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THE PORTFOLIO VIEW*: Bringing sustainability to the core of your portfolio with climate-aware CMAs

BlackRock Portfolio Analysis & Solutions, February 2021

** A series of short papers to provide a high-level view on themes and topics BlackRock believes you should consider when implementing changes to your asset allocation, and on which we can assist you.*

Over the last five years, the European financial services industry has gone through a **profound transformation with respect to sustainable investing.**

Originally, with sustainable investing being new for many, investors focused on understanding product landscape, taxonomy, and methodologies. As the space matured, **more and more investors have shifted their efforts towards incorporating sustainability across all steps of their portfolio construction process**: from setting the portfolio objectives, to designing a strategic asset allocation (SAA) which helps achieve such targets, to implementing it with products.

Working with EMEA investors, **our Portfolio Consulting team has seen a 70% increase in ESG-related portfolio consultations last year vs. 2019.** These consultations covered both building new sustainable portfolios from scratch and evolving existing allocations.

Up until now, achieving a sustainable transformation of portfolio construction processes has been a challenge. **While investors could define an ESG objective relatively easily, very few could design an asset allocation to meet it.** This is because forward-looking risk and return expectations (or capital market assumptions) for different asset classes rarely accounted for the impact of climate change, broadly continuing to be estimated only for 'brown' exposures. **As a result, investors could embed ESG exposures only at the product implementation stage** by swapping traditional building blocks for sustainable ones. **This, however, resulted in a tracking error vs. the original SAA design** – therefore limiting the penetration of sustainable strategies, particularly for investors with a structured CIO-led investment process.

BlackRock's new climate-aware CMAs, now available to investors, address this challenge [https://www.blackrock.com/institutions/en-gb/insights/charts/capital-market-assumptions],. **These risk and return expectations incorporate the impact of climate change and are available across asset classes.**

Our Portfolio Consulting team 'translates' these CMAs into asset allocation, to help investors with both **building new sustainable propositions from scratch and transforming their existing portfolios.** Everything we do maps into **a range of executable implementation options and is accompanied by a 360 degree assessment of portfolio sustainability features**, including ESG Quality Score, Carbon Emissions Intensity, Business involvement and Low Carbon Transition Score.

Get in touch with our Portfolio Consulting team via your BlackRock relationship manager to see how **you can incorporate sustainability at the core of your portfolio construction process.**

1 BUILDING NEW PROPOSITIONS

Our Portfolio Consulting team can help investors **design new, fully sustainable portfolios from scratch**, translating BlackRock IP and research in the sustainable space into asset allocation and product implementation ideas.

2 TRANSFORMING THE EXISTING SAA

Our Portfolio Consulting team can help **transform the existing asset allocation to improve its sustainability features**, both at index and at product implementation level.

Source: BlackRock, February 2021.

