Lecture 12

- Monetary policy (a policy that affects the money market) under a fixed exchange rate
- Fiscal policy (a policy that affects the good market) under a fixed exchange rate
- Monetary policy under a flexible exchange rate
- Fiscal policy under a flexible exchange rate
The IS-LM-BP Model

- An overall equilibrium is at the intersection of the IS, LM, and BP curves where both the goods and the money markets clear and there is no pressure on the exchange rate.

- Under a fixed exchange rate: (Fig. 10-11 Ch. 26)
  - If IS and LM intersects
    - Above BP: BOP surplus $\rightarrow \uparrow R (M^s) \rightarrow$ LM right
    - Below BP: BOP deficit $\rightarrow \downarrow R (M^s) \rightarrow$ LM left

- Under a flexible exchange rate: (Fig. 2-3 Ch. 27)
  - If IS and LM intersects
    - Above BP: e appreciates $\rightarrow$ BP left & IS left
    - Below BP: e depreciates $\rightarrow$ BP right & IS right
  - An appreciated e corresponds to a higher BP curve
  - An expectation to appreciate shifts BP to the right
Tight Monetary Policy under a Fixed Exchange Rate

- The IS-LM model:
  - $\downarrow M_s \rightarrow \text{LM left} \rightarrow \uparrow r \rightarrow e \text{ tends to app.} \rightarrow \text{surplus to keep } \Delta e = 0 \rightarrow \uparrow M_s \rightarrow \text{LM right}$

- The IS-LM-BP model: (BP stays as $\Delta e = 0$)
  - BP upward sloping and flatter than LM
    - $\downarrow M_s \rightarrow \text{LM left} \rightarrow \text{IS & LM intersects above BP} \rightarrow \text{BOP}_2 \text{ surplus} \rightarrow \text{LM right until where BP and IS intersects at the original position} \rightarrow \Delta Y^* = 0$
  - BP horizontal or vertical: same as above
  - Monetary policy is ineffective under a fixed $e$
    - Intuition: surplus $\rightarrow e \text{ tends to app.} \rightarrow \uparrow R \text{ until } \uparrow R = \text{the size of the initial tightening} \rightarrow \Delta M_s = 0$ regardless of the degree of capital mobility
Expansionary Fiscal Policy under a Fixed Exchange Rate

- The IS-LM model: (LM shifts to keep $\Delta e = 0$)
  - $\uparrow G \rightarrow IS$ right $\rightarrow \uparrow r \rightarrow e$ tends to appreciates $\rightarrow$ surplus $\rightarrow \uparrow M^s \rightarrow LM$ right

- The IS-LM-BP model: (depends on the slope of BP)
  - BP upward sloping and flatter than LM
    - $\uparrow G \rightarrow IS$ right $\rightarrow IS$ & LM intersects above BP $\rightarrow$ BOP$_2$ surplus $\rightarrow LM$ right $\rightarrow Y^*$ increases further
  - BP horizontal:
    - $Y^* \uparrow$ by the full multiplier effect, i.e. $\Delta Y^* = k_0 \times \Delta G$
  - Fiscal policy is most effective under a fixed e and perfect capital mobility
    - Intuition: surplus $\rightarrow e$ tends to appreciates $\rightarrow \uparrow R$ until $\uparrow M^s = \uparrow R = \uparrow G$ as $\Delta r=0$ (monetary expansion reinforces with the initial fiscal expansion)
Tight Monetary Policy under a Flexible Exchange Rate

The IS-LM model:
- $\downarrow M^s \rightarrow \text{LM left} \rightarrow \uparrow r \rightarrow e \text{ app.} \rightarrow \downarrow NX \rightarrow \text{IS left}$

The IS-LM-BP model: (BP shifts as $e$ changes)
- BP upward sloping and flatter than LM
  - $\downarrow M^s \rightarrow \text{LM left} \rightarrow \text{IS & LM intersects above BP} \rightarrow e \text{ app.} \rightarrow \text{BP and IS left} \rightarrow Y^* \text{ falls further}$
- BP horizontal
  - $Y^* \downarrow \text{ by the full multiplier effect, i.e. } \Delta Y^* = k_0 \times \Delta NX$
- Monetary policy is most effective under a flexible e and perfect capital mobility
  - Intuition: surplus $\rightarrow$ e app. $\rightarrow \downarrow NX = \downarrow M^s \text{ as } \Delta r=0$ under perfect capital mobility (fiscal contraction reinforces with the initial monetary tightening)
**Expansionary Fiscal Policy under a Flexible Exchange Rate**

- **The IS-LM model:** (LM stays as $\Delta R = 0$)
  - $\uparrow G \rightarrow IS$ right $\rightarrow \uparrow r \rightarrow e$ app. $\rightarrow \downarrow NX \rightarrow IS$ left

- **The IS-LM-BP model:** (depends on the slope of BP)
  - **BP upward sloping and flatter than LM**
    - $\uparrow G \rightarrow IS$ right $\rightarrow IS$ & LM intersects above BP $\rightarrow e$ app. $\rightarrow BP$ and IS left $\rightarrow Y^*$ increases less
  - **BP horizontal:**
    - $BP$ stays $\rightarrow IS$ left to the initial position $\rightarrow \Delta Y^* = 0$
  - **Fiscal policy is ineffective under a flexible e and perfect capital mobility**
    - Intuition: surplus $\rightarrow e$ app. until $\downarrow NX = \uparrow G$ (as $\Delta r=0$ under perfect capital mobility s.t. the impact of $\uparrow G$ falls entirely on e) $\rightarrow \Delta Y^* = 0$ (government spending completely crowds out private spending on imports)