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The Global Economy II

Nova SBE – Spring 2021/2022 Miguel Lebre de Freitas Mid-term assessment 04/04/2022 – Duration: 1h45

I (4.5)

Define *three* of the following concepts (3-5 lines each):

- i. Equilibrium world interest rate
- ii. Real exchange rate

iii. Balassa-Samuelson effect

iv. Money targeting

v. Official versus unofficial dollarization



IV (2.5)

In each question, choose one (correct answer: +0.5; wrong answer: -0.125):

- 1. In a two-period economy, when current output falls: (i) the interest rate decreases if the economy is closed; (ii) the trade balance improves if the economy is open; (iii) investment decreases if the economy is closed; (iv) none of the above.
- 2. In a two-economy world, when each economy holds 50% of the other country's capital, an unexpected period -2 recession in the home economy fully matched by an expansion in the foreign economy will deliver (in period 2): (i) a balanced current account; (ii) a deficit in the trade balance at home; (iii) a positive NFIA at home; (iv) all the above.
- 3. The relative PPP hypothesis fails in predicting exchange rates in the long run in the presence of: (i) price stickiness; (ii) monetary shocks; (iii) productivity shocks in non-tradable goods; (iv) none of the above.
- 4. All else equal, under flexible exchange rates and flexible prices, a (once-and-for-all) increase in domestic income causes, at the impact: (i) an excess supply of money; (ii) a sale of foreign assets by the private sector; (iii) a purchase of foreign assets by the central bank; (iv) all the above.
- 5. Nominal stability will be better achieved: (i) with a fixed exchange rate regime if money velocity is unpredictable and productivity shocks are absent; (ii) with money targeting if money velocity is unpredictable and productivity shocks are absent; (iii) with a fixed exchange rate regime if money velocity is predictable and productivity shocks are frequent; (iv) none of the above.



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II (13)

II.1. Consider a two-period economy with no initial assets. The representative consumer has a lifetime utility function given by: $U = C_1 C_2$. In period 1, there is a pre-determined amount of output: $Q_1 = 40$. As for the second period, there is no exogenous output, but there are investment opportunities, as described by $Q_2 = 10K^{0.5}$, where K depreciates fully after one period. Further assume that this economy is able to borrow and lend in the international markets at the interest rate r*=25%.

a) Find out: (a1) optimal investment;

(a2) NPV;

(a3) life-time wealth;

(a4) consumption in period 1 and 2;



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(a5) represent graphically, identifying the contribution of investment to life-time wealth.

b) Based on your results in a), find out:(b1) GNE in period 1:

(b2) GNI in period 2:

(b3) FA in period 1:

(b4) domestic savings in period 2:

c) Assume instead that this economy was closed to capital flows. Without calculations, explain how would the resulting equilibrium compare to (a), in terms of: (c1) interest rate; (c2) investment. (c3) Conclude on the benefits of trade openness in this exercise



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II.B. Consider an economy with flexible prices where the purchasing power parity and the Fisher principle hold instantaneously. Assume that $P^* = 2$, the real interest rate is 5% and the money demand is given by $m^D = \frac{Y}{4i}$. Full employment output is given by $Y_f = 72$. Initially, the money supply is constant at $M^s = eB_c^* + B = 600 + 120$ and the exchange rate is fixed at e=1.

a) Describe in a graph the money market equilibrium, and quantify: the real money demand, the price level and the velocity of money.

b) Departing from a), assume that the central bank <u>unexpectedly</u> announces a once-and-for all devaluation to E=3. Describe the adjustment, quantifying money demand, price level and the interest rate.



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c) Departing from a), assume that the central bank starts to increase domestic credit by 20% per year. Assuming that the domestic credit expansion is to be fully sterilized and that agents have perfect foresight, find out: c1) the timing of the speculative attack and c2) the reserves that are lost at the time of the attack. c3) Draw the time path of the price level, exchange rate and the interest rate.