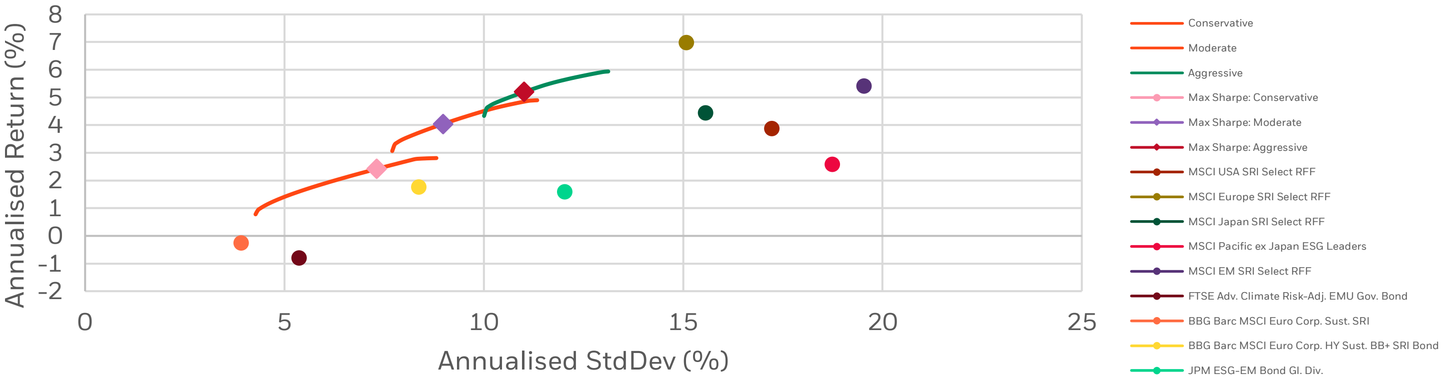
CASE STUDY 1

BUILDING NEW PROPOSITIONS – ILLUSTRATING HOW WE CAN PARTNER

Our Portfolio Consulting team can help clients design a **new offering of ESG portfolios** to complement their existing offering built with traditional building blocks.

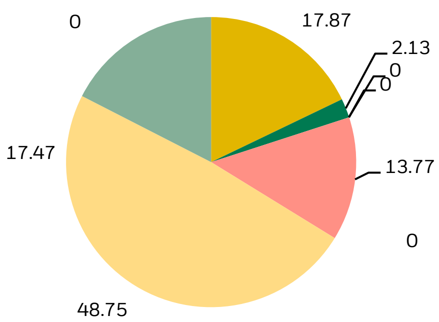
In this illustrative case study we are building **three EUR-based multi-asset models across risk profiles: Conservative, Moderate, and Aggressive.** The objective is to **maximise portfolios' risk/return profiles, subject to equity/fixed income constraints** at 20%/80% (Conservative), 60%/40% (Moderate) and 80%/20% (Aggressive).

To do that, we **used the BlackRock climate-aware CMAs in EUR over a 10-year horizon, combined with the optimisation's objectives and constraints[1], to identify different strategic asset allocation blends** that might help achieve these objectives.

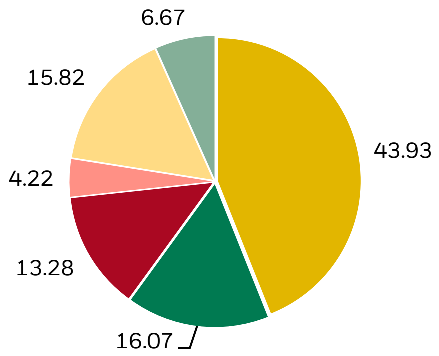


The allocations of the three resulting Max Sharpe portfolios – **Conservative, Moderate, and Aggressive** – as well as their **risk / return characteristics** can be found below. Our Portfolio Consulting team can help **translate this asset allocation into product implementation ideas**.

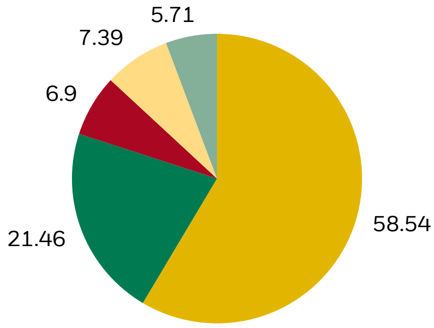
Max Sharpe Allocations (%): Conservative



Max Sharpe Allocations (%): Moderate



Max Sharpe Allocations (%): Aggressive



- MSCI USA SRI Select RFF Index
- MSCI Europe SRI Select RFF Index
- MSCI Japan SRI Select RFF Index
- MSCI Pacific ex Japan ESG Leaders Index
- MSCI EM SRI Select RFF Index
- FTSE Adv. Climate Risk-Adj. EMU Gov. Bond Index
- BBG Barc MSCI Euro Corp. Sust. SRI Index
- BBG Barc MSCI Euro Corp. HY Sust. BB+ SRI Bond Index
- JPM ESG-EM Bond Gl. Div. Index

	Max Sharpe: Conservative	Max Sharpe: Moderate	Max Sharpe: Aggressive
Annualised Return, %	2.44	4.05	5.21
Annualised Risk, %	7.39	9.01	11.03
Sharpe Ratio	0.38	0.49	0.5
Equity, %	20	60	80
Fixed income, %	80	40	20

For illustrative purposes only, not a recommendation or advice by BlackRock based on our strategic asset allocation views.
Based on a subset of available indices. Results may differ subject to chosen universe and constraints.

