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Responsible Investment
Climate-aware fixed income solutions

Case Study: Delivering climate-aware credit investing for pension scheme clients

Rob Price, Credit Portfolio Manager, AXA IM

As a crucial climate summit approaches at COP26 in Glasgow this November, UK pension schemes find themselves well positioned to act on climate change risks. In general, investment strategies have been resilient through the pandemic, and schemes, by and large, are likely in a better funding position. The significant stimulus that has underpinned asset prices has been accompanied by a gentle uptick in yield that has been beneficial from a liabilities' perspective.

As pension schemes mature and move towards a fully funded position, and perhaps embark on cashflow-driven investment (CDI) strategies, thoughts must turn to de-risking and to endgame objectives. As this happens, climate change has steadily emerged as one of the central themes for any investor on this pathway. Simply put, in any CDI strategy a lot of the focus is necessarily on successfully managing downside risk in the assets held – and that now clearly includes both the physical risks of climate change and the risks inherent in the transition to a net zero world.

The findings we set out below indicate that institutional investors can be confident this is within their grasp. We believe we have demonstrated it is possible to reduce the measurable climate risk in a credit portfolio while maintaining or even improving other key characteristics such as credit spreads. Importantly, we also consider just how long the window of opportunity to perform this adjustment might remain open.

Framing the discussion

Clients have been asking us how we can integrate climate into their mandates, and we have broken down our approach into a three-step process known as AIM: Assess, Integrate and Monitor.

Assess – Investors today have greater access to the data, tools and approaches required to assess and manage climate-related risks. In addition, greater disclosure around climate is becoming a regulatory reality for UK pension schemes with the Task Force on Climate-related Financial Disclosures (TCFD) becoming mandatory in October 2021 for large schemes. That means clients have push and pull factors driving them to better understand the climate risk factors at play in their existing portfolios, and to start setting tangible objectives over time. This might include a series of targets designed to align with the Paris Agreement goal of net zero by 2050 or before.

Integrate – The next stage is to understand what changes can be made to a portfolio to help meet those objectives, whether in the assets held or in how they are managed. This may prompt the inclusion of green bonds in a portfolio and deeper analysis of holdings in high-emitting industries to examine their carbon pathway. An investor could also use metrics such as climate value at risk (CVaR) to build a long-term picture of a portfolio's risks in different scenarios with the goal of reducing CVaR as we approach 2050. Long-term credit strategies in particular can be closely aligned with the timeframe over which climate risks are likely to materialise.

Monitor – This is not a one-off task. Our understanding of these risks and how issuers are addressing them is changing all the time. It is therefore essential to regularly review portfolio positioning through this climate lens. Pension schemes should expect their climate profile to consistently improve as more companies make more ambitious commitments and as portfolio managers re-invest in bonds consistent with a client's requirements.

Putting the theory to work

This over-arching system underpins a fundamentals-driven process, supported by climate data which is designed to mitigate climate risks while delivering financial returns. To demonstrate how it might work we have taken a sample cashflow-focused UK credit portfolio and applied some key aspects of our climate-aware approach (see Figure 1).

Figure 1: Case study: climate integration into a UK credit portfolio

Portfolio Summary

- £1.5bn multi-client portfolio
- De-risking credit strategy
- Focus on cashflow delivery
- ESG integrated portfolio

