



CAMRADATA



ESG in Fixed Income Whitepaper

Sponsored by



TCW

Clear and Independent Institutional Investment Analysis

We provide institutional investors, including pension funds, insurance companies and consultants, with data and analysis to assess, research and report on their investments. We are committed to fostering and nurturing strong, productive relationships across the institutional investment sector and are continually innovating new solutions to meet the industry's complex needs.

We enable institutional investors, including pension funds, insurance companies and consultants, to conduct rigorous, evidence-based assessments of more than 5,000 investment products offered by over 700 asset managers.

Additionally, our software solutions enable insurance companies to produce consistent accounting, regulatory and audit-ready reports.

To discuss your requirements

+44 (0)20 7832 6517

info@camradata.com

Find us at camradata.com



Join us on LinkedIn



Follow us on Twitter @camradata

Contents

03	Introduction
04	ESG in Fixed Income Roundtable
10	Roundtable Participants
15	Aegon Asset Management - Aligning financial and climate obligations within fixed income portfolios
19	MFS Investment Management - Time to rethink pension scheme asset allocation
23	TCW - Crosscurrents of Sustainable Investing in 2023



Welcome to CAMRADATA's ESG in Fixed Income Whitepaper

Fixed income is a mainstay in institutional investor portfolios. Its very name indicates its reliability as an asset class. But what if the drivers of this income change?

Credit risk is one of the largest return drivers within an investor portfolio. Understanding the potential of any company and its ability to pay back a loan is the underlying basis for debt markets to function.

Yet, on the journey towards sustainability within portfolios, these debt markets have trailed their equity counterparts in embracing the risks these companies face, and investors have been less active in considering the impact of all the issues that regularly demand coverage within their stock and private equity holdings.

In a global economy being wracked by all three elements that make up the ESG moniker – environmental, social and governance-focused investment – investors should take as much interest in the make up of their fixed income portfolio on a long-term basis as they do on the equities side.

Additionally, within the sphere of stewardship and engagement, the provision of capital at an acceptable rate to fund growth, innovation or other vital commercial activities, is arguably a more effective lever than voting for resolutions during AGM season.

The introduction of green bonds, and other sustainability-based initiatives, has moved the conversation on a little, but in a broader debt market worth more than \$300 trillion, which is more than double that of listed global equities, can these products be seen as truly moving the needle?

With an expansive range of fixed income instruments to address, the sustainability question for this part of the investment landscape is not straightforward. Yet the imperative and impetus to move more quickly to embrace the risks and opportunities presented by sustainability within them is growing.

The challenge for investors and their advisors is to see what works for them and their long-term portfolio, but also stay alert to a changing environment and economy, and stay agile enough to address new issues as they appear.

ESG in Fixed Income Roundtable

The CAMRADATA ESG Fixed Income Roundtable took place in London on 30th November 2022.



At a recent CAMRADATA roundtable, experts from across the industry shared their thoughts on the burgeoning ESG fixed income space and explored the challenges and opportunities of the market.

Fixed income is a cornerstone of institutional investors' portfolios, yet as sentiments shift towards sustainable investments, embracing ESG through the debt markets presents a range of challenges.

The fixed income sector has trailed its equity counterpart in embracing the environmental, social, and governance risks faced by companies, and investors have been less active in considering the impact of all the issues that regularly demand coverage within their stock and private equity holdings.

In recent months, the growing provision of green bonds, and other sustainability-based initiatives, has moved the conversation on a little, but in a

debt market worth more than \$300 trillion, investors are rightly questioning whether these products are enough to move the needle. But the drive to move quickly to embrace the risks and opportunities presented by sustainability within fixed income markets is growing, necessitating all stakeholders in the investment chain

The right investment for the right investor

Natalie Winterfrost, director at Law Debenture, said it is widely recognised that ESG was integrated into equities first, resulting in a large degree of ESG equity exposure from institutional investors. Fast forward a few years, and Winterfrost said there has "been a shift change" in broad ESG allocations "because we don't want much equity left anymore in most of our schemes."

"Historically, even though we might have invested in quite long dated fixed income instruments, there was a feeling that we weren't necessarily holding them for the long term, and it was quite easy to trade in and out and that any risks to ESG were not going to repair the credit. There wasn't much of an investment rationale for it," she said. But a preference to "buy and retain" emerged, leading institutional investors to consider the long-term implications of their holdings. "That's when ESG started to come into fixed income investing in a significant way," Winterfrost said.

As Winterfrost described to attendees, a shift-change in investment needs paved the way for a broader uptake of ESG fixed income investments, but this is not enough to appropriately facilitate the range of non-financial considerations that go into ESG investments, namely the application of governance procedures.

“By aggregating fixed income and equity AUM together, we can gain more influence, and we encourage our fund managers to engage more cohesively across the asset classes they manage”.

Laying the foundations

Chandra Gopinathan, senior investment manager at Railpen, said the scheme's internal approach to ESG and stewardship in asset classes outside equities, starts with understanding the governance and accountability mechanisms available to investors across different asset classes, including fixed income

“You need to understand what is available and what is missing and needed, and then establish the approach to climate, ESG and stewardship in the asset class, for investors and the respective trustees,” he said.

Railpen is attempting to do this across corporate fixed income through their leadership of the bondholder stewardship initiative at IIGCC (Institutional Investors Group on Climate Change) to target bolstering exactly these mechanisms and along with a working group of large bond managers.

Gopinathan's experience of developing the necessary skill set, governance and accountability mechanisms to handle fixed income ESG investments aligns closely with that of Gustave Lorient-Boserup, responsible investment manager at LGPS asset pooling company London CIV.

London CIV has only started to build out its responsible investment capabilities over the past two years. Engaging with their clients to understand their investment needs across equities and fixed income portfolios provided the bedrock from which a broader responsible investment policy was formed, but outsourcing stewardship responsibilities

amplified London CIV's impact across all asset classes.

“By aggregating fixed income and equity AUM together, we can gain more influence”, and we encourage our fund managers to engage more cohesively across the asset classes they manage” Lorient-Boserup said.

From the asset management perspective, governance analysis of fixed income investments has long existed alongside equity governance scrutiny, explained Julius Huttunen, head of ESG, fixed income public markets at Aegon Asset Management. But innovations, such as the labelling of ESG debt funds, has created new assessment pathways that do not apply to equities.

“There are certain innovations that don't exist in the equity space that are quite interesting. There's a lot of room to improve, but we're moving the needle there,” said Huttunen.

Katie Yu, ESG fixed income strategist at Phoenix Group described how her fixed income approach is now targeting the climate transition on the back of an initial exposure policy that was later supplemented by a broader ESG integration approach.

“Most of the asset owners and asset managers have been setting commitments to be net zero by 2050, so you need to have a defined decarbonisation strategy in fixed income asset classes to deliver this net zero commitment,” she said.

As such, much of Yu's attention has been on portfolio decarbonisation, net zero aligned asset selection, considering factors like impact investing, biodiversity, and physical risk as part of the investment process. Yu described it as part of the wider “journey” the

business has undertaken to be more conscious of ESG factors.

