

Referee report on „Yes, we should discount the Far Distant Future at its lowest possible rate: A resolution of the Weitzman-Gollier puzzle” by Mark Freeman

The author draws on papers by Weitzman, Gollier and others who propose criteria to evaluate projects that mitigate costs that arise in the far future. An example is mitigation of climate change. The author claims to resolve a puzzle that arises by different evaluation rules: While Weitzman suggests to use the Expected Net Present Value criterion, Gollier suggests to take the Expected Net Future Value criterion. The author's main "result" is that the ENPV criterion "correctly" assesses the attractiveness of a project, while the ENFV rejects projects that are accepted under the ENPV criterion. The author links his considerations to related contributions in the literature.

In my view the paper is a complete mess. First of all, the main result is not surprising and not really new. It is already known from the literature that the ENPV and the ENFV criterion are not equivalent. It therefore must be the case that a project can pass one criterion while it fails to pass the other one. The 2nd part of Theorem 1 is also very weak. It says that it can happen that a project that passes the ENPV criterion does not pass the ENFV criterion, but does not give conditions, when a project that passes the ENPV criterion fails to pass the ENFV criterion or vice versa. Moreover, the Theorem does not prove that the ENPV is the one and only criterion. So the first part is more or less tautological.

Second the author claims that the social planner is risk neutral. At the same time he assumes that he has a strictly concave utility function. (How can you assume that u is strictly concave, $u(\cdot) \equiv v(\cdot)$, but $v'' = 0$? I do not understand the role of the function $v(\cdot)$). If the social planner is risk neutral the certainty equivalent must be equal to the expected payoff, which here is not the case.

Third, the paper jumps back and forth between the own formal model and different contributions in the literature. This makes the paper hard to read. In particular for readers who are not rooted in the finance literature, section 3.2 is hard to follow.

Fourth, the author claims to make methodological progress? I do not see this.

Fifth, the author does not refer to the title's issue of the "lowest possible" rate. What is the lowest possible rate?

In my view the only part that has some potential is section 3.1. But the Theorem has to be made much more precise. The author must make clear why his finding is in contrast to the one by Gollier.