Part I, Paper 2: Macroeconomic Principles II

Supervision 4

The Mundell-Fleming model

Short questions

1. [Tripos 2014] Explain what the Marshall-Lerner condition is. What would happen in response to a fiscal expansion in a small open economy with fixed prices and a floating exchange rate if the Marshall-Lerner condition is not satisfied? Explain your answer.

2. [Tripos 2012, adapted] Illustrate using diagrams the effects on output and the interest rate of a fiscal expansion in a small open economy with fixed domestic prices and a fixed exchange rate regime with: (a) perfect capital flows, (b) zero capital flows. Briefly explain your answers.

Long questions

1. Consider a small open economy with a floating exchange rate and sticky prices. Analyse the likely impact on this country's output, nominal exchange rate and net exports of:

   (a) A cut in taxes

   (b) Financial instability that increases the demand for money as a 'safe' asset

   (c) A reduction in import tariffs as part of a new trade deal

2. A small open economy with fixed prices is characterised by the following equations:

$$\begin{aligned} C &= \bar{C} + cY \\ I &= \bar{I} - \delta r \\ NX &= X(e) - M(e) - mY \end{aligned}$$

   where Y is income, C is expenditure, I is investment and NX is net exports. $X(e)$ and $M(e)$ are functions satisfying $\frac{dX(e)}{de} < 0$ and $\frac{dM(e)}{de} > 0$, and the parameters δ, c and m satisfy $\delta > 0$, $0 < c < 1$ and $0 < m < c$. There is no government expenditure. The central bank is pegging the nominal exchange rate at some value $\bar{e}$, and capital is perfectly mobile. The world real interest rate is r^*.

   (a) Provide a brief interpretation of the term mY in the expression for net exports.Why does it make sense to assume $m < c$?

(b) Derive expressions for Y and NX in terms of r^*, $\bar{C}$, $\bar{I}$, $X(\bar{e})$, $M(\bar{e})$, c, m and δ. What do higher values of m imply for the slope of the IS curve in (r, Y) space? Explain this result briefly.

Now suppose that the country decides to ban all capital inflows and outflows, in the hope of obtaining monetary autonomy. Assume additionally that net income flows from abroad are zero, so that $CA = NX$.

(c) What value(s) for r is the central bank able to choose? Comment briefly on the implications of your result for the effectiveness of capital controls.