Defining the space

In light of the relatively nascent stature of the ESG fixed income market, there is a pressing need for portfolio managers to understand definitions and the wider taxonomy of the fixed income ESG space, said Jamie Franco, head of fixed income ESG at TCW.

The need to cement definitions is indicative of the fixed income ESG market trailing its equity counterpart, leading to important discussions on performance and the overall role within a portfolio to be temporarily sidelined.

“You can't really answer the question of performance unless you are very clear on what you're doing,” added Franco.

Pete Smith, principal and head of sustainable investment, at Barnett Waddingham echoed this sentiment, noting that there is little “commonality of description on what ESG represents” within the fixed income space, and that the end users will all have “very different” interpretations of what needs to be done to bolster the sustainable credentials of this nascent area.

But the narrative is shifting. As the fixed income ESG market matures with new products becoming available, investors are seeking to capitalise on more intricate investment strategies.

Broadly, Lorient-Boserup said defined contribution (DC) clients have shifted away from “a quite simplistic exclusions base,” instead opting to hold assets for longer, to steer change – a trend true in both the fixed income and equities space.



“Loriot-Boserup said defined contribution (DC) clients have shifted away from a quite simplistic exclusions base, instead opting to hold assets for longer, to steer change – a trend true in both the fixed income and equities space”.

“A lot of them are starting to realise that excluding energy, mining sectors, and material sectors isn’t doing anything to reduce carbon emissions in the atmosphere.

“You do need to stay invested within those sectors, and engage with companies there in order to pressure them to set the targets to improve their business models, and improve their operations so that they themselves can get to net zero and contribute to global greenhouse gas emissions reductions.

“And whilst we would agree that it has primarily focused on equities so far this year due to exclusions to more proactive ESG integration, it is also starting to translate into fixed income products now. That’s definitely a positive step”, he said.

Changing priorities

But Owen Murfin, global fixed income portfolio manager at MFS Investment Management said there are conflicting priorities with clients, with alpha generation not being “the only objective anymore,” demanding investment managers find a compromise in their approach to the rapidly-evolving space.

Sustainability objectives are increasing in importance, but that is not a valid reason to “give up on alpha” as the companies best positioned should also be the alpha creators of the future, especially over the long term, he explained.

But Murfin conceded the duality of seeking both alpha and sustainable outcomes “does

reduce the universe” limiting diversification, particularly within fixed income.

Even within organisations, differing viewpoints can result in conflicting priorities. Murfin pointed towards investment analysts, who “want to hold what is cheap”.

In terms of the number of names that currently satisfy investors’ demands, shortlists usually consist of “a few dozen” possibilities, Murfin said.

From an institutional investor’s standpoint, priorities are also currently shifting, Barnett Waddingham’s Smith noted, on the back of the assumption that pension schemes are long-term investors.

He explained: “If you look at the liability horizon for a growing number of pension schemes approaching buy-in, it’s anywhere between five and 10 years, so that is one of the challenges that we have when we talk about sustainable investment, given the perception of it as a long-term issue.

“Another challenge is that for many they are not going to be the owner in the long term, and will be passing the assets to someone else,” he said. As such, while there

have been lessons learned from the equity side, it is important to approach fixed income investing with tools and approaches relevant to the asset class.

"Because you're doing something in equities, doesn't mean you should mirror that in what you do on the fixed income side," Smith added.

Credit spreads and sovereigns

As the ESG fixed income market continues to mature, attention will inevitably turn to value for money and whether ESG and sustainability factors will be reflected in the capital cost. Notably, as new products come to market, credit spread is set to be a hotly debated topic within the space.

Loriot-Boserup said the perceived value of such costs depends on how you frame ESG factors.

"From academic evidence, it's quite clear that credit spreads are already very well correlated to high ESG factors, so that is clearly embedded already. But if you look at other forms of ESG factors, such as forward-looking data, there is potential to take advantage of these structural trends like the transition to net zero and get good, forward-looking ESG whilst also maintaining large credit spreads," he added.

Aegon AM's Huttunen agreed there is a correlation, but added it is not clear if it's driven by quality bias or the ESG factors yet, but exclusion screens drive a lot of the behaviour in the market.

As such, there is room for these strategies to be developed and refined over time, Franco said, distinguishing ESG fixed income strategies from two years ago and the approaches being developed today. In short, investors and managers need the time to be able to establish whether pricing variations are ESG-correlated or not.

On the flip side, analysts are currently contending with a lot of noise in the data, with data amalgamators often measuring the same indicator different ways,

limiting the scope of comparability, Franco explained.

Yu echoed this sentiment, saying asset owners rely on their estimators' capabilities when it comes to applying ESG data to fixed income investing. By way of a litmus test, Yu monitors data providers' own ESG and net zero policies to see if their actions align with their analysis.

But in response to market-wide calls for greater clarity, asset owners are increasingly setting clear principles when launching fixed income funds, explains Loriot-Boserup.

He said: "We want the fund manager to demonstrate clear capabilities and have that fundamental ESG analysis that cuts through the data inconsistencies and gaps.

We also need our fund managers to have clear forward-looking expectations of how those risks will evolve over time and whether the companies or the issuers have set decarbonisation plans to reduce carbon intensity over time.

There are all these elements which we are already starting to see that our fund managers or our prospective fund managers, should also be consistent with, he added.

Winterfrost welcomed these thoughts but added that it is currently difficult to validate their actions against their promises.

The role of regulation

The role of regulation in the context of sustainable products is of paramount importance, and with ESG regulations being introduced in major economies, the direction of travel in the fixed income ESG space is set to be shaped on the back of regulations currently being implemented.

Loriot-Boserup pointed to the controversy surrounding the EU taxonomy and whether it should include natural gas and nuclear power assets.

He stated that as a minimum, regulators should provide the baseline of what the lowest possible expectations are of a

fixed income investment to qualify as 'sustainable', and what metrics investors can use to evaluate their fixed income holdings.

He said: "This is what we've seen with the EU's SFDR and what we're seeing with the FCA sustainability disclosure requirements as well".

"They're setting the tone and the baseline set of criteria of what you should expect from investing in a sustainable product, in order to avoid all the issues associated with greenwashing".

"You are getting that stamp of approval that there is at least some element of due diligence on the ESG characteristics of assets and the issues that you're invested in," he added.

Looking ahead, the panellists agreed that biodiversity is climbing up global regulators' agendas. Franco said biodiversity is a critical part of a climate transition portfolio, but she doesn't see many transition strategies in Europe that are going to fit into that regulation.

I am much more encouraged by the ability to develop a comprehensive climate transition strategy under the FSA's disclosure requirements, particularly the sustainable improver category, she added.

Roundtable Participants



Julius Huttunen, CFA

Head of ESG

Personal Profile

Julius Huttunen, CFA, is head of ESG – fixed income public markets in the responsible investment team. He oversees engagement activities on the credit side and works with portfolio managers and credit analysts globally to support ESG integration in investment decision making and the development of responsible investment solutions.

He is chair of the Fixed Income Sustainable Investment Committee responsible for determining eligibility to sustainability-themed credit portfolios.

