Climate-aware CMAs: From insight to action

BlackRock

A practitioner's guide to sustainable portfolio construction

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Capital at risk. The value of investments and the income from them can fall as well as rise and are not guaranteed. Investors may not get back the amount originally invested.

We believe sustainable investing demands a holistic and multi-asset approach to portfolio construction. This means integrating sustainability at the strategic asset allocation (SAA) level and in the implementation level, as we have previously advocated.

BlackRock this year unveiled capital market assumptions (CMAs) that seek to explicitly reflect the impact of climate change on the investment landscape. These climate-aware CMAs, developed by the BlackRock Investment Institute (BII), inform our portfolio construction.

This publication aims to put theory into practice:

- We explain our three-step approach: embedding insights on the impact of climate change into our SAAs, implementing them through index, factor, and alpha-seeking strategies; and monitoring and adjusting portfolios. See page 2.
- We then showcase two examples to provide a practitioners' perspective on ESG integration in a holistic way: an asset allocation strategy using ETFs, and an alpha-seeking multi-asset strategy. See pages 3 and 4.

A tectonic shift

We believe there is a tectonic shift toward sustainable investing that investors have yet to fully appreciate. The COVID-19 pandemic has accelerated this structural trend, as evidenced in increased investment flows into strategies that emphasize ESG considerations.

We expect there is more to come. BlackRock's 2020 Global Sustainability Survey polled 425 institutional investors around the world on their asset allocation plans. The result? Respondents said they planned to double their sustainable investments in the next five years, rising from an average of 18% of assets today to 37% by 2025[1].

We seek to deliver outcomes with more precision by employing a holistic, multi-asset approach to constructing sustainable portfolios.

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1 Source: BlackRock, 2020 Global Sustainability Survey.

Integrating sustainability into whole portfolios

As multi-asset investors, we integrate ESG into portfolios in three steps:

1. First, we embed insights on the impact of climate change into our SAAs.
2. Second, we invest using a range of index and alpha-seeking strategies.
3. Third, we continuously monitor portfolios and adjust over time.

Step 1: Strategic Asset Allocation

Until recently, integrating ESG into an SAA was difficult. 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. However, BlackRock's climate-aware CMAs, first published in Q1 2021, address this challenge.

BII's proprietary framework for developing climate-aware CMAs accounts for the impact of climate change on asset prices through three channels: the macroeconomic impact, the repricing of assets to reflect climate risks and exposures, and the impact on corporate fundamentals.

Adding climate considerations to the CMAs can result in a higher expected return for developed market equity, and slightly lower expected return for high yield corporate credit and emerging market debt, in our view. Higher expected returns for developed market equities appear to be largely driven by higher allocations to "green" sectors in their MSCI indices, as measured by carbon emissions intensity and our assessment of sectoral exposure to climate risks and opportunities. By contrast, the higher carbon intensity of companies in high yield and broad emerging market debt indices could diminish their appeal.[2]

