

Macroeconomic Policy in the World Economy

ECON 3133

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Problems

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

- An open market purchase of \$10 billion?
 - A foreign exchange market intervention to prevent a depreciation of \$10 billion?
 - 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 $r^{e*} = 0.02$.

- 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.
 - 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 $r^{e*} = 0.01$.

- Suppose that the inflation rate $\pi = 0$. According to the Taylor rule, what would the nominal interest rate be if the output gap $(Y - Y^*)/Y^* = 0$.
- Now suppose that the inflation rate $\pi =$ minus 1 percent. Can monetary policy be conducted according to the Taylor rule?