The AMBACHTSHEER Letter

Sustainable Pension Design • Effective Pension Management

July 2024

CLIMATE-RELATED RISKS, TIME HORIZON, AND INVESTMENT POLICY:

HOW ARE THEY BEST INTEGRATED?

"In the context of climate change, it is as if we were modeling the scenarios of the Titanic hitting an iceberg, but excluding the possibility that the ship could sink. It is deeply concerning that what we see happening in the real world is largely excluded from risk models widely used across the financial sector."

Prof. Trust, University of Exeter
July 2023

"The Titanic did in fact sink after hitting the iceberg, and many lives were lost. If we are to prevent global warming from becoming the global Titanic of the 21st Century, urgent 'Net Zero' actions are required <u>now</u>."

The Ambachtsheer Letter
September 2023

"We investigate financial experts' beliefs about climate risk pricing and analyze how those beliefs influence stock return expectations. Most experts share the view that climate risks are insufficiently reflected in stock prices, yet they hold heterogeneous beliefs about the source and persistence of the mispricing. Differences in experts' mental models explain the variation in return expectations."

Profs. Bauer, Godker, Smeets, Zimmerman
"Mental Models in Financial Markets: How Do Experts Reason About the Pricing of Climate Risk?"
May 2024

"Antonio Guterres, UN Secretary-General, commented 'we need an exit ramp off the highway to climate hell. The battle for 1.5 degrees will be won or lost in the 2020s.' He was responding to an EU climate change monitoring service report that the average global temperature for the 12-month period ending May 2024 was the warmest such period since record keeping began in 1940."

Reuters
June 6, 2024

Our Titanic *Letter*

The **September 2023 *Letter*** cited above reviewed the findings of separate 2023 studies by *Carbon Tracker* and by the *University of Exeter* on climate risk modeling. Both studies asserted there was a material gap between the scientific reality of potential high-impact physical, social, and economic events (e.g., rising sea levels, extreme weather, bio-diversity loss, resource scarcity, economic inequality, migration, conflict, mortality), and the much weaker, more subdued consequences suggested by the outdated long-term economic risk models still being used by the financial sector.

These findings logically led to the question of what should pensions funds be doing now to lessen these potential impacts in the decades ahead. The short answer of course is to stop using risk models that do not capture the scientific realities of climate risk.

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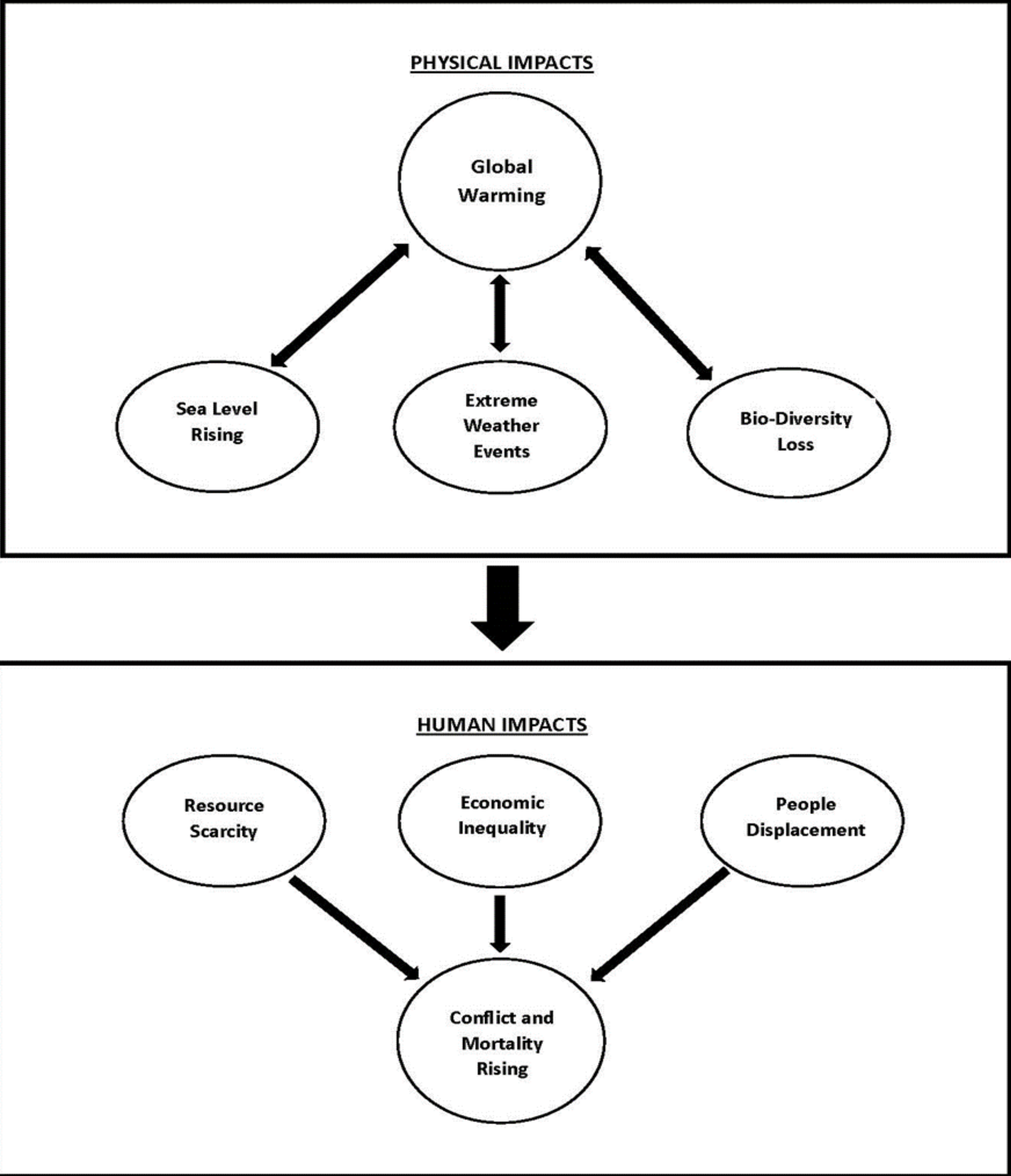
The longer answer is to break down the silos standing in the way of developing common understandings of the problem and its consequences and to foster and promote ‘net zero’ strategies not just in pension funds’ own operations, but also in the Scope 1, 2, and 3 emission dimensions of the businesses they invest in. The greater the future control of GHG emissions, the lower the impact on global warming, and hence the greater the likelihood that future pensions promised will become future pensions paid.