Prior to joining the firm, Julius worked at Calvert Research and Management in Washington D.C., where he was an ESG research analyst covering corporate issuers, continuously building on their ESG integration process and focusing on corporate governance research.

Julius has been in the industry since 2013 and joined the firm in 2019. He holds an MSc in international strategy and economics from University of St. Andrews and is a CFA charterholder

Company Profile

Aegon AM is an active global investor. Our 389* investment professionals manage and advise on assets of £271 billion* for a global client-base of pension schemes, public funds, insurance companies, banks, foundations, wealth managers, family offices and individuals.

We are a global business with over 1,200* employees across Europe, the Americas and Asia. We organise our investment capabilities around four focused investment platforms where we have deep asset-class expertise: fixed income, real assets, equities, and multi-asset & solutions. *as at 30/06/22



Owen Murfin, CFA

Institutional Portfolio Manager

Personal Profile

Owen Murfin, CFA, is an investment officer and institutional fixed income portfolio manager at MFS Investment Management® (MFS®). He is a member of the MFS Global Fixed Income portfolio management team. In this capacity, he participates in portfolio strategy discussions, customizes portfolios to client objectives and guidelines and communicates portfolio investment strategy and positioning. He is based in London.

Prior to joining MFS in 2017, Owen served as managing director and global fixed income portfolio manager at BlackRock for 15 years. Before that, he worked as an associate and global fixed income portfolio manager at Goldman Sachs Asset Management for five years.

Owen earned a Bachelor of Science degree with first class honors from University College London. He holds the Chartered Financial Analyst designation.

Company Profile

In 1924, MFS launched the first US open-end mutual fund, opening the door to the markets for millions of everyday investors. Today, as a full-service global investment manager serving financial advisors, intermediaries and institutional clients, MFS still serves a single purpose: to create long-term value for clients by allocating capital responsibly. We believe that purpose is synonymous with sustainable investing, which we approach by integrating ESG factors into our research, security selection and overall investment process.

Our powerful investment approach combines collective expertise, thoughtful risk management and long-term discipline. Supported by our culture of shared values and collaboration, our teams of diverse thinkers actively debate ideas and assess material risks to uncover what we believe are the best investment opportunities in the market.

To learn more visit www.mfs.com

Roundtable Participants



Jamie Franco

*Senior Vice President,
Head of Fixed Income ESG*

Personal Profile

Ms. Franco is Head of Fixed Income ESG and is responsible for managing the strategic integration of ESG considerations across all fixed income sectors, in addition to working with clients to achieve their ESG objectives within their fixed income mandates.

Before assuming her current role, she was a Senior Account Manager and Product Specialist within the Client Services group, where she was responsible for communicating investment strategies, performance, and outlook to fixed income clients.

Before joining TCW in 2014, Ms. Franco spent over a decade at the U.S. Department of the Treasury in Washington, D.C., serving in several roles, including as Senior Advisor to Treasury Leadership in both the domestic and international divisions, International Economist, and Deputy Director of the International Banking and Securities Markets Office. Ms.

Franco was also an Advisor to the U.S. Executive Director at the International Monetary Fund for several years. Ms. Franco holds a BA in Political Science from Johns Hopkins University and an MA in International Economics from Johns Hopkins School of Advanced International Studies. Additionally, she holds Series 7 and 63 FINRA licenses.



TCW

Company Profile

TCW is a leading global asset management firm with more than five decades of investment experience and a broad range of products across fixed income, equities, emerging markets, and alternative investments. Through the TCW and MetWest Fund Families, TCW manages one of the largest mutual fund complexes in the U.S. TCW's clients include many of the world's largest corporate and public pension plans, financial institutions, endowments and foundations, as well as financial advisors, and high net worth individuals. As of September 30, 2022, TCW had total assets under management, including commitments, of \$206 billion.

TCW is headquartered in Los Angeles, and has offices in New York, Boston, Chicago, London, Milan, Singapore, Hong Kong, Tokyo, and Sydney.



Pete Smith

Principal and Senior Investment Consultant

Pete is a Principal and Senior Investment Consultant in our Glasgow office. Pete has significant experience in providing strategic and implementation investment advice to defined benefit schemes both in the private and public sector. He is a lead member of Barnett Waddingham's Sustainability and ESG investment team.

Pete's extensive experience, clear advice and proactive approach have helped him to become a trusted consultant to a wide range of businesses.

A native of Glasgow Pete has a love of following Scottish national sports teams and golf.



Natalie Winterfrost

Director

An experienced actuary, Natalie has considerable pensions, investment consulting and asset management experience gained over more than 25 years.

As a Trustee she has taken a leading role in the industry, helping large schemes address ESG and TCFD issues. And while her investment expertise is sought out for Investment Committee roles, she has a broad interest in all matters pensions and represents LawDeb on everything from GMP working groups, valuation and covenant committees and discretions committees. Her trustee boards range in size from sub £100 million right up to the very largest pension funds.

Natalie is a CFA Charterholder and CFA UK Fellow for her services to the investment industry. She is also a Fellow of the Institute and Faculty of Actuaries and has a Joint Honours in Mathematics & Economics from Bristol University.

Roundtable Participants



Gustave Lorient

Responsible Investment Manager

Gustave joined London CIV in November 2020 as a Responsible Investment Manager. Having previously worked as a Senior ESG data Specialist for a large financial services organisation, Gustave now leads the Pool's work on ESG risk analysis, providing insight into potential risks and opportunities that may impact the Pool's performance.

He is also responsible for the development and implementation of the London CIV's Net-Zero Strategy.

Gustave has studied the interactions between finance, economics and the environment at the London School of Economics, where he holds a BSc in Environmental Policy with Economics, and at Imperial College, where he obtained an MSc in Climate Change Management and Finance.



Katie Yu

ESG Fixed Income Strategist

Katie Yu, CFA, ESG Fixed Income Strategist, joined the firm in 2021. Katie leads ESG integration and broader sustainable Investment strategy across the Fixed Income asset class within the Phoenix Sustainable Investments team.

Prior to joining Phoenix Group, Katie was Euro Corporate Credit, Global Convertible Bond Portfolio Manager at DWS group. Katie has a Master's degree in Financial Markets from EDHEC and a BA in International Finance from the Kyung-Hee University. Katie is a Chartered Financial Analyst charterholder.

Moderator



Chandra Gopinathan

Senior Investment Manager

Chandra Gopinathan leads the Climate workstream at Railpen and is responsible for climate strategy, energy transition investment, climate risk integration and management across Railpen's portfolios and investment in climate and natural capital opportunities and solutions.

Chandra has two decades of experience across investing and portfolio management, credit structuring and ESG analysis and brings a multi-asset investment perspective to Railpen's sustainability practices.

Chandra has a Master's degree from Columbia University and is a CAIA designation.



Elizabeth Pfeuti

Chief Client Officer

Former Dow Jones staffer Elizabeth Pfeuti is Rhotic's Chief Client Officer and a member of the Rhotic Media executive leadership team. A highly-decorated journalist, Elizabeth has been in financial journalism for around 15 years. At Dow Jones, she covered the asset management, investment banking and investor services beats for Financial News, where she also wrote on a wide range of regulatory themes.

