ESG & CLIMATE RESEARCH

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CONTACT

Kevin Bourne
Managing Director
Head of Investment Research
S&P Global Sustainable1
kevin.bourne1@spglobal.com

Greg Wallace
Managing Director
Head of Quantitative Investment Research
S&P Global Sustainable1
greg.wallace@spglobal.com

SUBJECT MATTER EXPERTS

Reid Steadman
Managing Director,
Global Head of ESG & Innovation
S&P Dow Jones Indices
reid.steadman@spglobal.com

Frédéric Samana
Managing Director,
Head of Strategic Development
S&P Global Sustainable1
frederic.samana@spglobal.com

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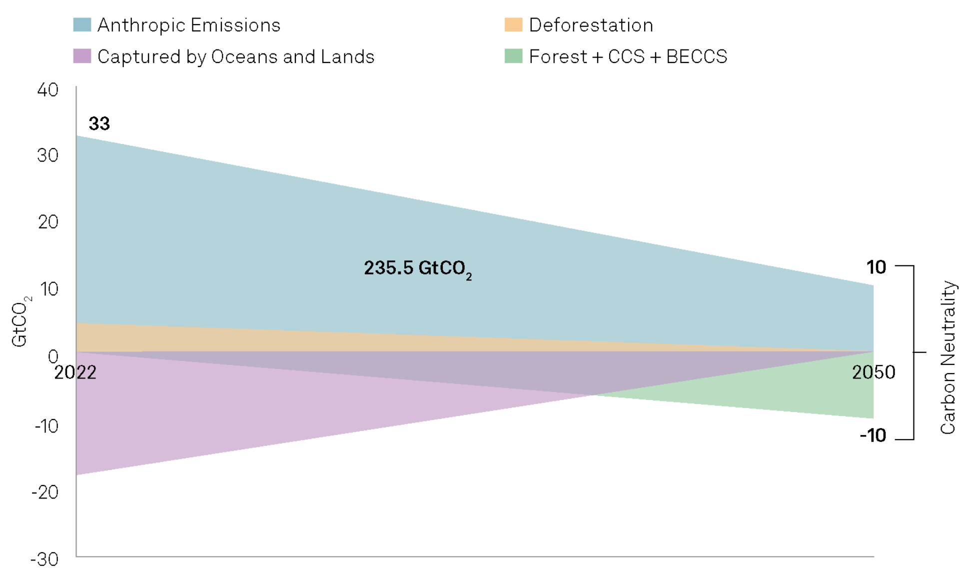
Post-COP27:

IPCC aligned indexes, time for changes?

Key Insights

- To achieve a 1.5°C objective by 2050, the world has a finite carbon budget of only 300 Gt CO_2, according to the Intergovernmental Panel on Climate Change.
- The world can meet this carbon budget by reducing CO_2 levels 12% each year from 2022 to 2050.
- One simple, transparent approach to address this challenge is for asset owners and investors to consider **Net Zero Carbon Budget Indexes** that track this requirement and thus capture the cost of time.
- Unfortunately, as the carbon budget shrinks with time, the objective becomes increasingly challenging. Decreasing 12% per year will become 20% in 2025 and 47% in 2028 to achieve a 1.5°C objective with an 83% probability by 2050.
- With a **Net Zero Carbon Budget Index**, lower carbon emitters within each sector are selected and reweighted to reduce emissions 12% each year. A simple but transparent solution.
- Modeling suggests the Tracking Error against a broad market-cap weighted index using this process is estimated to increase from 0.1% in 2020 to 1.4% in 2050.

Figure 1: Remaining carbon budget (in 2021)



Source: Bolton et al., 2022

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Notes

At COP26 in Glasgow, Scotland, banks, insurers and investors representing US$130 trillion made a historic commitment via Mark Carney's Glasgow Financial Alliance for Net Zero (GFANZ) to reach net zero emissions by 2050 at the latest[1], mirroring government pledges. As we now work through COP27, the scale of the challenge continues to crystalize.

The question remains how to integrate these commitments into a solution that is simple and transparent with low-market impacts.

S&P Dow Jones Indices seeks to address the challenge with the recent launch of a new series of innovative net zero carbon budget indices.

The concept is simple: What is true for the planet is true for all forms of diversified financings.

In other words, all types of financing should align to the remaining global carbon budget established by the IPCC in their most recent report to achieve a 1.5°C objective with an 83% probability: a 300 $GtCO_2$ budget with a starting point of 31.5 $GtCO_2$ in 2020.