Portfolio Objectives

- Focus on limiting downside risks
- Further climate integration

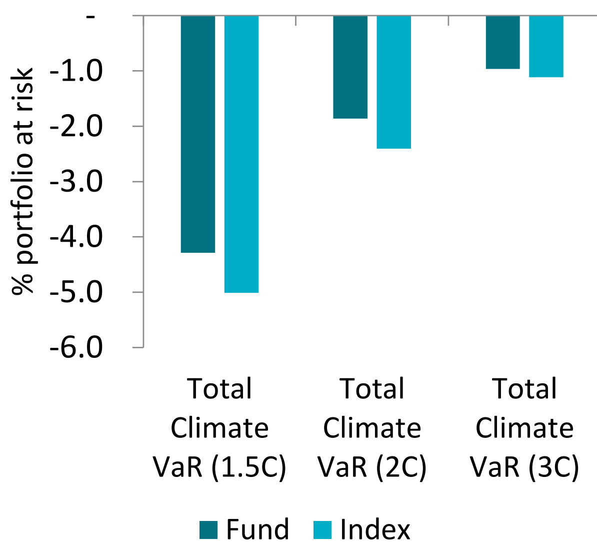
Characteristics	Portfolio
Portfolio yield	1.1
Credit spread	62bps
Duration	13.6 years
Portfolio rating	AA-/A+
# issuers	~160
GBP allocation	89%

Source: AXA IM & ICE BofAML. For illustrative purposes only

This sample portfolio has already benefitted from our integration of environmental, social and governance (ESG) factors. Many of our clients are experienced responsible investors and we have built long-term partnerships with them thanks to our commitment to ESG investing. These skills are embedded across all our investment teams, rather than siloed off in a standalone department – our 40 plus - strong credit research team, include climate, diversity, governance and a host of other ESG criteria in their work on every issuer. Our clients' inputs have helped shape our approach.

The first thing we did was to estimate the potential percentage impact on this sample portfolio under different global warming scenarios. In the case of this portfolio, we found the CVaR under all three scenarios tested began below the benchmark level – a testament to our integration of ESG factors. The result still offers good room for improvement though, given the significance of the fully priced-in risks when compared to portfolio yields (see Figure 2 overleaf).

Figure 2: Total Climate Value-at-Risk by Scenario

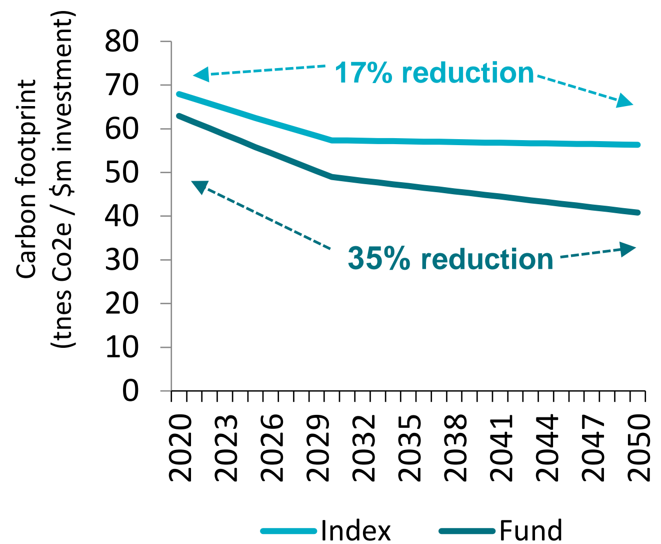


- **Forward-looking** measure of climate risk
- % a portfolio can fall if climate risks **fully priced** into the market today
- Impacted by **physical and transition** risks and opportunities
- Portfolio **CVaR slightly below index** but **room for improvement**

Source: AXA IM & ICE BofAML, MSCI Carbon Delta. For illustrative purposes only. Index is ICE BofAML Sterling non-gilt index.

Next, we focused on carbon pathways, which use company commitments to estimate the progress over time of emissions in tonnes of CO2 equivalent (CO2e) – a measure that allows us to incorporate the effect of other greenhouse gases such as methane or nitrous oxide. We view this as a better assessment tool for issuer and portfolio performance than the static snapshot provided by carbon footprint, especially when backed up by research from the Science-Based Targets initiative (SBTi) which appraises the validity and viability of those commitments. Carbon pathways give pension schemes a forward-looking view of the carbon intensity of their underlying holdings. In this case we found a potential 35% reduction in CO2e per million dollars invested to 2050, compared to 17% for the benchmark (see Figure 3).