Step 2: Implementation

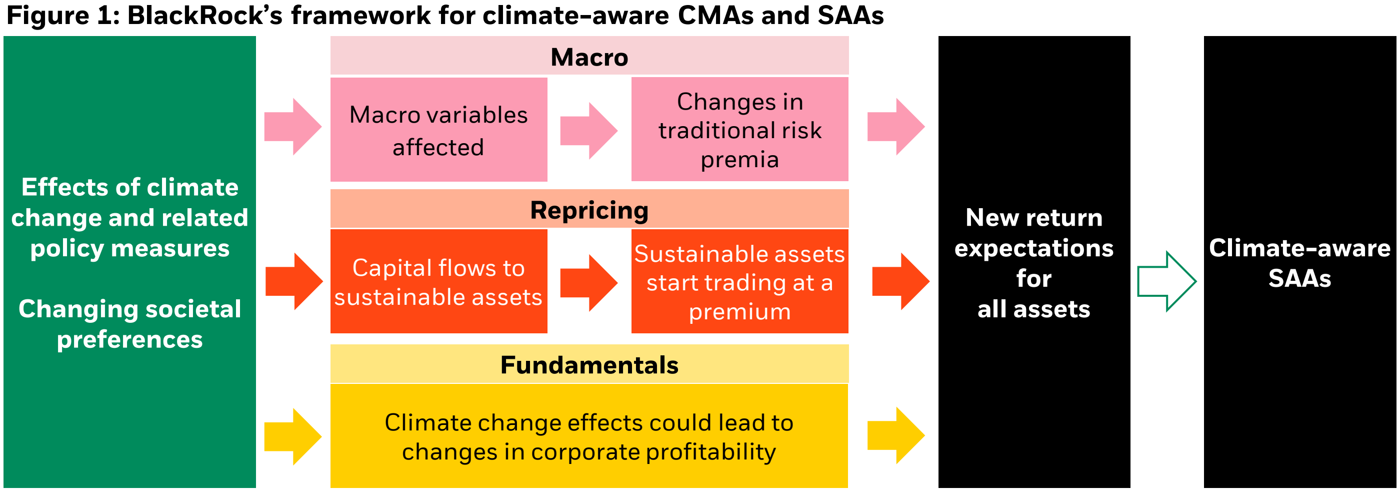
Once we have incorporated climate into the strategic asset allocation, the next step is to implement and manage it with a combination of index and alpha-seeking strategies. The selection of building blocks will depend on our insights along with client needs and preferences, including investment outcomes, risk tolerance, and regulatory requirements. We partner with clients both to build new sustainable propositions and to transform existing portfolios.

Step 3: Monitoring and Reporting

The portfolio management process is ongoing. Delivering sustainable outcomes over time requires us to fully integrate ESG into our regular governance and monitoring processes. This includes partnering with BlackRock's Investment Stewardship team to promote business practices consistent with sustainable long-term value creation. In addition, our proprietary Aladdin Climate tool allows portfolio and risk managers can see climate-adjusted analytics alongside standard datasets as we make decisions. BlackRock's approach uniquely bridges climate science with asset-specific modeling. Our clients benefit from full transparency on portfolio sustainability features, including ESG scores and carbon metrics.

Risk: While proprietary technology platforms may help manage risk, risk cannot be eliminated.

Figure 1: BlackRock's framework for climate-aware CMAs and SAAs



Source: BlackRock Investment Institute, February 2021. For illustrative purposes only. Subject to change without notice.

2 Source: BlackRock, as of June 2021. Subject to change. Reference to individual investments mentioned in this communication is for illustrative purposes only and should not be construed as investment advice or investment recommendation.

Practitioner's perspective

In this section, we present two case studies to further illustrate how our MASS investment team builds sustainable portfolios.

Case Study 1: Multi-Asset ESG ETF strategy (For illustrative purposes only)

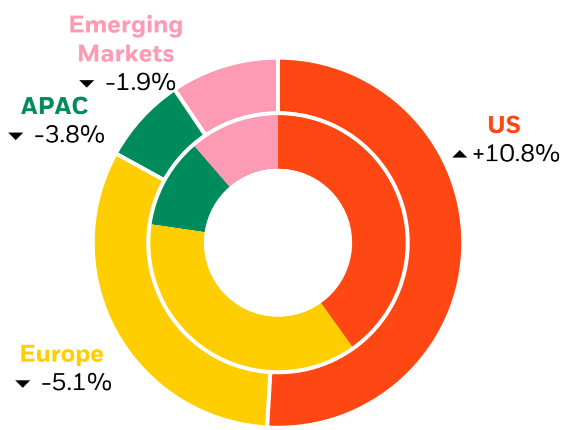
Our range of Multi-Asset ESG ETFs are diversified, risk-managed, and cost effective portfolios. These strategies draw on the climate-aware CMAs as part of the portfolio construction process and invest using the full universe of iShares UCITS ESG ETFs.

Step 1: Strategic Asset Allocation

As previously noted, SAAs driven by our climate-aware CMAs have tended to have increased allocations to developed market equity at the expense of emerging market and high-yield debt.

In this example, when we compare the SAA driven by "climate change-agnostic" CMAs to one that incorporates climate risk, we observe an increase in US equities funded by reductions in other regions.[3]

Figure 2: Climate-aware (outer) vs. climate change-agnostic (inner) equity positioning



Source: BlackRock, as of June 2021. For illustrative purposes only. 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.

