Retake Exam "International Monetary Economics II"

April 21, 2012

Question 1 (30%)

True or false? Explain briefly in each case:

- a) In the intertemporal model of the current account, the undiscounted current-account balances sum up to zero over all periods of the planning horizon.
- b) In the two-sector model of tradable and non-tradable goods, an increase in the productivity of the tradables sector drives up the wage level and the price of non-tradables so that the purchasing power of wages in terms of non-tradables is unchanged.
- c) In Branson's two-country model of German reunification, an increase in Germany's budget deficit causes a real appreciation of the D-Mark in the short run, but a real depreciation in the long run.
- d) In the second-generation currency crisis model, with the government minimizing the loss function $L = (\alpha \pi_t^2 + x_t^2)$, subject to $Rb_t = x_t + \theta(\pi_t \pi_t^e)$, the value of the loss function in the fixed-exchange-rate case is $(Rb_t)^2$.
- e) When Rating Agencies took away the AAA rating from France in early 2012 while upholding the top rating for the United Kingdom although British government debt exceeded French government debt as a fraction of GDP, this ran counter to all economic logic.

Question 2 (40%)

In their exposition of the Dornbusch overshooting model with perfect foresight, Obstfeld/Rogoff derive the following difference equations for the real (q) and the nominal (e) exchange rate:

$$q_{t+1} - q_t = -\delta\psi(q_t - \overline{q})$$

$$e_{t+1} - e_t = \frac{e_t}{\eta} - \frac{\left(1 - \phi \delta\right)}{\eta} q_t + \frac{p^*}{\eta} + \frac{\phi}{\eta} \overline{y} - \frac{m_t}{\eta} - \frac{\phi \delta}{\eta} \overline{q} - i^*$$

Variables: notation as usual.

 δ : elasticity of output demand with respect to the real exchange rate

- ψ : slope of the short-run Phillips curve
- η : (semi-)elasticity of money demand with respect to the interest rate
- ϕ : elasticity of money demand with respect to output
- a) Construct the phase diagram for this model in (q, e)-space:
 - i Calculate the demarcation lines.
 - ii Draw the directional arrows.
 - iii Comment on the stability of the system.
- b) What is the immediate response to an unanticipated change in the money supply?
- c) What is the condition for the model to predict exchange-rate overshooting? Give an economic interpretation of this condition.

Question 3 (30%)

The "rotating-slumps" model discussed in class proposes a two-country representation of a monetary union in which, using the usual notation, the demand for the output of each country is given by:

(1)
$$y_i = d_i + g_i - \partial_0 (i - \pi_i) - \partial_1 (p_i - p_j) - \mu (y_i - y_j)$$
 $i, j = 1, 2; i \neq j.$

- a) Explain the meaning of the terms on the right-hand side of the equation.
- b) Now suppose that instead of assuming equal interest rates for both countries ($i_1 = i_2 = i$), we allow for a risk premium ρ which drives a wedge between the two interest rates:

(2)
$$i_1 = i_2 + \rho$$

Consider an exogenous increase in ρ and assume the central bank continues to optimize over aggregate output and aggregate inflation for the union as a whole, subject to the constraint of the prevailing short-run Phillips curve. How does the increase in ρ affect

- ba) the short-run output differential between the two countries?
- bb) the short-run aggregate output of the union?
- bc) the long-run equilibrium real exchange rate between the two countries? (You are not expected to trace out the dynamics of the adjustment process)