Figure 3: Projected carbon pathways



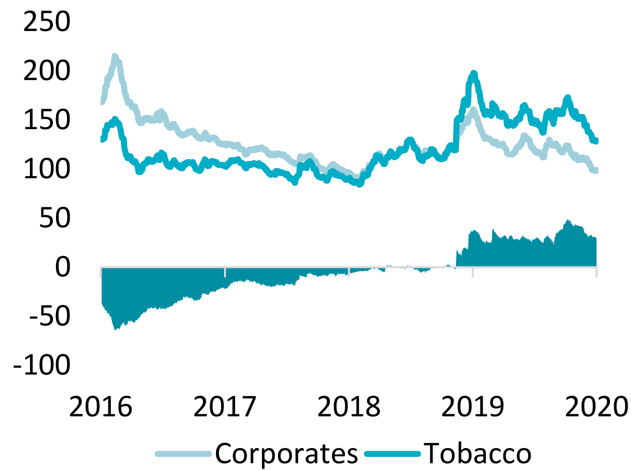
Source: AXA IM & ICE BofAML, MSCI. For illustrative purposes only. Index is ICE BofAML Sterling non-gilt index.

Refining the universe

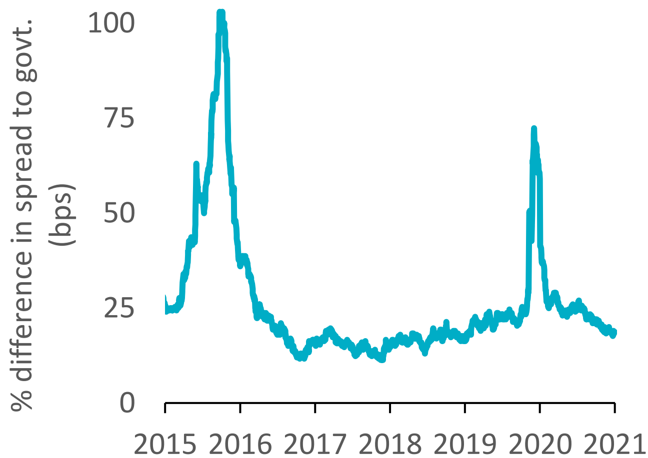
One of the simplest, and perhaps bluntest tools, pension schemes can use to seek decarbonisation of portfolios comes in the form of exclusions. They can certainly be used to quickly reduce carbon intensity and have been deployed successfully in a broader ESG context to help protect portfolios from reputational and operational risks. However, when schemes are building a climate-aware portfolio we recommend some caution – the experience with tobacco companies helps explain why (see Figure 4 overleaf).

Figure 4: History lessons from tobacco?

Tobacco spreads have windened considerably:



But the highest emitting sectors haven't shifted yet::



*Source: AXA IM as at 31/03/2021. *Universe: ICE BofA Sterling Non-Gilts Index. Tobacco: ICE BofA US Tobacco Index. Corporates: ICE BofA US Corporates index. Highest emitting sectors: ICE BofA Global basic Industry index + ICE BofA Global Energy index + ICE BofA Utility index. For illustrative purposes only.*

Tobacco firms have long been a favourite exclusion for many schemes, but while the sector represents only about 1% of the investable bond universe, the more carbon-intensive sectors such as utilities, energy and basic industries represent more than 20%. These companies are also the major source of direct emissions, known as Scope 1 and 2 emissions, and are therefore front and centre when measuring carbon intensity right now. However, the data collection behind Scope 3, or indirect, emissions is still in its infancy and is likely to flag up other sectors as it evolves, most notably financials. In this context, we think a measured, sector-neutral approach which seeks out the best-in-class issuers across the universe is appropriate at the current time to avoid dramatically reducing the opportunity set and the potential for diversification. We believe this can still deliver meaningful reductions to carbon intensity while avoiding unnecessary damage to potential returns.

Buy and maintain credit and CDI portfolios are designed to limit transaction costs by keeping active turnover low. That means that adjustments intended to improve a scheme's climate profile are best incorporated into the natural cycle of the portfolio. In other words, we can look to skew the portfolio towards those sector leaders over time by making use of new inflows and by reinvesting proceeds from maturing bonds.