As a final input to this step, our portfolio managers review CMA-dictated SAAs and make discretionary changes where appropriate. Our portfolio construction process considers both climate-aware CMAs and total risk, while preventing large deviations of the portfolio return outcome versus a comparable broad market-capitalisation portfolio.

Step 2: Implementation

In implementing the SAA, this strategy uses only ESG-oriented index building blocks. Historically, focusing on ESG ETFs has not reduced returns or impacted portfolio risk, and our portfolio managers see potential for outperformance of sustainable index exposures versus traditional counterparts.

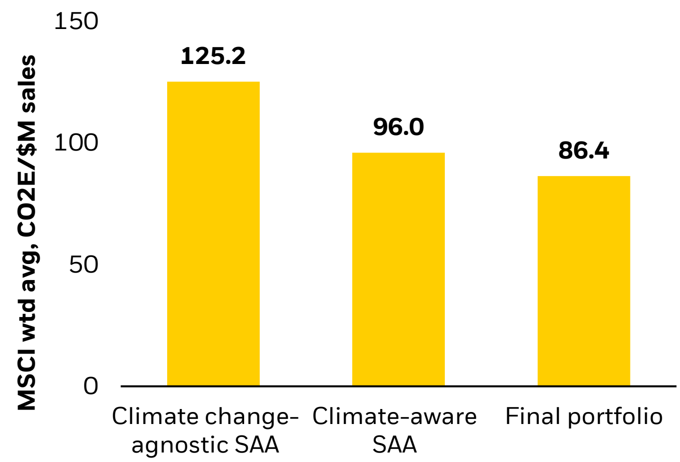
Within the universe of ESG ETFs, there are several varieties from which the portfolio managers can choose. Some indexes simply exclude controversial or poorly scoring companies, while others are further optimised toward companies with higher ESG scores. These different approaches come with varying levels of active risk, ESG and carbon scores, and cost.

In constructing the Multi-Asset ESG ETFs, we have used "enhanced" and socially responsible investing (SRI) indexes as well as climate aware and green bond exposures within fixed income. Benefits of enhanced indexes include modest tracking error and potential for increased resilience and exposure to companies which may improve their ESG scores over time. SRI indexes come with greater tracking error but tend to have the highest ESG scores given more stringent screens. We are also always tracking availability of new sustainable strategies and building blocks, notably impact, thematic, and Paris-aligned benchmark indexes.

Step 3: Monitoring and Reporting

By considering sustainability throughout the portfolio construction process, we believe we are able to positively impact environmental and sustainable factors. Most notable is the 30% reduction in carbon emissions intensity, as shown below.

Figure 3: Reduction in carbon intensity



Source: BlackRock, MSCI, as of June 2021. For illustrative purposes only. MSCI ESG ratings, metrics, methodologies and scores may differ from those of other providers.

3 Source: BlackRock, as of June 2021. Subject to change. Reference to individual investments mentioned in this communication is for illustrative purposes only and should not be construed as investment advice or investment recommendation.

Case Study 2: ESG Strategic Growth strategy (For illustrative purposes only)

Step 1: Strategic Asset Allocation

Like our Multi-Asset ESG ETF strategy example, the ESG Strategic Growth strategy uses the climate-aware CMAs to determine the SAA that is aligned to the strategy's long-term objective. Portfolio managers then apply a layer of discretionary oversight which allows us to consider the implications of our macro outlook on near-term positioning.

