

**SUSTAINABLE INVESTMENT BULLETIN****ISSUE #3 1/7/2022**

We are excited to continue our speaker series in the 2021-22 academic year. This new set of webinars will focus on issues related to the interaction between the financial system and sustainable development goals: environmental, social, and governance (ESG). The talks focus on financial sustainability, green finance, and, more generally, the role of the financial system in combating climate change as well as addressing other ESG goals.

**Net-Zero Carbon Portfolio Alignment**

On October 15, 2021, CAFIN and UC Investment Speaker Series hosted Frederic Samama, Chief Responsible Investment Officer at CPR AM, Amundi Group, in conversation with Dr. Daniel Friedman, Distinguished Professor of Economics Emeritus at UC Santa Cruz. Here, we provide a summary of the conversation. The video of the conversation and the presentation slides are available on [our website](#). Dr. Samama's presentation was based on his [research paper](#) co-authored with Patrick Bolton and Marcin T. Kacperczyk.

The 2015 Paris Climate Agreement was a watershed moment in global recognition of the threats of climate change and the urgency required in addressing them. 113 countries, representing over 50% of the world's GDP committed to a legally binding agreement to limit global warming to a cap of 2 degrees (preferably 1.5 degrees) Celsius by 2050, compared to pre-industrial levels. The agreement was accompanied by the establishment of investor coalitions, such as the Net Zero Asset Owners Alliance and Net Zero Asset Managers Initiative, representing around \$100 trillion, committing to the same objective.

The Intergovernmental Panel on Climate Change (IPCC) in their sixth Assessment Report, proposed a cap of 300 gigatons of CO<sub>2</sub> emissions through 2050 and a 45% reduction in emissions over the next 8.5 years, in order to be able to achieve the 1.5 degrees goal for 2050 with a probability of 83%. Frederic Samama and his coauthors propose a carbon budget approach for incorporating this constraint into an investment portfolio model. This involves constructing a portfolio that is consistent with a 25% immediate carbon emissions reduction, followed by an 8% annual emissions reduction, based on a representative MSCI portfolio.

The carbon budget approach has several key advantages. It maps scientifically established climate change mitigation goals to responsible investment goals in a transparent, simple, and scalable manner. Furthermore, it is based on a reasonable set of assumptions regarding the nature of the portfolios, and gives a clear set of recommendations for both required goals, and for policymakers to ensure transparency and compliance. Another advantage is that this approach provides incentives to corporates: companies can predict when they would be excluded from portfolios if they do not themselves align with a Net Zero target. As a result, there is a competitive pressure on companies to decarbonize in order to maintain their place in the portfolio.

The tracking error of the zero-carbon portfolio (that is, the difference in returns compared to a benchmark MSCI) is shown to be quite small, yet the result is net zero emissions, in stark contrast to a "business-as-usual" scenario, which would lead to emissions increasing by 65% between 2020 and 2050.

In order to arrive at the desired trajectory of reduced emissions, corporations need to be provided with a sector-specific divestment roadmap that outlines the steps they need to take to be able to make the transition, and a legally binding set of constraints and incentives to ensure their compliance. One simple, robust way of doing so is to mandate investors to disclose a carbon pathway that outlines their carbon reduction policy and their forward-looking carbon footprint.