Year on year, the index series will allocate a carbon budget across corporate index constituents based on their total emissions. The sum of the yearly carbon budgets will mirror the trajectory necessary to be carbon-neutral (decreasing 10% per year in volume).

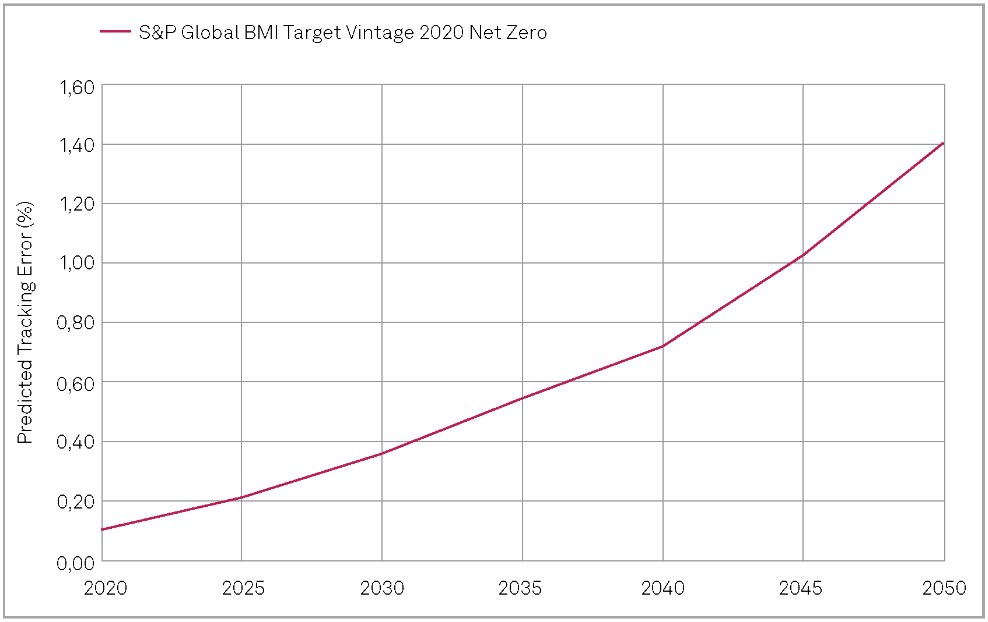
[1] Amount of finance committed to achieving 1.5°C now at scale needed to deliver the transition | Glasgow Financial Alliance for Net Zero (gfanzero.com)

Notes

We show it is possible to construct a net zero benchmark that is simple, transparent and robust, based on this carbon budget approach, and built on comprehensive Scope 1, 2 and 3 carbon emissions data provided by S&P Global Sustainable 1 (Trucost).

Furthermore, the approach has limited index construction impacts as illustrated by a low Tracking Error across a broad market index (BMI) universe and with constant emissions over time.

Figure 2: Tracking Error estimates



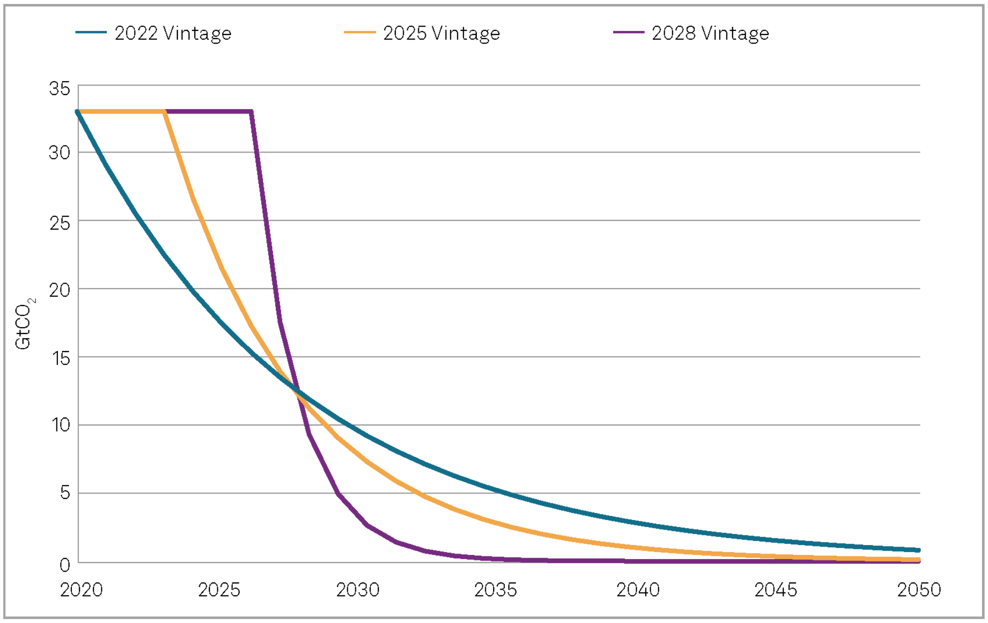
Source: S&P Dow Jones Indices, July 2022

