Macroeconomics, Part IIA
Petra Geraats, Lent 2018

Supervision 9

Exchange Rates and International Finance

Short questions (250 words max)

1. In the flexible price monetary model, a decrease in the growth rate of domestic money supply leads to an immediate downward jump in the domestic price level and a depreciation of the domestic currency because of a decrease in the domestic nominal interest rate. True or false? Explain.

2. Consider the tradables-nontradables model presented in lecture. Derive the (log) real exchange rate when the productivity of nontradable goods A_N is different for the Home and Foreign country (i.e. $A_N \neq A_N^*$). Explain how the growth rate of the real exchange rate is affected if the growth rates of nontradables productivity A_N and A_N^* in Home and Foreign both increase from 0 to $x\%$.

3. When there is imperfect substitutability between domestic and foreign assets, an unanticipated increase in the domestic money supply could reduce the domestic nominal interest rate while keeping the nominal exchange rate fixed. True or false? Explain.

Problem

4. Suppose the world consists of two countries, Home and Foreign. There is perfect international capital mobility between the two countries, and Home and Foreign assets are perfect substitutes. The rate of return for a Home investor on Home and Foreign assets is H_s and F_s, respectively, where $s = 1, 2$ denotes the state of nature. State 1 occurs with probability q and state 2 with probability $1 - q$. The Home investor allocates her wealth W to maximize expected utility

$$U = qu(C_1) + (1 - q)\, u(C_2)$$

where $u(C) = -e^{-C}$, $C_s = [\alpha H_s + (1 - \alpha) F_s] W$ is consumption in state s, and α is the share of Home assets in the Home investor's portfolio. Suppose that $W = 1$, $H_1 = 3$, $H_2 = 1$, $F_1 = 1$ and $F_2 = 2$, and $q = 1/3$. [Tripos 2008]

   (a) Compare the expected rates of return on Home and Foreign assets. How do they depend on the probability q of state 1?

   (b) Derive the optimal portfolio share α from the first order condition. Explain intuitively whether it is desirable for the Home investor to engage in international portfolio diversification.

   (c) Suppose now that the probability of state 1 increases. Explain how this would affect the optimal portfolio share α and the desirability of international portfolio diversification.

Essay question (1000 words max)

5. Are speculators irrational when they attack the currency peg of a country that still has foreign exchange reserves? [Tripos 2001]

Main reading

- Krugman, Obstfeld and Melitz (2014 or 2018), *International Economics: Theory and Policy* (10th or 11th edition), chapter 16 and 18-20.

Supplementary references
- De Grauwe (1996), *International Money: Post-War Trends and Theories* (2nd edition), chapter 3-5, 7 and 8.
- Feenstra and Taylor (2014), *International Economics*, chapter 14, 16-17, 19-20 and 22.
- Sachs and Larrain (1993), *Macroeconomics in the Global Economy*, chapter 10, 13, 21.