
JOIM CONFERENCE SERIES
CLIMATE CHANGE: INVESTMENT MANAGEMENT
IMPLICATIONS
OCTOBER 12 – 14, 2021/VIRTUAL CONFERENCE
Co-Hosted with Georgia Tech Scheller College of Business

CONFERENCE SUMMARIES



This conference covered topics from how the biggest pension fund in the world is dealing with this issue to comments from a lead author of the recent authoritative UN Report to quantitative analytics which are useful in managing climate change and other ESG portfolios. Included were practical strategies to cope with climate change mandates. This event was co-sponsored with Invesco and Georgia Tech Scheller College of Business.

Masataka Miyazono, Government Pension Investment Fund (GPIF)

Keynote Speaker

Translator: Jeffrey Bohn, U.C. Berkeley and One Concern Climate Change and Other ESG investing at GPIF

Although the potential impact may vary in size, climate change risks occur simultaneously across all companies and asset classes, and these risks cannot be completely eliminated simply through diversification. At the very least climate-change

risks are highly likely to manifest over the long-term, and GPIF therefore believes that asset owners should take the lead in addressing them. At GPIF, we've taken actions such as linking a portion of our passive equity portfolio to environmental stock indexes and investing in green bonds, in addition to announcing our support for the TCFD." is an abstract of Miyazono san's speech.

Sudheer Chava, Georgia Tech Scheller College of Business

Do Managers Walk the Talk on Environmental and Social Issues?

Discussant: Divya Mankikar, S&P Global

We train a deep-learning based Natural Language Processing (NLP) model on various corporate sustainability frameworks in order to construct a comprehensive Environmental and Social (E&S) dictionary that incorporates materiality. We analyze the earnings conference calls of

U.S. public firms during 2007-2019 using this dictionary. We find that the discussion of environmental topics is associated with higher pollution abatement and more future green patents. Firms reduced their air pollution even after the U.S. announced its withdrawal from the Paris Agreement. Similarly, the discussion of social topics is positively associated with improved employee ratings. Overall, our results provide some evidence that firms do walk their talk on E&S issues.

Kim Cobb, Georgia Tech

Climate Change in the 2020's and Beyond – The Bumpy Road to a Net-Zero World

Discussant: Lukasz Pomorski, AQR Capital Management / Yale School of Management

The new Intergovernmental Panel on Climate Change Six Assessment Report brings into clear view the short and long term consequences of current greenhouse gas emissions trajectories. Notably, the report presents new and stronger evidence for physical links between rising greenhouse gases and a number of climate extremes, including drought, wildfires, extreme rainfall, tropical storms, and heat waves over land in the ocean. These extremes will challenge ecosystems and communities around the world, with the report noting that every single region in the world is already confronting multiple impacts of climate change. The report highlights that sustained, deep emissions cuts this decade are required to keep warming to the most ambitious target of 1.5C, which may allow for the initiation of global cooling by the second half of this century. Even so, sea levels will continue to rise every year for centuries to come, with the ultimate magnitude and rates of change dependent on how quickly we move towards net zero emissions. As Lead Author for the IPCC report, Dr. Cobb outlines the science behind these key findings, and outlines the scale of changes that would be required to achieve net

zero emissions by 2050, with a particular focus on levers for action in the private sector.

Elroy Dimson, University of Cambridge

The Norway Model in Perspective

Discussant: Jay Raol, Invesco

Our 2012 paper on the Norway Model spotlighted that country's sovereign wealth fund. We argued that Norway provides a coherent and compelling approach to managing long-term pools of assets. Since then, the Norwegian Government Pension Fund has grown in scale and complexity, and its structure has evolved. Meanwhile, other models for asset management have been put forward. In this article we review Norway's investment strategy in the light of the last decade's experience, put it in a broader context by comparing Norway with alternative approaches, and re-examine the Fund's commitment to responsible investing. Since we wrote our earlier paper, environmental and social issues have come to the fore and there is still much to learn from the Norway Model.