Notes

And finally, with a sector-neutrality objective, capital is reallocated within each sector to the lowest carbon emitters so a competition is created within each sector toward reducing emissions. By simulating future portfolios, we can actively engage with corporates to let them know if, and when, they will exit the index.

But time is of the essence. If being carbon-neutral in 2022 means to reduce the volume of CO_2 by 10% per year, it becomes a reduction of 18% in 2025 and impossible by the end of the decade, based on current emission levels.

Figure 3: Time impact on decarbonization rate



Source: Bolton et al., 2022

Subject Matter Experts

Reid Steadman

Managing Director, Global Head of ESG & Innovation

S&P Dow Jones Indices

reid.steadman@spglobal.com

Reid Steadman is Managing Director and Global Head of Environmental, Social and Governance (ESG) & Innovation at S&P Dow Jones Indices (S&P DJI).

In addition to ESG and innovation indices, he oversees product management for strategy indices and indices employing natural language processing and machine learning.

Prior to his current position, Reid served in several key roles within S&P DJI, including Global Head of ESG, Deputy Head of Product Management, and Global Head of ETF Licensing. Before joining Standard & Poor's in 2003, Reid worked as an economist for the U.S. Bureau of Labor Statistics.

Reid holds a bachelor's degree in economics from Brigham Young University. He also holds an MBA from Carnegie Mellon University, with emphases in finance and marketing.

Frédéric Samana

Managing Director, Head of Strategic Development

S&P Global Sustainable1

frederic.samana@spglobal.com

Frederic Samama is Head of Strategic Development at Sustainable1.

Mr. Samama started his career at JP Morgan in Paris. He then oversaw Corporate Equity Derivatives at Crédit Agricole Corporate Investment Banking in Paris and in New York. There, he developed and implemented the first international leveraged employee share purchase program, a system now widely used by French companies.

He then joined leading European asset manager, Amundi. There, he reorganized and developed the institutional clients coverage. He built Amundi's green finance franchise by pioneering the first mainstream equity low-carbon indexes. He also launched the largest green bond fund of its time to finance green infrastructures in Emerging Markets.

Mr. Samama also co-launched the first coalition of institutional investors committed to decarbonizing their portfolios, which was selected to represent the entire finance industry during the COP21 Action Day.

Mr. Samama founded the Sovereign Wealth Fund Research Initiative in 2009, a pioneer academic center dedicated to SWFs and sustainability. He co-edited a book on long-term investing with Nobel Prize Laureate Joseph Stiglitz and Professor Patrick Bolton and has published numerous papers on green finance (e.g., "The Green Swan, central banking and financial stability in the age of climate change", "Hedging Climate Risk"). He is currently a visiting professor at Sciences Po, Paris.

Mr. Samama is regularly invited to comment publicly on ESG and climate change including before the US Senate.
His philanthropic activities include support for organizations such as the NGO Positive Planet, which he presided in the US between 2009 and 2013.

Mr. Samama is a member of the Scientific Committee of the French Prudential Supervision and Resolution Authority (ACPR). He has been appointed to the Independent High-Level Expert Group on Climate Finance managed by Lord Stern. He is a member of the One Planet Lab and has advised the Bank for International Settlements (BIS).

MS in Economics (Neomia Business School), MA in Philosophy (Pantheon-Sorbonne University), Stanford Executive Program.

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Contact us

If you are looking to learn more about S&P Global ESG Scores click here and an ESG Specialist will assist you.

Americas
P: **+1-877-863-1306**
E: **market.intelligence@spglobal.com**

EMEA
P: **+44-20-7176-1234**
E: **market.intelligence@spglobal.com**

APAC
P: **+852 2533 3565**
E: **market.intelligence@spglobal.com**

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