She was previously the European Editor for CIO Magazine and boasts an exceptional contact book of buy-side and in-house institutional CIOs and asset management executives. More recently she has worked on corporate briefs for pension consultants, investment banks and asset management groups.



CONTENT &
LEAD GENERATION

NETWORKING
FORUMS

TAILOR MADE
PANELS

LATEST MARKET
TRENDS

CAMRADATA Roundtables

We bring together Institutional Investors and Asset Managers resulting in an interactive and dynamic debate, covering a wide array of topical asset classes.

Branding , editorial and advertising opportunities are part of all roundtables as well as the opportunity to connect with expert investor panels and network with key stakeholders.

info@camradata.com



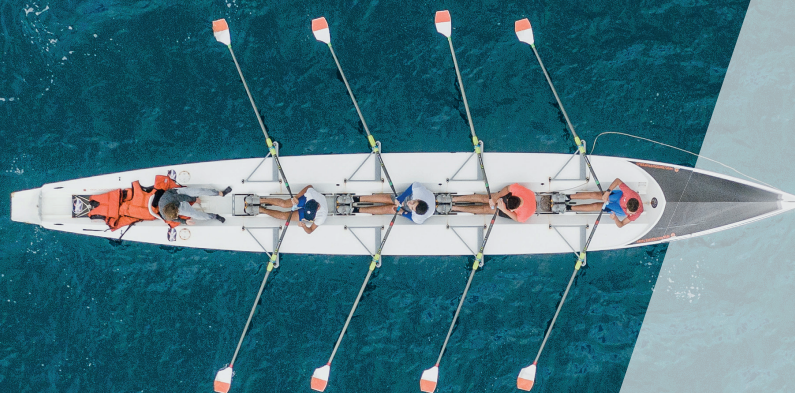
CAMRADATA

INVESTING BEYOND BORDERS

For 175 years we have been expanding our knowledge, broadening our horizons and seeking new investment opportunities for our clients.

Today we organize our investment teams globally by asset class, bringing the breadth and depth of our research and investment capabilities together for our clients around the world. We call it investing beyond borders.

Find out more at www.aegonam.com



*Beyond
borders™*

AEGON
Asset Management

For professional investors only. Capital at risk. The value of investments can go down as well as up. This marketing is issued in the EU and EEA by Aegon Investment Management B.V. and in the UK by Aegon Asset Management UK plc. Aegon Investment Management B.V. is authorised and regulated by the Netherlands Authority for the Financial Markets and Aegon Asset Management UK plc is authorised and regulated by the Financial Conduct Authority. Aegon Asset Management businesses are wholly owned subsidiaries of Aegon N.V.
Adtrax: 5189234.2 | Exp. date: 30 June 2023

Aligning financial and climate obligations within fixed income portfolios

Regulatory, societal and investment pressures are driving greater awareness of climate-related risks. At the same time investors face many challenges, including a backdrop of negative real returns on cash, which demand they consider alternative investment solutions.

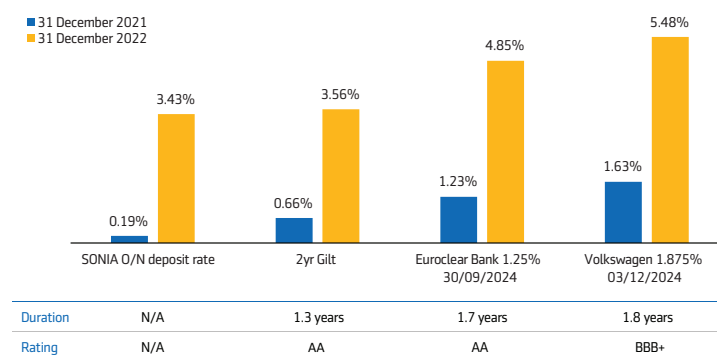
This article discusses why short-dated corporate bonds which are relatively close to maturity can help investors capture attractive yields with minimal interest-rate sensitivity, low portfolio volatility and good levels of liquidity – all while having a relatively low climate-related risk.

The appeal of short-dated investment grade bonds

The unique characteristics of short-dated bonds offer investors an opportunity to access a lower-volatility segment of the broader investment grade fixed income market.

Short-dated investment grade bonds can offer attractive and relatively consistent returns against a market backdrop of negative real returns. Chart 1 below highlights that you can enhance your yield by taking modest risk through investing in short dated corporate bonds from good quality companies without taking on additional interest rate (duration) risk.

Chart 1: Short-dated investment grade bonds offer attractive yields for low duration



“Today’s ideal is to deliver a dual climate and return outcome”

Authors:



Iain Buckle
Head of Credit UK



Rory Sandilands
Investment Manager

Source Ageon AM

The appeal of short-dated bonds is based on a range of factors, including:

- A long-term record of generating attractive risk-adjusted returns.
- Capital-preservation qualities - higher resiliency to negative company-specific events than longer-dated bonds.
- Less susceptibility to fluctuating interest rates, as returns derive from credit risk rather than duration risk.
- Steady cashflow generation paid-out as an income or reinvested to take advantage of further opportunities.
- Higher liquidity than longer-dated equivalents, due to the high frequency of bonds reaching maturity.

Furthermore, with short-dated bonds there is no material yield sacrifice for a reduction in climate risk, which is a benefit that we now explore in more detail.

Assessing climate transition risk

Understanding the potential risks to company cash flows is vital to retain the conservative nature of short-dated bonds. Actively managing ESG risks, including climate-related risks, should therefore play an important role in investment decision-making.

To assess the materiality of climate change risks for bonds, research typically focuses on the potential impacts of transition and physical risks. This involves assessing a range of carbon emission metrics, which investors to understand the carbon footprints of various investments.

When focusing on transition, the next stage in climate risk analysis is to assess a company’s ambitions, performance, and management toward net-zero. This goes beyond backward-looking emissions to form a forward-looking view of a company’s transition readiness and alignment with the energy transition.

More in-depth analysis should be considered for issuers in sectors deemed to have a stronger ability to influence the achievement of global climate goals. In these sectors, it is important to understand the idiosyncratic considerations and issues faced by companies and tailor climate analysis accordingly.

Rather than simply exclude high influence sectors, this type of research can help to identify and support those companies that have plans to transition towards a low carbon economy. Furthermore, the design of the research framework can be compatible with external climate initiatives, such as the Net-Zero Asset Owner Alliance and the Paris Aligned Investment Initiative, while a complementary active engagement can play an important role in encouraging more aggressive climate-related targets and helping to improve the quality of disclosures.

Bond maturity and climate risks

The analysis and decisions made around climate risks can vary significantly depending on the maturity of an individual bond. With shorter-dated bonds investors are much less exposed to a climate-related deterioration in credit quality during their lifetime.

Although we can potentially identify climate risks now, they can take a long time to significantly impact a company's credit profile. In general, the longer you lend to a company that is potentially facing climate risks, the more you are exposed to those risks. So, for holders of longer-dated bonds, particularly through buy-and-hold strategies, it is vital to analyse and understand climate change risks.