[1] The constraints used in the optimisation included a 20%/80% equity/fixed income allocation for Conservative portfolio, 60%/40% for Moderate portfolio and 80%/20% for Aggressive portfolio. A Max Sharpe portfolio was selected on each of the three efficient frontiers. Assets under consideration included: MSCI USA SRI Select Reduced Fossil Fuel Index, MSCI Europe SRI Select Reduced Fossil Fuel Index, MSCI Japan SRI Select Reduced Fossil Fuel Index, MSCI Pacific ex Japan ESG Leaders Index, MSCI EM SRI Select Reduced Fossil Fuel Index, FTSE Advanced Climate Risk-Adjusted EMU Government Bond Index (EGBI), Bloomberg Barclays MSCI Euro Corporate Sustainable SRI Index, BBG Barc MSCI Euro Corporate High Yield Sustainable BB+ SRI Bond Index and J.P. Morgan ESG Emerging Market Bond Global Diversified Index.

This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise - or even estimate - of future performance. Forecasts are not a reliable indicator of future performance. Source: BlackRock Investment Institute, February 2021. Data as of 31 December 2020. Time Period: 10 Years. Notes: Return assumptions are total nominal returns. Return expectations for all asset classes used in the analysis have been unhedged. Asset return expectations are gross of fees. Full methodology is available at https://www.blackrock.com/institutions/en-zz/insights/charts/capital-market-assumptions#methodology. Index returns are for illustrative purposes only and do not represent any actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

CASE STUDY 2

TRANSFORMING THE EXISTING SAA – ILLUSTRATING HOW WE CAN PARTNER

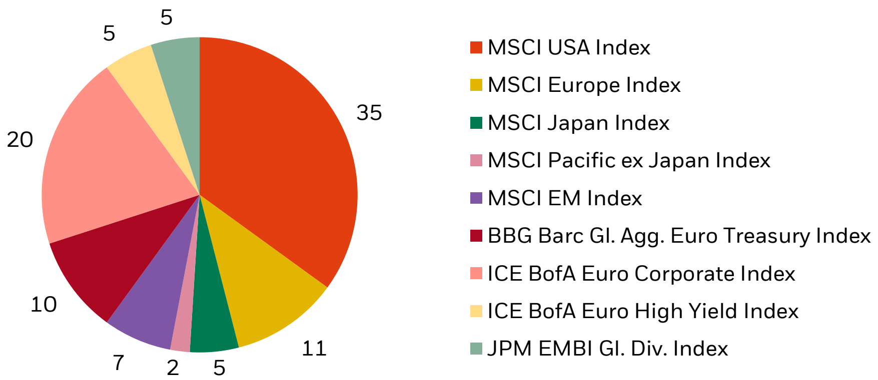
Our Portfolio Consulting team can partner with clients to **transform their SAA to improve portfolios' sustainability features**.

In this illustrative case study we are showing how we can transform a hypothetical SAA built with traditional building blocks into an **SAA built with ESG building blocks that would achieve the same level of risk and an ESG Quality Score of at least 7.2** (to ensure that the resulting portfolio falls into MSCI's 'ESG Leaders' category).

1 ASSESSING RISK AND ESG PROFILE OF THE ORIGINAL SAA

First, we established that **the expected risk of the original portfolio was 9.8% and the ESG Score was 5.8**, using the BlackRock climate-aware CMAs and MSCI ESG Research data, respectively.

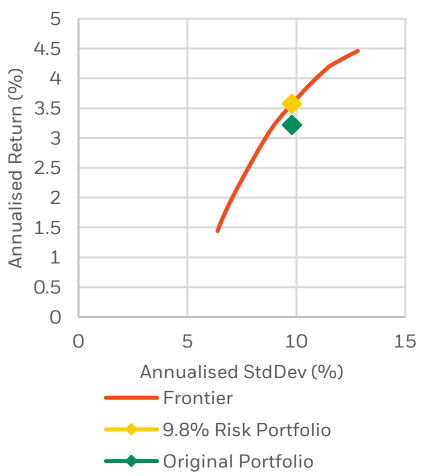
Original Portfolio Allocations (%)