The September *Letter*’s contribution to fostering systems thinking about the scientific realities of climate risk was set out in Figure 1 below. It clearly shows the pathways from global warming to its physical consequences, and from there to its economic and social economic consequences. The higher we allow temperatures to rise, the more severe those economic and social consequences will be.

Figure 1 The Global Warming Story



A New Climate Risk Study

The third citation on the front page comes from a new academic study with the explanatory title "**Mental Models in Financial Markets: How Do Experts Reason About the Pricing of Climate Risk?**" In the words of its four authors, the purpose of the paper is to investigate financial experts' beliefs about climate risk pricing and the impact of those beliefs on stock return expectations. Or stated differently, this new paper does not compare the climate risk models built by climate experts with those built by economists. Instead, the study ascertains the views of a large sample of financial analysts on the degree to which climate risk is embedded in today's financial markets, and how they view the investment implications of their beliefs.

Here are summary descriptions of the design of the study and the people who responded to it:

- Study Design: respondents were asked what their jobs were, and how frequently they dealt with security pricing questions. They were asked to address a series of multiple-choice questions related to perceived importance of climate risk as a securities pricing factor, to the perceived level of climate-related mispricing and its reasons, and to expected over/under investment performance due to climate risk factors.
- Study Respondents: the study researchers worked with the CFA Institute to distribute the questionnaire to holders of the CFA designation reachable by email. In total, 1989 completed responses were received, representing 3.6% of all CFA holders around the world. The sample was deemed to be diverse by respondent roles, gender, and geography.

Key study findings follow.

Key Study Findings

They are:

- Importance of climate change risk as a securities pricing factor: 67% of the sample judged it 'extremely important', 'very important', or 'somewhat important', 33% of sample judged it 'not very important', or not at all important. The implication is that 2/3rds of a sample of almost 2,000 experts believe climate change risks impact securities prices at least to some degree, and likely materially.
- Correctness of climate change risk impact on securities pricing: 68% of the experts believed that securities are insufficiently impacted: 19% believed the impact was about right, and 13% believed they are too much impacted. The implication is that 2/3rds of the experts believe market prices currently insufficiently reflect prospective climate change risks.
- Correlations between beliefs on climate change importance/pricing correctness and opinions on investment performance: the stronger the 'importance' view in the sample, the stronger the view that 'climate friendly' securities will outperform the market. Similarly, the stronger the view that markets insufficiently reflect climate change risk, the stronger the view that 'climate friendly' securities will outperform the market.
- Beliefs Drivers: the reasons for holding the views they reported were mixed. The three most-mentioned reasons for their stated beliefs mentioned by survey participants were 1. The beliefs of other market participants (48%), 2. Data challenges and informational constraints (47%), and 3. Political measures and geography (11%).
- Limits to arbitrage: the study authors note that even though the majority of survey respondents believe climate change risks are not sufficiently priced in financial markets, that does not logically lead them to overweight 'climate friendly' securities. The data limitations are a problem, as are the differing beliefs of other market participants. Both are deterrents to investment professionals materially restructuring their portfolios in line with their beliefs.

So what should we take away from this new study?

Time Horizon Matters

An important message of this new study is a reminder that managing climate change risk requires a time horizon perspective. The September *Letter* and its Figure 1 schematic reproduced here take the long view. Its message is that without serious Net Zero mitigation, paying adequate pensions 25+ years from now will become an increasingly challenging proposition for every pension fund in the world. Its action implications for today are clear: pension funds around the world must aggressively foster and support Net Zero strategies both collectively and individually wherever they can. Repeating the words of UN Secretary General Antonio Guterres, "*we need an exit ramp off the highway to climate hell. The battle for 1.5 degrees will be won or lost in the 2020s*."

In contrast, the new study reviewed in this *Letter* reminds us that in the much shorter term, financial markets will continue to be noisy and unpredictable even though 2/3rds of the almost 2,000 CFA respondents believe that climate change is insufficiently reflected in financial markets today. An unwelcome, but necessary piece of reality in setting and implementing climate-related investment policies over the course of the next few years.

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