

Discussion of "How climate-awake are financial markets?"
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What is this paper about?

- The aim of the paper: To empirically test the hypothesis that asset prices responds to changes in the (increasing) frequency of of climate-related disasters (subjective disaster probability)
- Main contribution of the paper: model formation of beliefs about future distribution of climate shocks, by introducing
 - ▶ a *belief rigidity* parameter regarding the Poisson parameter (that pins down the disaster arrival rate and its variance)
 - ▶ and a *climate optimism* parameter

The findings of the paper

- The model predicts that lower climate optimism and lower belief rigidity, which is consistent with a higher subjective probability of a disaster, implying a lower risk-free rate and a higher risk
- Small response of asset prices to physical climate risks premia

Comments

- Very nice idea to incorporate belief updating in asset pricing-subjective belief dynamics in particular with respect to the realization of climate shocks
- The research question is clear and timely
- In the next slides, I will discuss some points

Comments

- Rigid beliefs gives an impression of a friction or presented somewhat this way. But in the context of increasing climate volatility, we want belief rigidity to avoid extreme movements/instability in financial markets.
- Are these real frictions? Can we measure them or proxy? Can governments influence these? What drives them?
- What are the implications for macro/micro prudential policy or regulation more broadly?
- They also affect sovereign yields so has implications for fiscal policy sustainability.
 - ▶ After a disaster, movements of government bonds could be related to direct government spending...
 - ▶ ...maybe less relevant for the US but for instance in Turkey, the direct physical cost of the recent earthquake is measured about 4 percent (or more) of GDP in cumulative terms. So it could imply deterioration in fiscal balances and hence increased yields.

Comments

- What about the differences in belief updating in pricing green assets vs brown assets?
 - ▶ One would expect the brown assets to be riskier in terms of their exposure to climate shocks. So Bayesian updating could be more relevant for brown assets?
- Some technical questions:
- How do the model fit compare with Gabaix (2012), belief rigidity $\in [0, 1]$ and climate optimism $\in [0, 1]$?
 - ▶ Is there a way to conduct some sort of out-of-sample comparison to judge the model fit?
- Are the expected losses in productivity and welfare resulting from disasters adjusted for the arrival rate of disaster or more specifically for the subjective disaster probability? (*subjective expected future payoffs?*)
- Are expected losses consistent with the estimated weighted average of SSP1 and SSP3?
- Minor point: The paper is framed in the context of the *rare events* asset pricing framework...
 - ▶ ...still maybe the disasters are not so rare as your contribution relies on the continuous arrival of disasters.