Robert Engle, NYU Stern School of Business

Climate Financial Risk: Portfolios and Stress Tests

Discussant: Sam Peters, Clear Bridge Investments

- Climate change impacts asset prices as future expected damages and decarbonization are built into prices and the uncertainty of such events contribute to the risk. Assets highly exposed to such risks should receive a risk premium and portfolios which short such risks will have a negative alpha unless the market view on climate severity worsens.
- Factor mimicking portfolios correlated with climate news conditional on other risk factors are constructed from long positions in publicly available sustainable funds.

- Such portfolios can be used to stress test banks for climate related shocks.

Stephen Horan, UNC Wilmington

The End of ESG

Discussant: Jeff Hales with Sustainability Standards Board (SASB)/UT Austin

ESG strategies have experienced a massive inflow of capital over the past decade. Curiously, this has occurred despite investors having little concrete evidence that ESG investing is actually accomplishing its purported goals. Furthermore, it has happened without investors having the information, tools, and methods needed to evaluate and communicate their specific ESG values, objectives, and preferences. Without evidence of efficacy and clearly articulated investment objectives, it is impossible for investors with ESG intent to know if they are getting what they are paying for, to distinguish between investment managers based on nonfinancial objectives, or to improve the likelihood of achieving positive ESG investing outcomes. This paper highlights key challenges faced by ESG investors and portfolio managers implementing ESG investment mandates. It then seeks to address these challenges with the end of the ESG investment process in mind. Specifically, it focuses on relevant fund reporting, provides guidance on the information required to make informed ESG investing decisions, and proposes a performance evaluation and attribution framework to support the ESG investment management process.

Robert Litterman, Kepos Capital

Measuring Comprehensive Carbon Prices of National Climate Policies

Discussant: Alison Li, CalPERS

We measure the comprehensive carbon price from 2008 to 2019 resulting from climate policies

imposed by 25 high polluting countries that represent 82 percent of global carbon dioxide (CO₂) emissions in 2019. Comprehensive carbon prices build upon previous notions—including explicit, effective, and implicit carbon prices—by incorporating a broad range of policies that reduce carbon emissions. We consider seven types of major market-based policies commonly used to create marginal incentives to reduce emissions: carbon taxes, emissions trading systems, fossil fuel taxes, fossil fuel subsidies, renewable portfolio standards, feed-in tariffs, and low-carbon fuel standards. Comprehensive carbon prices represent the weighted average of marginal incentives imposed on polluters by country policy mixes.

Andrew Lo, MIT Sloan School of Management

Quantifying the Impact of Impact Investing

Discussant: Mike Chen, Panagora Asset Management

We propose a quantitative framework for assessing the financial impact of any form of impact investing, including socially responsible investing (SRI), environmental, social, and governance (ESG) objectives, and other non-financial investment criteria. We derive conditions under which impact investing detracts from, improves on, or is neutral to the performance of traditional mean-variance optimal portfolios, which depends on whether the correlations between the impact factor and unobserved excess returns are negative, positive, or zero, respectively. Using Treynor-Black portfolios to maximize the risk-adjusted returns of impact portfolios, we propose a quantitative measure for the financial reward, or cost, of impact investing compared to passive index benchmarks. We illustrate our approach with applications to biotech venture philanthropy, divesting from “sin” stocks, investing in ESG, and “meme” stock rallies such as GameStop in 2021.

Carsten Rother, Invesco*Factor investing in Paris: Managing Climate Change Risk in Portfolio Construction*

Discussant: Jennifer Bender, State Street Global

The 2015 Paris Agreement is a landmark in limiting emissions and targeting global warming well below 2, preferably 1.5, degrees Celsius compared to pre-industrial levels. In this light, we investigate how to efficiently construct equity portfolios that help mitigating climate change risk but at the same time do not jeopardize harvesting well-established return drivers such as

value, momentum or quality. While thoughtfully fostering the adaption of temperature alignment is essential, it is not straightforward to do so. A pure reduction in greenhouse gas intensity or a divestment from fossil sectors is not necessarily leading to a better temperature alignment of a portfolio. Given the limited set of temperature-aligned assets, keeping the average temperature increase below 2 degrees comes with fairly large active risks. We propose a net zero portfolio construction frame work that brings a gradual increase of 2 degree aligned assets together with a decrease in the portfolio's carbon intensity, but allows for harvesting equity factor premia.