## **Referee Report for**

## "The Role of Lenders' Trust in Determining Borrowing Conditions for Sovereign Debt An Analysis of One-Period Government Bonds with Default Risk"

## by Yanling Guo (Manuscript MS 1478)

This paper considers a dynamic stochastic model of sovereign debt and default and introduces a parameter  $\alpha$  that is interpreted as a weight on the lenders' interest. The author argues that there is a 'good' equilibrium in which a higher  $\alpha$  generates a lower risk of sovereign default.

The research question of this paper is unclear. Moreover, the theoretical framework is not well described and the analysis is confusing. Here are some comments that may be helpful to improve the quality of the paper.

- In the introduction, the author motivates the paper by emphasizing that sovereign debt consists
  of domestic and external debt. The author argues that this empirical fact requires the introduction of a new parameter α. But then, α is defined as a weight that the borrowing government
  assigns to the average lender. What is the 'average' lender? In the analysis, the author refers
  to 1 α as the share of debt held by foreign investors. These different interpretations of α are
  confusing: what is the meaning of α and what is the exact research question of the paper?
- 2. In Section 2.2, the model environment is described. The model setup is hard to understand. Since the author considers a standard model of sovereign debt and default, I strongly suggest to follow the notation that is commonly used in the literature. Here are some additional remarks:
  - Equation (2) seems to be the budget constraint of the representative domestic household who holds a fraction  $\alpha$  of total public debt. Equation (3) is the government's budget constraint who issues public debt from domestic and foreign lenders. The author treats  $\alpha$  as an exogenous parameter and interprets it as a weight on the average lender's interest. Why? It is hard to understand this interpretation:  $\alpha$  is just the share of domestic debt.
  - The representative domestic household is assumed to be risk-averse. There should be an Euler equation regarding the household's optimal savings decision. Why is the household's Euler equation not taken into account in the government's maximization problem?
  - The author assumes that in default neither domestic nor external debt is repaid. This assumption should be discussed. In the data, do defaults on external debt and domestic debt take place at the same time?
  - The author introduces some additional costs of taxation  $x(\tau_t)$  that show up in the budget constraint of the household. Why is this important for the analysis? It seems to be easy to consider endogenous costs of taxation by considering endogenous production and distortionary taxation.
  - Is endowment  $y_t$  stochastic? Are foreign investors risk-neutral? Equation (4) implies this, but the authors should clearly state all assumptions.
- 3. In Section 2.3, the author derives first order conditions. Why are the value functions independent of endowment  $y_t$ ? Why does the author distinguish between  $V^d$  and  $V^a$ ? If the government chooses to default,  $b_{t-1} = 0$ , such that  $V^d$  and  $V^a$  are equivalent. Given that  $V^f$  has a kink, what about the differentiability of the value functions?

- 4. Section 3.1. is entitled 'Model of the default probability'. The theoretical framework of this section turns out to be the same as in Arellano (2008), except that the budget constraint contains  $(1-\alpha)b_{t-1}$  instead of  $b_{t-1}$ . The author shows that the default risk decreases if  $(1-\alpha)$  decreases. This is trivial since it just says that the default risk is higher if the government is more indebted. The author interprets this finding by saying that the lender's wealth position is internalized by the government in its objective function. This is a wrong interpretation since the model setup does not allow for domestic lenders. Instead, risk-neutral foreign lenders provide external credit to the government. Overall, this section does not offer any new insights compared to Arellano (2008). Section 3.2 is entitled 'Model of the default rate' and considers a two-period framework similar to Calvo (1988). What is the contribution of this section?
- 5. It would be interesting to see a quantitative application of the theoretical framework.
- 6. Overall, the paper needs to be substantially rewritten. The introduction should clearly state the research question and the contribution. The related literature on sovereign debt and default needs to be cited and discussed. The title of the paper is misleading (what is the role of trust in the current framework?), too long and uninformative.