

# KEYNOTE SPEECH 1

## SOME FINANCIAL IMPLICATIONS OF GLOBAL WARMING: AN EMPIRICAL ASSESSMENT

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### Abstract

Concurrent with the rapid development of the market for cat bonds, a steady decline in their returns per unity of risk or multiples has been observed. Whether the latter trend is consistent with the evolution of natural disasters risk is an open question. Indeed, a large share of outstanding risk capital in the cat bonds market appears to be exposed to some climate change-related risk as, for instance, hurricane risk, which global warming is expected to enhance. The paper addresses the above issue within a novel econometric framework, allowing to accurately assess the global warming evidence and its implications for the natural environment and, therefore, the cat bonds market. We find evidence of ongoing global warming, driven by radiative forcing, and of feedback effects consistent with the view that global warming might affect the environment by enhancing the disruptive effects of natural oscillations, such as El Niño/La Niña episodes, and of cyclones activity. In the light of current climate change developments, disasters risk then appears to be on a raising trend. In this respect, while our evidence provides support to the view that falling multiples should be related to the expansionary monetary stance, as well as to the increased market participation of institutional investors, it also points to some risk undervaluation in the cat bonds market.

Keywords: Cat bonds, multiples, temperature anomaly, global warming, radiative forcing, ENSO, El Niño, dynamic conditional correlation model.

JEL classification: G11, G23, C32