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ECO 209Y
MACROECONOMIC THEORY

Problem Set 8

1. Consider the following model under fixed exchange rates:

$C = \overline{C} + c\,YD$
$I = \overline{I} - b\,i + f\,Y$
$G = \overline{G}$
$TA = t\,Y$
$TR = \overline{TR}$
$X = \overline{X} + x\,(eP^f / P)$
$Q = \overline{Q} + m\,Y - s\,(eP^f / P)$

$L = k\,Y - h\,i$
$M/P = (\overline{M} / \overline{P})$

$CF = \overline{CF} + g\,i$

In this model P^f is the given foreign price level, P is the given domestic price level, and e is the exchange rate.

a) Find the equilibrium levels of Y and i.
b) Find $\Delta Y/\Delta e$.
c) Calculate BP and then find $\Delta BP/\Delta e$. (Note that i may change as well.)
d) Suppose the government decided to increase M/P. Determine the effects on Y and BP (given we start from a position where BP = 0). What options are available to the government if it wants to maintain fixed exchange rates?

2. Consider an open economy with fixed prices, fixed exchange rates, and imperfect capital mobility. This economy is characterized by the following equations:

$C = 60 + 0.8\,YD$
$I = 200 - 20\,i + 0.1\,Y$
$G = 300$
$TA = 0.25\,Y$
$TR = 50$
$X = 250 + 100\,eP^f/P$
$Q = 400 - 50\,eP^f/P + 0.1\,Y$

$P^f = 2$
$P = 1$
$L = 0.2\,Y - 10\,i$
$M = 200$
$e = 0.9$
$CF = 10\,(i - 6)$

a) What is the equation for the *IS* curve in this model?
b) What is the equation for the *LM* curve in this model?
c) What is the equation for the *BP* curve in this model?
d) What are the equilibrium values of *Y* and *i* in this economy?
e) What are the balances in the current and capital accounts in the above equilibrium?
f) Suppose that the international rate of interest increases to $i^* = 9$. What are the new equilibrium values of *Y* and *i* in this economy? What is the new level of *M*? [Note: A graphical analysis of this situation will give you a hint as to how to answer the question.]

3. Answer true, false or uncertain to the following statements:

a) A devaluation-induced change in the trade balance does not work well when different countries' economic cycles are highly synchronized.

b) Fiscal policy cannot change real output under fixed exchange rates and perfect capital mobility.

c) Under a fixed exchange rate system and perfect capital mobility an increase in foreign interest rates will cause the level of domestic output to rise.

d) Under a fixed exchange rate system, expansionary monetary policy runs down foreign reserves at the central bank.