When we compare a bond in the oil & gas sector with a similarly rated bond in the consumer sector, the latter will typically have a lower climate transition risk. At the short end of the market (less than four years), there is little difference in the yields of the two bonds, whereas for longer-dated bonds issued by the same companies, the differential increases significantly.

This means that the additional yield or premium that the oil & gas company must pay increases significantly as you move out the maturity spectrum, suggesting that the climate risk of that sector is more likely to be priced into the longer-dated bonds of those companies. But conversely, the small difference between these respective issuers at the short end suggests that transition risk is not priced in. So, a more focused approach to managing climate risk can be applied to a portfolio of short-dated bonds with little yield sacrifice.

Summary

It is possible to construct a climate transition focused short-dated corporate bond portfolio that does not sacrifice expected yield. Rather than simply exclude companies based on higher carbon emissions, or from the higher influence sectors, portfolios can be constructed to invest in those companies that have robust and credible plans for transitioning towards a low carbon economy and therefore be better aligned to investors' net-zero goals. This is potentially attractive to investors as regulatory, societal and investment pressures lead to a greater awareness of climate-related risks. To discuss aligning financial and climate obligations within your fixed income portfolios, please contact a member of our UK Institutional Business team or visit www.aegonam.com/gsdct.

Important information

Investment Policy

Invests predominantly in global investment grade (lower risk) bonds. The fund may also hold selected high yield (higher risk) bonds, contingent convertible (higher risk) bonds and cash. Bonds will be issued by companies and governments worldwide. A minimum of 80% of the Fund's net assets will be invested in investment grade bonds that have a residual maturity that does not exceed four years. The Fund is actively managed.

Risks

The main risks of the fund are:

Credit: An issuer of bonds may be unable to make payments due to the Fund (known as a default). The value of bonds may fall as default becomes more likely. Both default and expected default may cause the Fund's value to fall. High yield bonds generally offer higher returns because of their higher default risk and investment grade bonds generally offer lower returns because of their lower default risk.

Liquidity: The Fund's value may fall if bonds become more difficult to trade or value due to market conditions or a lack of supply and demand. This risk increases where the Fund invests in high yield, off-benchmark or emerging market bonds.

For more details on the risks for this fund please see the KIID or Prospectus.

For Professional Clients only and not to be distributed to or relied upon by retail clients. This is a marketing communication.

Please refer to the Prospectus of the UCITS and to the KIID before making any final investment decisions. The relevant documents can be found at aegonam.com. The principal risk of this product is the loss of capital.

Past performance does not predict future returns. Outcomes, including the payment of income, are not guaranteed.

All investments contain risk and may lose value. Responsible investing is qualitative and subjective by nature, and there is no guarantee that the criteria utilized, or judgement exercised, by any company of Aegon Asset Management will reflect the beliefs or values of any one particular investor. Responsible investing norms differ by region. There is no assurance that the responsible investing strategy and techniques employed will be successful. Investors should consult their investment professional prior to making an investment decision.

Opinions and/or example trades/securities represent our understanding of markets both current and historical and are used to promote Aegon Asset Management's investment management capabilities: they are not investment recommendations, research or advice. Sources used are deemed reliable by Aegon Asset Management at the time of writing. Please note that this marketing is not prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing by Aegon Asset Management or its employees ahead of its publication.

Fund Charges are taken from income but will be taken from capital where income is insufficient to cover charges.

All data is sourced to Aegon Asset Management UK plc unless otherwise stated. The document is accurate at the time of writing but is subject to change without notice.

Data attributed to a third party ("3rd Party Data") is proprietary to that third party and/or other suppliers (the "Data Owner") and is used by Aegon Asset Management UK plc under licence.

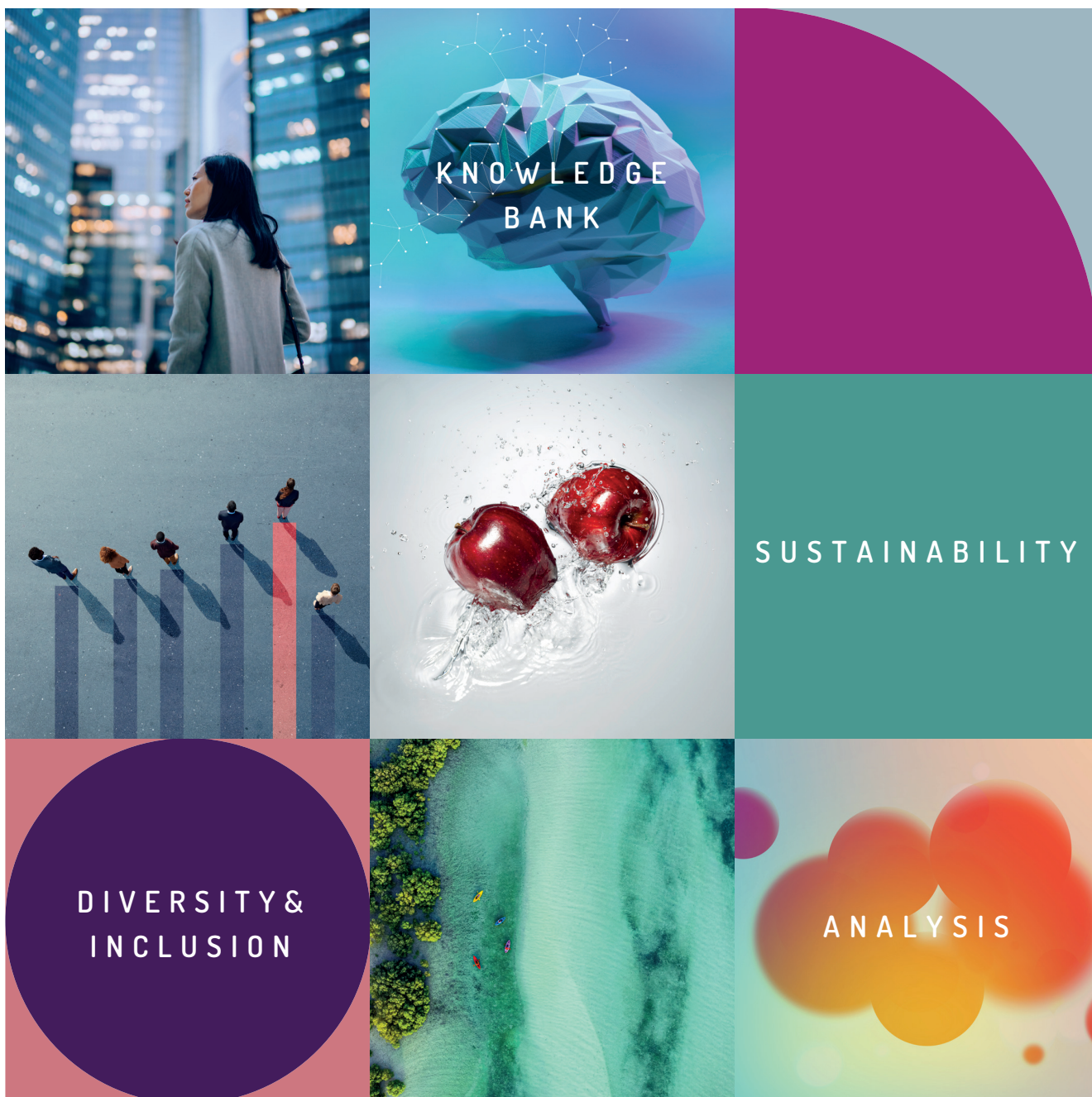
3rd Party Data: (i) may not be copied or distributed; and (ii) is not warranted to be accurate, complete or timely. None of the Data Owner, Aegon Asset Management UK plc or any other person connected to, or from whom Aegon Asset Management UK plc sources, 3rd Party Data is liable for any losses or liabilities arising from use of 3rd Party Data.