For example, the inclusion of climate impact in the CMAs suggested a reduced allocation to UK equities and global infrastructure and an increase in the allocation to European equities and hard currency emerging market bonds.[4] In this example, when considering these changes alongside our macro outlook, we elected to reduce exposure to broad UK equities and increase exposure to European equities, as indicated by the SAA. On the other hand, we retained the allocation to global infrastructure, which is largely implemented through listed renewable energy funds. As well as contributing to the decarbonisation of electricity generation, from an investment perspective we believe that these assets will continue to benefit from the transition to a low-carbon economy and note the additional diversification benefit they bring to the portfolio.[5]

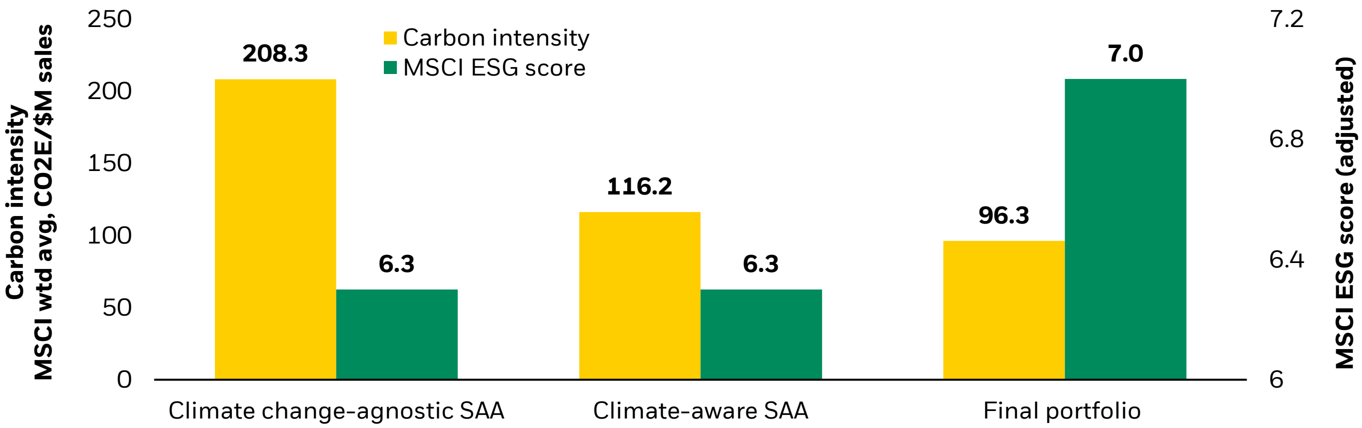
Step 2: Implementation

In implementing the desired asset allocation, we use ESG and SRI ETFs and index funds, bespoke thematic baskets, and individual securities. We seek to generate alpha by identifying and investing in companies that are ESG leaders or part of an ESG theme. Furthermore, we apply a number of exclusionary screens. We believe this comprehensive approach to ESG investing allows us to lean into those companies better managing ESG risks, including climate risk, and therefore best placed to deliver sustainable growth.

Step 3: Monitoring and Reporting

In this strategy, we aim to deliver a lower carbon intensity and higher ESG score than the broad market. As shown in the figure below, using the climate-aware CMAs has been especially impactful on the former, while our choice of implementation vehicles helps us achieve the latter.

Figure 4: Reduction in carbon intensity and improvement in MSCI ESG score



Source: BlackRock, MSCI, as of June 2021. For illustrative purposes only. MSCI ESG ratings, metrics, methodologies and scores may differ from those of other providers. See page 5 for more details.

Want to learn more?

Our multi-asset investment team believes that integrating sustainability through the investment process helps us to deliver outcomes with more precision. We are here to partner with clients who are looking to build portfolios that are more resilient to climate change or set to have a positive impact on the world. Please contact us to learn more about putting sustainability at the core of your portfolio through our multi-asset model portfolios, alpha-seeking strategies, and portfolio construction consulting services.

4 Source: BlackRock Investment Institute, as of 31 March 2021. 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. See next page or www.blackrock.com/institutions/en-zz/insights/charts/capital-market-assumptions for more details on capital market assumptions. 5 Source: BlackRock, as of June 2021. Subject to change. Reference to individual investments mentioned in this communication is for illustrative purposes only and should not be construed as investment advice or investment recommendation.

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For further details, see the table below or www.msci.com/esg-ratings or www.msci.com/index-carbon-footprint-metrics.

