Macroeconomic Policy in the World Economy
Additional Homework Problems
ECON 3133
Dr. Keen

1. Suppose the balance sheet of the central bank is (billions of dollars):

Domestic credit	450	Currency	425
Foreign reserves	50	Bank reserves	75

What would be the effect on domestic credit, foreign reserves, currency, and bank reserves of

a. An open market purchase of $10 billion?

b. A foreign exchange market intervention to prevent a depreciation of $10 billion?

c. A sterilized foreign exchange intervention of $10 billion?

2. Suppose Canada and the United States kept their exchange rate fixed, with each country conducting monetary policy according to the Taylor rule,

$$R = \pi + \beta_{\pi}\times(\pi - \pi^*) + \beta_Y\times[(Y - Y^*)/Y^*] + r^{e*},$$

where $\beta_Y = 0.5$, $\beta_{\pi} = 0.5$, $\pi = 0.02$, and $r^{e*} = 0.02$.

a. If Canada conducts an expansionary fiscal policy, so that its equilibrium real interest rate increases from 0.02 to 0.03, show why this is incompatible with maintaining a fixed exchange rate with the United States.

b. Following the change in Canada's fiscal policy, what would the United States need to do to keep the exchange rate fixed?

3. Suppose that the Taylor rule is given by

$$R = \pi + \beta_{\pi}\times(\pi - \pi^*) + \beta_Y\times[(Y - Y^*)/Y^*] + r^{e*},$$

where $\beta_Y = 0.5$, $\beta_{\pi} = 0.5$, $\pi^* = 0.01$, and $r^{e*} = 0.01$.

a. Suppose that the inflation rate $\pi = 0$. According to the Taylor rule, what would the nominal interest rate be if the output gap $(Y - Y^*)/Y^* = 0$.

b. Now suppose that the inflation rate π = minus 1 percent. Can monetary policy be conducted according to the Taylor rule?