregate Corporates Index** is a flagship measure of global investment grade, fixed-rate corporate debt. This multi-currency benchmark includes bonds from developed and emerging markets issuers within the industrial, utility and financial sectors.

The **Bloomberg Barclays Global Aggregate Bond Index ex USD – CMBS** tracks commercial mortgage-backed securities (CMBS) in the Bloomberg Barclays Global Aggregate Bond Index, excluding US CMBS.

The **Bloomberg Barclays Global Aggregate Bond Index ex USD – ABS** tracks asset-backed securities (ABS) in the Bloomberg Barclays Global Aggregate Bond Index, excluding US ABS.

The **Bloomberg Barclays Global Inflation – Linked Index** measures the investment-grade, government inflation-linked debt from 12 different developed market countries. Investability is a key criterion for inclusion of markets in this index, and it is designed to include only those markets in which a global government linker fund is likely and able to invest.

The **Bloomberg Barclays Global High Yield Index** is a multi-currency flagship measure of the global yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities. The Global High Yield Index is a component of the Multiverse Index, along with the Global Aggregate, Euro Treasury High Yield and EM Local Currency Government Indices. It was created in 1999, with history backfilled to January 1, 1990.

The **Bloomberg Barclays Multiverse Index** provides a broad based measure of the global fixed income bond market. The index is the union of the Global Aggregate Index and the Global High Yield Index as it represents investment grade and high yield bonds in all eligible currencies.

The **Bloomberg Barclays Pan-European Aggregate Bond Index** tracks fixed-rate, investment-grade securities issued in the following European currencies: EUR, GBP, NOK, DKK, SEK, CHF, CZK, HUF, PLN, RUB, and SKK. Inclusion is based on the currency of the issue, and not the domicile of the issuer.

The **Bloomberg Barclays US Aggregate Bond Index** is an unmanaged, market-value weighted index composed of taxable US investment grade, fixed rate bond market securities, including government, government agency, corporate, asset-backed and mortgage-backed securities between one and 10 years.

The **Bloomberg Barclays US MBS Index** tracks mortgage-backed securities (MBS) in the Bloomberg Barclays US Aggregate Bond Index.

Terms and definitions: **Alpha** is a measure of risk-adjusted excess return above that of a benchmark. **Market Capitalisation** refers to the aggregate value of a company's publicly traded stock.