International Macroeconomics and Finance

Problem Set - Sovereign Default

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Consider the two-period sovereign default model analyzed in class.

1. Write down a more general version of this finite-horizon model. Specifically, assume that the economy lasts a finite number of periods $T > 2$. You can assume that the endowment follows in all periods the two-period process introduced in the slides. You can also retain the same structure of default costs.

2. Write a code to solve in each period for:

   - Optimal policy for default and borrowing, as function of y_t, b_t
   - Debt price function

   Hint: write the code in a general way in terms of the number of periods considered T.

3. Evaluate the difference between the value functions computed at $t = 1$ and $t = 2$. What key parameter of this model economy would you change to make the difference between these two value functions smaller? Show that this suggestion is effective.

4. Show how equilibrium default in this model economy depends on the structure of default costs and on preferences of the lenders and of the representative agent in the open economy.