Socially efficient discounting under ambiguity aversion

Johannes Gierlinger[1]
Toulouse School of Economics (LERNA)

Christian Gollier
Toulouse School of Economics (LERNA and EIF)

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[1]**Correspondence**: Toulouse School of Economics, Manufacture des Tabacs, Aile J.-J. Laffont, MF007, 21 allée de Brienne, 31000 Toulouse, France. Email: johannes.gierlinger@univ-tlse1.fr.
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Abstract

We consider an economy with an ambiguity-averse representative agent who faces uncertain consumption growth. We examine conditions under which ambiguity aversion reduces the socially efficient discount rate. It is shown that ambiguity aversion affects the interest rate in two ways. The first effect is an ambiguity prudence effect, similar to the prudence effect that prevails in the expected utility model. In contrast, it requires decreasing ambiguity aversion in order to be signed. The second effect is that ambiguity also entails pessimism. But this implicit shift in beliefs generally has an ambiguous effect on the interest rate. We provide sufficient conditions under which ambiguity aversion does indeed decrease the socially efficient discount rate. The calibration of the model suggests that the effect of ambiguity aversion on the way we should discount distant cash flows is potentially large.

Keywords: Decreasing ambiguity aversion, ambiguity prudence, Ramsey rule, sustainable development.