Aegon Asset Management Investment Company (Ireland) Plc (AAMICI) is an umbrella type open-ended investment company which is authorised and regulated by the Central Bank of Ireland. Aegon Investment Management B.V. (Aegon AM NL) is the appointed management company. Aegon AM NL is registered with and supervised by the Dutch Authority for Financial Markets (AFM).

Aegon AM NL's German branch markets AAMICI in Germany, Austria and Switzerland, is registered with and supervised by the AFM and supervised by BaFin in Germany. Aegon AM NL's branch in Spain markets AAMICI in Spain, Italy and Switzerland. Aegon AM NL's Spanish branch is registered with and supervised by the AFM and is supervised by the CNMV in Spain. Aegon AM UK markets AAMICI in the UK and otherwise outside of the EEA. Aegon Asset Management UK plc (Aegon AM UK) is authorised and regulated by the Financial Conduct Authority.

For investors in Spain, Italy, the UK, Jersey and Guernsey - AAMICI's relevant sub-funds are notified to each regulator. The prospectus, supplements, key investor information and reports (together "Disclosures") are available at www.aegonam.com along with information about paying agents. For Switzerland, AAMICI is a UCITS which is authorised for distribution by FINMA as a Foreign Collective Investment Scheme. The Disclosures are available from www.aegonam.com or from the Representative and Paying Agent in Switzerland, CACEIS (SA) Switzerland, Chemin de Precossy 7-9, CH-1260 Nyon / VD, Suisse, Phone: +41 22 360 94 00, Fax: +41 22 360 94 60.

Please note that not all sub-funds and shareclasses may be available in each jurisdiction. This document is marketing and does not constitute an offer or solicitation to buy any fund(s) mentioned. No promotion or offer is intended other than where the fund(s) is/are authorised for distribution.



Bringing data to life

We provide institutional investors, including pension funds, insurance companies and consultants, with data and analysis to assess, research and report on their investments.

CAMRADATA is committed to fostering and nurturing strong, productive relationships across the institutional investment sector and are continually innovating new solutions to meet the industry's complex needs.

info@camradata.com



CAMRADATA

INFLATION

VOLATILITY

LIQUIDITY
UNCERTAINTY
DURATION



RISK
FIXED INCOME
RISING RATES

SURVIVE OR THRIVE?

Do more than survive. Our active fixed income approach strives to help you make the most of changing bond markets.

Do more at mfs.com/active360



Time to rethink pension scheme asset allocations



2022 was a difficult year for some UK pension schemes, with the [LDI liquidity crisis](#) causing many trustees to scramble for liquidity to meet margin calls. However, on the brighter side, rising gilt yields have generally improved funding levels despite lower asset values across equity and fixed income. The result is that schemes will need fewer assets to meet the significantly lower level of liabilities, allowing them to further reduce risk in their portfolios.

Key takeaways for schemes from the LDI crisis include paying attention to liquidity and reviewing asset allocations¹.

“In our view, this means UK institutional asset allocations may shift towards increased proportions of fixed income, lower illiquidity and a greater focus on sustainability”

Looking ahead, we see two major questions for trustees, sponsors and their advisors:

- 1) Given the improved funding position, what will future asset allocations look like?
- 2) How do UK regulatory requirements to address climate risks and reach Net zero factor into portfolios?

While the answers will depend on the desired endgame for schemes — insurance-based solutions or self-sufficiency — we believe there are common factors such as combining the desire to de-risk with the need to meet Net Zero objectives.

In our view, this means UK institutional asset allocations may shift towards increased proportions of fixed income, lower illiquidity and a greater focus on sustainability.

Impact of improved funding levels on asset allocation

Schemes using leveraged LDI faced severe issues during the crisis due to the short, sharp rises in gilt yields. Despite this story making national and international headlines, what is overlooked is that, overall, schemes are in an improved funding position due to the rise in yields.

Longer term, these reduced liabilities will require a smaller pool of assets to pay out benefits as they come due. With improved funding levels and the ability to hedge interest rate risk at better levels today, what might it mean for asset allocations going forward?

We see schemes now getting closer to the buy in or buy out stage, and in a better position to reach self-sufficiency. In the case of an insurer-based solution, this means schemes and sponsors should start positioning portfolios to be attractive to insurers, which we view as containing higher fixed income allocations and lower private asset exposure.

Now is a good time for schemes and their advisors to reset and consider what this future state could be. As the industry reflects on the LDI crisis, schemes may wish to assess whether they had the right liquidity risk management and liquidity asset pool, and how much risk to take as the funding backdrop improves.

Meeting climate regulations while managing portfolios

Whilst asset allocation decisions appear relatively straightforward, how can schemes factor the UK's Net Zero ambitions into their de-risking plans? Does Net Zero impose a challenge to building an attractive portfolio for insurers who face the same challenge?

In our view, strategies like buy and maintain credit will become ever more appealing from a de-risking perspective; however, aligning fixed income investment goals with Net Zero commitments can pose challenges due to balancing conflicting priorities. Careful consideration will be required to find the



Author:

Owen Murfin, CFA

Institutional Portfolio

Manager

balance between, risk, return, liquidity and sustainability.

De-risking and influencing real-world carbon emissions

Is it possible for schemes to de-risk portfolios while meeting real-world climate targets? We have been working with clients to design a solution that meets their requirements, considering Net Zero alignment ambitions alongside return and risk management objectives.

We see buy and maintain credit as an ongoing portfolio that can meet a client's need for steady returns without a specific timeframe. We also see buy and maintain helping clients meet their Net Zero goals because, as an active manager, we can build fixed income portfolios based around client's risk and return as well as environmental, social and governance (ESG) parameters. We believe ESG factors impact the ability of a company to pay its coupons and principal maturities over the long term and in a timely manner, making them an extremely important part of our credit analysis.

To meet these risk, return and Net Zero goals, it's the client that directs the parameters before we run a proprietary quantitative framework over the vast universe of fixed income securities to filter down to a more dedicated and concentrated portfolio. This becomes the starting point for our fundamental analysis by portfolio managers and credit analysts. Our proposed solution uses a combination of ESG data and metrics (Transition Pathway Initiative, Science-Based Targets Initiatives) as well as our proprietary SFDR Article 8 criteria and fundamental research ratings. Through monitoring and ongoing engagement with portfolio companies, we strive to improve the overall Net Zero alignment of the proposed portfolios.

So, is there a silver lining?