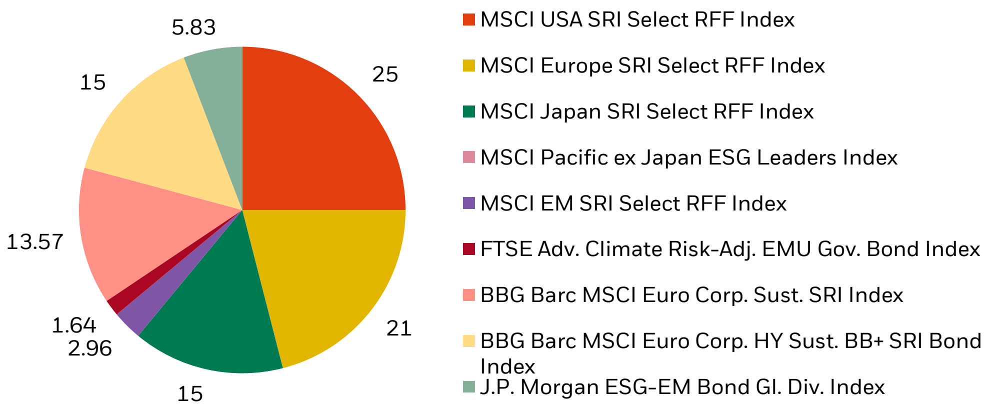
	Original Portfolio
Annualised Risk, %	9.8
ESG Quality Score	5.8

2 IDENTIFYING A SUSTAINABLE SAA WITH THE SAME RISK AND HIGHER ESG SCORE

We then **replaced the original exposures with their sustainable alternatives[1] to build an efficient frontier.** The weight of each asset was constrained to -/+10% vs. the weight of its traditional counterpart in the original portfolio. The minimum constraint for portfolio's ESG Score was set at 7.2. On the frontier we have identified a **portfolio achieving the same level of risk as the original one at 9.8%.**



Sustainable Portfolio Allocations (%)



[1]MSCI USA SRI Select Reduced Fossil Fuel Index, MSCI Europe SRI Select Reduced Fossil Fuel Index, MSCI Japan SRI Select Reduced Fossil Fuel Index, MSCI Pacific ex Japan ESG Leaders Index, MSCI EM SRI Select Reduced Fossil Fuel Index, FTSE Advanced Climate Risk-Adjusted EMU Government Bond Index (EGBI), Bloomberg Barclays MSCI Euro Corporate Sustainable SRI Index, BBG Barc MSCI Euro Corporate High Yield Sustainable BB+ SRI Bond Index and J.P. Morgan ESG Emerging Market Bond Global Diversified Index.

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Notes: Return assumptions are total nominal returns. Return expectations for all asset classes used in the analysis have been unhedged. Asset return expectations are gross of fees. Full methodology is available at https://www.blackrock.com/institutions/en-zz/insights/charts/capital-market-assumptions#methodology. Index returns are for illustrative purposes only and do not represent any actual fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indices are unmanaged and one cannot invest directly in an index.

