

## Macroeconomics

EXAM 17 JANUARY

OPEN QUESTIONS

- 1) Small open economy. Two periods. Country can choose whether to borrow or lend at interest rate of one-unit bond  $B$  at  $t=1$ .  $C_1, C_2, Q_1, Q_2, Y = Q_1 + (Q_2/(1+R))$ ,  $U(c_1, c_2) = \ln(C_1) + B \cdot \ln(C_2)$ .
  - a) Calculate  $C_1, C_2$ , and the parameters of the model
  - b)  $B_0$  was  $-10$ , now it's  $0$ . How do  $C_1$  and  $C_2$  change? Give economic intuition
  - c) Find the equations for  $TB_1$  and  $CA_1$ . How does  $CA_1$  change when  $B_0$  changed?
  - d) Assume  $Q_1=Q_2=Q$  and  $B^*(1+r)=1$ . How do  $C_1, C_2$  and  $CA_1$  change?
  - e) Find the equations of  $TB_1$  and  $CA_1$  with the assumption of d) and give economic intuition.
- 2) It's 2012 and we're in the middle of the eurozone crisis. There's a policy that is gonna buy all the sovereign bonds, bundle them, and put them as a diversified portfolio.
  - a) Does this policy solve any issues of the Eurozone crisis? Explain
  - b) Are there any issues with this policy? Explain

STATEMENTS: true/false

- 3) The probability of sovereign default
  - a)
  - b)
  - c) Is decreasing with productivity
  - d) Is affected by the bond prices
- 4) Multiple equilibria can
  - a) Happen in the presence of rational agents
  - b) arise when a country's fundamentals are bad
  - c) Arises from bond prices as they depend on future debt levels, and future debt levels depend on bond prices
  - d) Arises from bond prices as they depend from fiscal deficit, and fiscal deficit depend from bond prices
- 5) According to the Allan & Gamber (2000) model, the assets. Safe asset has return  $=1$  at  $t=2$ , price  $=1$  at  $t=1$ . There are two risky assets: A with high return of  $4$  and probability  $0.5$  and low return  $0$  with prob  $0.5$ ; B has high return of  $4$  with prob  $\frac{1}{4}$  and low return  $0$  with prob  $\frac{3}{4}$ .
  - a) Investor use its own wealth, the price of asset A is  $2$ .
  - b) Investor use its own wealth, the price asset of B is  $2$ .
  - c) Investor borrows money and the interest rate is  $1$ , the asset price of B is  $2$ .

- d) Investor borrows money and the interest rate is 1, the asset price of A is the same as B.
- 6) Pandemic question about income policy.
  - a) The policy should be based on the income recipient.
  - b)
  - c)
  - d) Affects effectiveness of health policies.
- 7) I don't remember
  - a) The lockdown is supply-driven because of the limited production
  - b) The lockdown is supply driven, so the demand stimulation is ineffective
  - c) The lockdown was many in the services, and it should jump back in.
  - d)