Although UK economic health has deteriorated, UK pension schemes are in better health due to rising gilt yields. Looking ahead, this presents an opportunity to de-risk portfolios to meet long-term objectives. In our view, this will result in increased fixed income allocations, lower illiquidity and greater focus on sustainability. That's why we believe now is the time for schemes to reconsider asset allocations and consider buy and maintain strategies which can incorporate Net Zero ambitions. We believe that we can align our strong global credit capabilities with enhanced ESG Integration to meet a range of client objectives.

For more information about MFS' Buy and Maintain capability, please contact Kelly Tran, Managing Director – Institutional, via ktran@mfs.com.

¹[MFS, UK Pension Schemes Reckon with Rate Rises, November 2022.](#)

Please keep in mind that a sustainable investing approach does not guarantee positive returns and all investments, including those that integrate ESG considerations into the investment process, carry a certain amount of risk including the possible loss of the principal amount invested.

The views expressed are those of MFS and are subject to change at any time. These views are for informational purposes only and should not be relied upon as a recommendation to purchase any security or as a solicitation or investment advice from the Advisor.

Unless otherwise indicated, logos and product and service names are trademarks of MFS® and its affiliates and may be registered in certain countries.

FOR INSTITUTIONAL AND INVESTMENT PROFESSIONAL USE ONLY. Issued in the UK and Switzerland by MFS International (U.K.) Limited ("MIL UK"), a private limited company registered in England and Wales with the company number 03062718, and authorised and regulated in the conduct of investment business by the UK Financial Conduct Authority. MIL UK, an indirect subsidiary of MFS®, has its registered office at One Carter Lane, London, EC4V 5ER. Note to Europe (ex UK and Switzerland) readers: Issued in Europe by MFS Investment Management (Lux) S.à r.l. (MFS Lux) – authorized under Luxembourg law as a management company for Funds domiciled in Luxembourg and which both provide products and investment services to institutional investors and is registered office is at S.à r.l. 4 Rue Albert Borschette, Luxembourg L-1246. Tel: 352 2826 12800. This material shall not be circulated or distributed to any person other than to professional investors (as permitted by local regulations) and should not be relied upon or distributed to persons where such reliance or distribution would be contrary to local regulation.

53188.1



KNOWLEDGE BANK

Bringing your content to life

Deliver your thought leadership exclusively to the institutional investor market through the Knowledge Bank feature on CAMRADATA Live.

A free service for subscribing Asset Managers to upload content including articles, whitepapers, podcasts and videos as well as the opportunity to feature in our weekly newsletter with full 360 reporting. Share your knowledge, your way, with the people that matter.

info@camradata.com



CAMRADATA

Uncovering ESG Investment Opportunities in Securitized Assets

Analyzing ESG in securitized markets can be complex. The TCW ESG Securitized strategy incorporates a robust research process to deliver sustainable exposure to one of the most interesting parts of the fixed income universe.

This material is for general information purposes only and does not constitute or form part of an invitation or offer to issue or sell, or a solicitation of an offer to buy, any security, specific product or services. This material is only directed at institutional investors and only provided upon their request. The distribution of this material in certain jurisdictions and/or to certain investors may be restricted or prohibited and should therefore not be relied upon by such persons. Accordingly, this material may not be used in any jurisdiction except under circumstances that will result in compliance with any applicable laws and regulations. Persons to whom this presentation is communicated should inform themselves about and observe any such restrictions. Any issuers or securities noted in this document are provided as illustrations or examples only, for the limited purpose of analyzing general market or economic conditions and may not form the basis for an investment decision, nor are they intended to serve as investment advice. Any such issuers or securities are under periodic review by the portfolio management group and are subject to change without notice. TCW makes no representation as to whether any security or issuer mentioned in this document is now in any TCW portfolio. TCW, its officers, directors, employees or clients may have positions in securities or investments mentioned in this publication, which are subject to change without notice. Any information and statistical data contained herein derived from third party sources are believed to be reliable, but TCW does not represent that they are accurate, and they should not be relied on as such or be the basis for an investment decision. All information is as of the date of this presentation unless otherwise indicated.

An investment in the strategy described herein has risks, including the risk of losing some or all of the invested capital. An investor should carefully consider the risks and suitability of an investment strategy based on their own investment objectives and financial position. There is no assurance that the investment objectives and/or trends will come to pass or be maintained. The information contained herein may include preliminary information and/or "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented herein. TCW assumes no duty to update any forward-looking statements or opinions in this document. This material comprises the assets under management of The TCW Group, Inc. and its subsidiaries, including TCW Investment Management Company LLC, TCW Asset Management Company LLC, and Metropolitan West Asset Management, LLC. Any opinions expressed herein are current only as of the time made and are subject to change without notice. The investment processes described herein are illustrative only and are subject to change. Past performance is no guarantee of future results. © 2023 TCW

Crosscurrents of Sustainable Investing in 2023

TCW

“We are hopeful that this year brings more progress, building a stronger foundation based on new standards and definitions that will help align the market and greatly improve transparency.”



Author:

Jamie Franco

Senior Vice President

Head of Fixed Income ESG

Despite a challenging market environment in 2022, assets invested with an ESG integration approach or sustainable objective continued to grow. This growth attracted increased attention and scrutiny from regulators seeking to standardize definitions, improve reporting, and prevent “greenwashing,” as well as from supporters and detractors alike. Given the trends we have seen so far, in our view 2023 could be a transformative year, though navigating the differing political views and regulatory attention will be complicated. Yet we are hopeful that this year brings more progress, building a stronger foundation based on new standards and definitions that will help align the market and greatly improve transparency.

Highlighted Below are Several Trends We Expect to be on the Agenda in 2023

New incentives to supercharge the energy transition in the U.S. and Europe:

By far the most dominant theme is the focus on climate and the energy transition. The passage of the Inflation Reduction Act (IRA) in the U.S. and REPowerEU Plan in the EU marked important legislative support for climate-related investments. The implications of this regulatory support will be material for new investment opportunities for the next decade and beyond. The International Energy Agency estimates¹ that clean-energy-related spending has risen 12% annually since 2020. We expect this to increase, but more importantly, the scope of related investment opportunities will expand far beyond clean tech to include industrials, materials, agriculture, and other sectors affected directly or where investments are essential to underwrite the transition of other sectors.

Confronting more expensive – and more frequent – manifestations of climate-related physical impacts:

The importance of managing the effects of climate-physical risks from greater weather volatility and its impacts on companies directly or via-supply chains has come into increasing focus in 2022 as several weather events – from extreme summer heat and wildfires to devastating floods and hurricanes – created sizable disruption, devastation, and economic losses in their wake. As the number of climate-related events and the severity of their impacts have increased over time, so have the costs and risks for businesses across many sectors.² Along with this, regulators and central banks are now requiring a variety of entities to manage and model risks associated with climate, a trend that will grow in scope and importance, particularly in certain jurisdictions, including Europe.

Forging ahead on plans for “Net Zero” alignment:

We have also seen mounting pressure from stakeholders as well as rising commitments by companies, investors, and sovereigns to set net-zero targets for carbon emissions and demonstrate their progress towards meeting these targets. We expect to see net-zero commitments accelerate along with increased scrutiny of companies’ progress to reduce actual carbon emissions, as well as to ensure the credibility of any carbon offsets, and to avoid greenwashing.