We also believe strongly in the power of engagement. In our experience as a large, active and collaborative responsible investor we have seen that we are able to influence the behaviour of corporations and establish new norms in how businesses think about ESG issues[1]. We take engagement as seriously in fixed income as we do in equities. In terms of climate we work with issuers to encourage emissions targets that help protect our client portfolios from climate risks and contribute to the move to a net zero world. Avoidance of assets that fall short of our expected standards is considered a last resort, when we believe our efforts at dialogue have failed.

[1] AXA IM 2020 Stewardship Report

Making changes

Once we have a measure of carbon intensity, an understanding of the nature of SBTi targets and an estimate of the CVaR, we can deploy our engagement process and use that natural flow through a portfolio to rebalance away from holdings identified for consideration should there be more suitable alternatives. Below we can see how this analysis allows us to identify potential alternatives according our sector-neutral approach (see Figure 5).

Figure 5: Seeking replacement opportunities

Positions for consideration

Issuer	Carbon intensity (revenues)	Decarbonisation target	CVaR %
Basic Industry 1	270	SBTi 2°C	-60
Energy 1	482	No target	-35
Utility 1	929	SBTi 1.5°C	-60
Utility 2	961	SBTi 2°C	-58.9
Basic Industry 2	756	No target	-10

Positions to rebalance

Issuer	Carbon Intensity (revenues)	Decarbonisation target	CVaR %
Utility 1	365	SBTi 1.5°C (Green bond)	No data
Utility 2	430	SBTi 2°C 100% by 2050	-1
Financial Services 1	13	No target	<-1
Telecoms 1	34	SBTi 1.5°C 100% by 2050	- 3.6
Basic Industry 2	85	Low carbon leader	No data

Source: AXA IM. For illustrative purposes only. SBTi = Science-based Target initiative.

For ease in this example, we have assumed that this change was instantaneous however in reality many clients may wish to use natural cashflows and re-investments to make portfolio changes which may take months, or even years to bring about change. However, even this limited and careful rebalancing, representing less than 5% of the strategy, has the effect of reducing the CVaR of the overall portfolio by about one percentage point based on the +1.5 degree scenario favoured by the Paris Agreement on climate change, to just above 3% of the portfolio at risk from just above 4% previously.

The immediate question should now be whether this reduction in risk would lead to a reduction in potential returns. In short, we think the kind of reductions in carbon intensity and CVaR seen in our sample portfolio can be achieved on a spread neutral basis. Once again, the historical example of the tobacco sector may help to illustrate the point.

Back in 2016, when AXA IM became one of the first of a long line of investors to exclude tobacco as an investable sector, it was still considered a quality asset and traded at a tighter spread than the wider market. This meant the downside was limited when switching into alternative holdings. However, if you are only getting around to switching now, the reverse is true, with the out-of-favour issuers currently offering a higher spread than the market.

It is impossible to say whether the experience of the tobacco sector will be replicated in industries now seen as the biggest contributors to climate change. However, when looking at the highest emitting sectors this turnaround in spreads is yet to materialise. In our view it is currently still possible to move out of a name with a relatively high carbon intensity and a poor trajectory and replace it with a similar, but better positioned company, for a very limited spread impact.
We can perhaps see evidence for this in data from our sample portfolio after our climate-aware rebalancing. In this example, **the process has not only reduced carbon intensity and CVaR – it has delivered a spread uplift, while other key metrics such as rating profile and duration remain essentially unchanged**[2]. (See Figure 6 overleaf).

[2] Past performance is not a guide to current or future performance. The value of investments, and the income from them, can fall as well as rise and investors may not get back the amount originally invested.

Figure 6: What does the new portfolio look like?