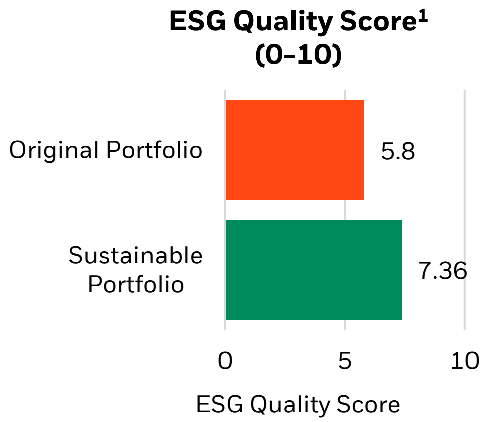
3 COMPARING RISK/RETURN PROFILE AND ESG FEATURES OF THE TWO PORTFOLIOS

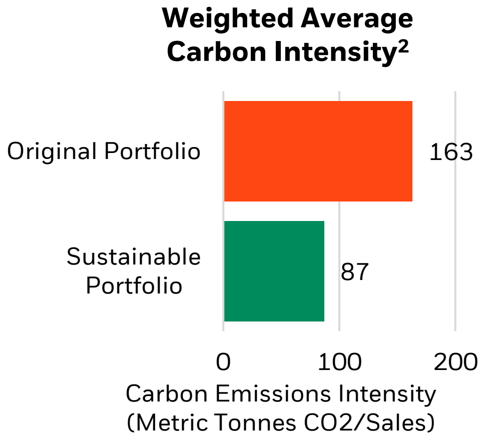
As the last step, we compared the new sustainable portfolio vs. the original one in terms of forward-looking risk/return expectations and sustainability characteristics.

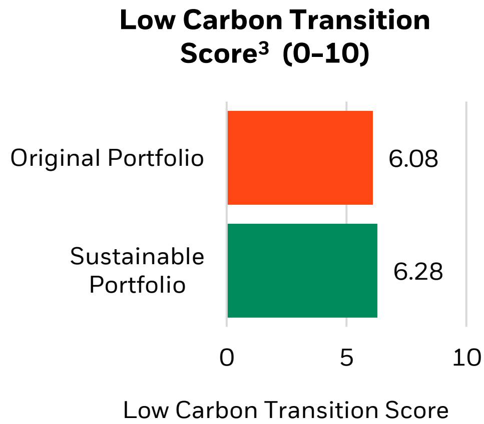
The sustainable portfolio achieved a higher Sharpe ratio at 0.4 (vs. 0.36 for the original one) and improved sustainability features including ESG Quality Score, Carbon Emissions Intensity and Low Carbon Transition Score.

Improvements in the portfolio's sustainability features were achieved thanks to a **shift from traditional into sustainable exposures**, while the higher Sharpe Ratio was driven by **shifts in the portfolio's strategic asset allocation, aiming to take advantage of winners and losers of climate change in the future**.

	Original Portfolio	Sustainable Portfolio
Annualised Return, %	3.22	3.57
Annualised Risk, %	9.8	9.8
Sharpe Ratio	0.36	0.4







The two case studies above represent just a sample of ESG analyses our Portfolio Consulting team can perform. Each portfolio consultation we provide for our clients is **accompanied by an overview of portfolios' ex-ante risk drivers – powered by BlackRock's multi-asset risk management platform Aladdin**®– and is done in an iterative fashion to **ensure that the resulting portfolios meet clients' individual objectives and constraints**.

Want to know more?

If you are looking to incorporate sustainability at the core of your portfolio design, speak with your BlackRock Relationship Manager and **request a BlackRock Portfolio Analysis & Solutions (BPAS) portfolio consultation**

[1] MSCI ESG Quality Score assesses management of key Environmental (E), Social (S) and Governance (G) risks & opportunities. E, S, and G factors are weighted according to their materiality to the company and the industry to achieve the MSCI ESG Quality Score. At the company level, the figure is an industry-adjusted weighted average of scores ranging from 0-10 (10 = best). At the portfolio level, the ESG Score also considers the ESG Rating trend of holdings and the portfolio exposure to holdings in the laggard category. For further details regarding MSCI's methodology, please visit https://www.msci.com/esg-ratings

[2] A portfolio's Weighted Average Carbon Emissions Intensity by Sales is achieved by calculating the carbon intensity (Scope 1 + 2 Emissions / $M Sales) for each portfolio company and calculating the weighted average by portfolio weight. The underlying holdings' emissions Intensity data is sourced from MSCI. For further details regarding MSCI's methodology, please visit https://www.msci.com/index-carbon-footprint-metrics

[3] MSCI ESG Research's Low Carbon Transition Risk Assessment is designed to identify potential leaders and laggards by holistically measuring companies' exposure to and management of risks and opportunities related to the low carbon transition. Low Carbon Transition Score is based on a multi-dimensional risks and opportunities assessment and considers both predominant and secondary risks a company faces. It is industry agnostic and represents an absolute assessment of a company's position vis-à-vis the transition. Source: MSCI, "Climate Change Metrics – Low Carbon Transition Risk Assessment. Methodology", March 2019.

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