Leveraging opportunities by developing more innovative corporate sustainability strategies:

There has been a growing focus on companies’ efforts to evaluate their businesses from a sustainability perspective and to integrate sustainability targets within their business models. This will be a critical year for many companies, as more action will be required to stay relevant and competitive, and as increasingly regulation in the U.S. and EU is compelling these actions.

Social factors will continue to rise in prominence on the sustainable investing agenda:

Issues such as diversity and inclusion and labor rights have dominated the conversation around the social component. Increased regulation has pushed for a variety of additional factors that are important in this category, from increased board diversity and workplace diversity disclosures to improvements in how employers treat their workforce, particularly in light of the pandemic. However, understanding and developing relevant metrics to define and measure some of these issues has been a notable challenge for investors.

As such, we anticipate more collective efforts to capture and disclose these factors as well as to find ways to highlight social risks, given their importance.

After a slump in labeled bond issuance in 2022, the ESG-labeled market should continue to grow in 2023:

Issuance of green, social, sustainable, or sustainability-linked bonds has grown exponentially over the past decade, with Morgan Stanley analysts estimating that roughly \$3.4 trillion of labeled bond debt has been issued since 2013.³ Despite rosy market projections at the start of 2022, issuance for the year did not quite keep up with that pace, with estimates ranging between \$800-\$900 billion. Issuance remains largely concentrated in sovereign and corporate green bonds, though we anticipate this will expand to other asset classes and labeled types. Overall, we expect the ESG-labeled market to grow over time as issuers structure bonds to meet the rising demand for these assets driven by the growth in the sustainable fund universe as well as sovereign and corporate sustainability and ESG-related commitments.

Taking stock of the evolving sustainability-related regulatory environment for corporates, investors, and third-party data providers, among others:

There has been a plethora of regulation that emerged in 2022 across multiple jurisdictions. Broadly, regulation has come in a few forms: 1) Requiring ESG-related disclosure for companies, investment managers, and products; 2) ESG product labels or categories and related requirements; 3) Taxonomy-related (i.e., what is a green investment?); and, 4) Third-party ESG rating, data, or opinion providers.

In 2023, new EU Sustainable Finance Disclosure Regulation related disclosure requirements for sustainable funds will go into effect at the same time as European firms will begin adopting the Corporate Sustainability Reporting Directive requirements, which will be applied as of 2024.⁴ In the U.S., the SEC is set to finalize its ESG and climate-related rulemakings this year, while the UK's FSA will finalize a labeling and disclosure regime that is currently in its comment period. For its part, the International Sustainability Standards Board will also finalize its sustainability standards early in the year. The landscape is evolving rapidly and, at times, in inconsistent ways, which has led to conflicting policy guidance or definitions across jurisdictions. These will be challenging for investors to navigate for years to come. Concurrently with the regulatory standard setting, we have also seen increased enforcement actions which we expect to continue.

¹ <https://www.iea.org/reports/world-energy-investment-2022>

² According to the US National Oceanic and Atmospheric Administration, in 2022, there were 18 weather/climate disaster events with losses exceeding \$1 billion each that affected the United States. This compares negatively to the 1980–2022 annual average of 7.9 events (CPI-adjusted), as well as the annual average for the most recent five years (2018–2022) of 17.8 events (CPI-adjusted). [https://www.ncei.noaa.gov/access/billions/#:~:text=In%202022%20\(as%20of%20%20October,events%2C%20and%201%20wildfire%20event.](https://www.ncei.noaa.gov/access/billions/#:~:text=In%202022%20(as%20of%20%20October,events%2C%20and%201%20wildfire%20event.)

³ “Global Fixed Income & ESG Strategy ESG Labeled Debt Quarterly Tracker”, Morgan Stanley. January 9 2023

⁴ “Sustainable economy: Parliament adopts new reporting rules for multinationals”, European Parliament News. November 2022. <https://www.europarl.europa.eu/news/en/press-room/20221107IPR49611/sustainable-economy-parliament-adopts-new-reporting-rules-for-multinationals>

DISCLAIMER

This material is for general information purposes only and does not constitute an offer to sell, or a solicitation of an offer to buy, any security. TCW, its officers, directors, employees or clients may have positions in securities or investments mentioned in this publication, which positions may change at any time, without notice. While the information and statistical data contained herein are based on sources believed to be reliable, we do not represent that it is accurate and should not be relied on as such or be the basis for an investment decision. The information contained herein may include preliminary information and/or “forward-looking statements.” Due to numerous factors, actual events may differ substantially from those presented. TCW assumes no duty to update any forward-looking statements or opinions in this document. Any opinions expressed herein are current only as of the time made and are subject to change without notice. Past performance is no guarantee of future results. © 2023 TCW

Meet the Team!



Sean Thompson

Managing Director



Natasha Silva

*Managing Director,
Client Relations*



Amy Richardson

*Managing Director,
Business Development*



Sam Buttress

Associate, Business Development



Sarah Northwood

*Marketing and Events
Coordinator*



CAMRADATA

CAMRADATA

With Intelligence
One London Wall
London
EC2Y 5EA

+44 (0)20 7832 6500

camradata.com



Join us on LinkedIn

Important Notice

This document is produced by CAMRADATA Analytical Services Ltd ('CAMRADATA'), a company registered in England & Wales with registration number 06651543. CAMRADATA is neither authorised nor regulated by the Financial Conduct Authority in the United Kingdom nor the Securities and Exchange Commission in the United States of America.

This document is a marketing documentation and is not intended to constitute an invitation or an inducement to engage in any investment activity. It is not intended to constitute investment advice and should not be relied upon as such. It is not intended and none of CAMRADATA, its holding companies or any of its or their associates ('With Intelligence Group') shall have any liability whatsoever for (a) investment advice;

(b) a recommendation to enter into any transaction or strategy; (c) advice that a transaction or strategy is suitable or appropriate; (d) the primary basis for any investment decision; (e) a representation, warranty, guarantee with respect to the legal, accounting, tax or other implications of any transaction or strategy; or (f) to cause the With Intelligence Group to be an advisor or fiduciary of any recipient of this report or other third party.

The content and graphical illustrations contained in this document are provided for information purposes and should not be relied upon to form any investment decisions or to predict future performance. CAMRADATA recommends that recipients seek appropriate professional advice before making any investment decision.

Although the information expressed is provided in good faith, the With Intelligence Group does not represent, warrant or guarantee that such information is accurate, complete or appropriate for your purposes and none of them shall be responsible for or have any liability to you for losses or damages (whether consequential, incidental or otherwise) arising in any way for errors or omissions in, or the use of or reliance upon the information contained in this document. To the greatest extent permitted by law, we exclude all conditions and warranties that might otherwise be implied by law with respect to the document, whether by operation of law, statute or otherwise, including as to their accuracy, completeness or fitness for purpose. CAMRADATA Analytical Services and its logo are proprietary trademarks of CAMRADATA and are registered in the United Kingdom.

Unauthorised copying of this document is prohibited.
© Copyright CAMRADATA Analytical Service January 2023