Metrics	Definition and methodology
ESG Coverage	The coverage represents the sum of the market value weights of the funds' underlying holdings that have been assigned an ESG score by MSCI. It is expressed as a percentage of the fund's total market value.
ESG Adjusted Score	The ESG Adjusted Score is calculated as the weighted average of the underlying holdings' ESG Scores. It is provided on a 0-10 scale, with 0 and 10 being the respective lowest and highest possible scores. MSCI scores underlying holdings according to their exposure to 37 industry specific ESG risks and their ability to manage those risks relative to peers. These issuer-level ESG scores correspond to an issuer-level ESG rating.
Environment (E), Social (S), Governance (G) Scores	The Environment (E), Social (S) and Governance (G) Scores are each calculated as the weighted average of the underlying holdings' E, S, and G scores respectively. They are also provided on a 0-10 scale, with 0 and 10 being the respective lowest and highest possible scores. MSCI scores underlying holdings according to their exposure to industry- specific Environmental, Social and Governance risks and their ability to manage those risks relative to peers. These issuer-level ESG scores correspond to an issuer-level ESG rating.
Emissions Intensity (Sales)	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.
Emissions Intensity (Total Capital)	A portfolio's Weighted Average Carbon Emissions Intensity by Capital is achieved by calculating the carbon intensity (Scope 1 + 2 Emissions / $M Total Capital) for each portfolio company and calculating the weighted average by portfolio weight. The underlying holdings' Scope 1 + 2 Emissions data is sourced from MSCI and BlackRock divides emissions by Total Capital (Total Debt + Total Equity).
Emissions Scope	Emissions Intensity by Sales and Total Capital cover Scope 1 + 2 Emissions where scopes are defined as indicated below: • Scope 1 emissions are those from sources owned or controlled by the company, typically direct combustion of fuel as in a furnace or vehicle. • Scope 2 emissions are those caused by the generation of electricity purchased by the company. • Scope 3 emissions include an array of indirect emissions resulting from activities such as business travel, distribution of products by third parties, and downstream use of a company's products (i.e. by customers).

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Product risks

BGF ESG Strategic Growth Fund

Exchange rate / currency risk - Overseas investment will be affected by movements in currency exchange rates. **High yield bonds risk** - The Fund invests in high yielding bonds. Companies which issue higher yield bonds typically have an increased risk of defaulting on repayments. In the event of default, the value of your investment may reduce. Economic conditions and interest rate levels may also impact significantly the values of high yield bonds. **Credit risk** - Fixed income securities issued by governments can be affected by the perceived stability of the country concerned and proposed or actual credit rating downgrades. The Fund invests in fixed interest securities issued by companies. There is a risk of default where the issuing company may not pay income or repay capital to the Fund when due. **Interest rate risk** - The fund invests in fixed interest securities such as corporate or government bonds which pay a fixed or variable rate of interest (also known as the 'coupon') and behave similarly to a loan. These securities are therefore exposed to changes in interest rates which will affect the value of any securities held. **ESG** - The environmental, social and governance ("ESG") considerations discussed herein may affect an investment team's decision to invest in certain companies or industries from time to time. Results may differ from portfolios that do not apply similar ESG considerations to their investment process.

BlackRock ESG Multi-Asset ETF range (Conservative, Moderate, Growth)

Counterparty risk - The insolvency of any institutions providing services such as safekeeping of assets or acting as counterparty to derivatives or other instruments, may expose the Share Class to financial loss. **Credit risk -** The issuer of a financial asset held within the Fund may not pay income or repay capital to the Fund when due. **Equity risk** - The value of equities and equity-related securities can be affected by daily stock market movements. Other influential factors include political, economic news, company earnings and significant corporate events. **ESG** - The benchmark index only excludes companies engaging in certain activities inconsistent with ESG criteria if such activities exceed the thresholds determined by the index provider. Investors should therefore make a personal ethical assessment of the benchmark index's ESG screening prior to investing in the Fund. Such ESG screening may adversely affect the value of the Fund's investments compared to a fund without such screening. **Liquidity risk** - Lower liquidity means there are insufficient buyers or sellers to allow the Fund to sell or buy investments readily. **Commodity swaps risk** - The prices of commodities tend to experience greater variations than other asset classes (e.g. equities or fixed income securities). Investments in commodities are therefore potentially riskier than other types of investments.

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