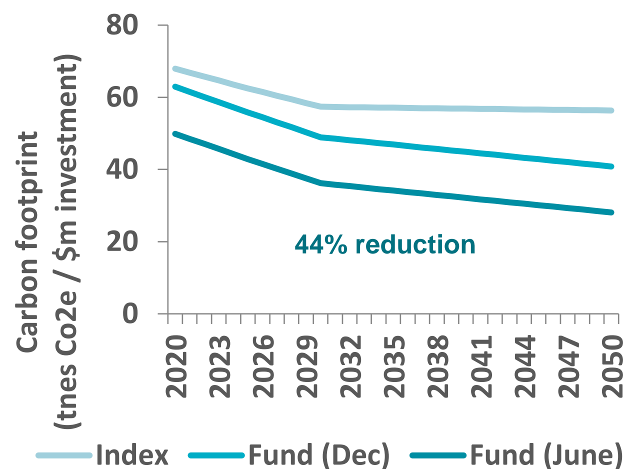
Characteristics	Portfolio Dec 2020	Portfolio Jun 2021
Portfolio yield	1.57%	1.67%
Credit spread	61bps	69bps
Duration	13.6 years	13.2 years
Portfolio rating	AA-/A+	AA-/A+
# issuers	~160	~190
GBP allocation	89%	82%
Green bonds	1.9%	3.2%

- **Financial characteristics maintained**
- Issuer, geographic and sector **diversification remains**
- Requirement to assess **wider opportunity set**

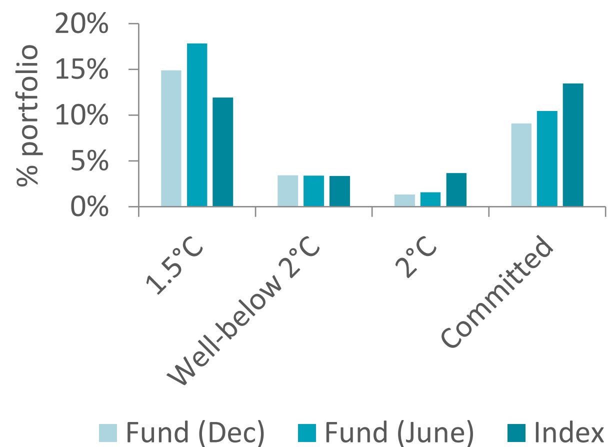
Source: AXA IM. For illustrative purposes only. Based on past performance.

Figure 7: An improvement in portfolio alignment: Carbon footprint and science-based targets

Projected carbon pathways



Science-based targets



Source: AXA IM & ICE BofAML, SBTi, MSCI. For illustrative purposes only. Index is ICE BofAML Sterling non-gilt index.

It's important to remember that this is not only about climate, but about embedding climate-aware investing in our pursuit of our clients' financial objectives. And so in this example the process has delivered a concurrent expansion of the opportunity set with a greater number of issuers included in the portfolio, and a concurrent if gentle diversification towards euro and US dollar names and away from sterling – which remains a significant majority. Green bond allocations have near doubled but stay a modest proportion of the portfolio. This is a powerful and expanding sector in which AXA IM has taken a leadership role[3], but the allocation here reflects its still-limited sectoral exposure and the dominance of euro issuance.

In Figure 7, you can see that the small changes in our rebalancing have delivered noticeable improvements in both carbon pathway and exposure to SBTi targets.

[3] https://www.axa-im.co.uk/insights/news/corporate-news/axa-im-reaches-eu13bn-milestone-green-social-and-sustainability-bonds

Staying alert

In this process, we have assessed the current positioning and the client's climate and financial goals. We have integrated climate-aware allocations so that those goals are met. We have done this while seeking to protect financial outcomes. Now it is vital to continue monitoring the carbon intensity and carbon pathways of each portfolio holding.

With the pace of change around climate targets and the quality and availability of data, there is simply no other way to ensure that we continue to deliver improvements in a client's climate profile. As the world edges closer to a sustainable, net zero economy we believe that with the right data, the right analysis and a clear strategy, investors can potentially benefit by positioning themselves to act decisively as that process unfolds.

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