**AGGREGATE DEMAND IN THE OPEN ECONOMY**

1. Aggregate Demand in the Open Economy

   - Mondell-Fleming Model: an international version of the IS-LM model
     - The SR model of national income including the effects of international trade and finance
     - The behavior of an economy depends on the exchange-rate system it has adopted

2. The Mundell-Fleming Model

   - The key assumption: *small open economy with perfect capital mobility*
     - the interest rate in this economy is determined by the world interest rate \( r = r^* \)
(1) The Goods Market and the IS* Curve

- The goods market:
  \[ Y = C(Y - T) + I(r^*) + G + NX(e) \]
  • \( NX(\varepsilon) \rightarrow NX(e) \)
    b/c price levels at home and abroad are fixed
- The IS* curve slopes downward (fig. 12-1)
  b/c \( e \uparrow \rightarrow NX \downarrow \rightarrow Y \uparrow \)

(2) The Money Market and the LM* Curve

- LM* curve: \( \left( \frac{M}{P} \right) = L(r^*, Y) \)
  \( \rightarrow \) “vertical” b/c the exchange rate does not enter into the LM curve (fig. 12-2)

(3) Equilibrium

- Goods market equilibrium condition: IS* curve
- Money market equilibrium condition: LM* curve
  \( \rightarrow \) Equilibrium exchange rate & income (fig.12-3)
  • Exogenous variables: G, T, M, P, r*
  • Endogenous variables: e, Y
3. The Small Open Economy under Fixed Exchange Rates

- Bretton Woods system: an international monetary system under which most governments agree to fix exchange rates in the 1950s and 1960s.

- How a Fixed-Exchange-Rate System Works
  • The commitment of the central bank to allow the money supply to adjust to whatever level will ensure that the equilibrium exchange rate equals the announced exchange rate
  • The fixed exchange rate governs the money supply (fig. 12-7)

(1) Fiscal Policy (fig. 12-8)

- Expansionary fiscal policy $\rightarrow \ Y \uparrow$
  • equil. $e > \text{fixed}$ $\rightarrow \ M \uparrow \rightarrow \text{equil. } e = \text{fixed } e$

  cf) the closed economy: $G \uparrow \rightarrow Y \uparrow$

(2) Monetary Policy (fig. 12-9)

- Expansionary monetary policy $\rightarrow$ no effect on
  • equil. $e < \text{fixed}$ $\rightarrow \ M \downarrow \rightarrow \text{equil. } e = \text{fixed } e$

  cf) the closed economy: $M \uparrow \rightarrow r \downarrow \rightarrow I \uparrow \rightarrow Y \uparrow
(3) Trade Policy

- Trade restrictions (Tariff or import quota) \( \Rightarrow Y \uparrow \)
  \( \Rightarrow NX \uparrow \)
  \( \Rightarrow \) equil. \( e > \) fixed \( e \)
  \( \Rightarrow M \uparrow \Rightarrow \) equil. \( e = \) fixed \( e \)

4. The Small Open Economy under Floating Exchange Rates

- Floating exchange rates: the exchange rate is allowed to fluctuate freely in response to changing economic conditions

(1) Fiscal Policy (fig. 12-4)

- Expansionary fiscal policy \( \Rightarrow e \uparrow \& \) no effect on \( Y \)
  - \( e \uparrow \) b/c capital flows in from abroad (upward pressure on domestic interest rate)
    \( \Rightarrow \) the relative price of domestic goods \( \uparrow \)
    \( \Rightarrow NX \downarrow \) offsets the effects of the expansionary fiscal policy on income

  cf) the closed economy: \( G \uparrow \Rightarrow Y \uparrow \)
(2) Monetary Policy (fig. 12-5)

- Expansionary monetary policy $\Rightarrow e \downarrow \& Y \uparrow$
  
  \hspace{1cm} $\ast$ $e \downarrow$ b/c capital flows out of the economy  
  \hspace{1cm} (downward pressure on domestic interest rate) 
  
  $\Rightarrow$ the relative price of domestic goods $\downarrow$

  $\Rightarrow NX \uparrow \Rightarrow Y \uparrow$

  \hspace{1cm} cf) the closed economy: $M \uparrow \Rightarrow r \downarrow \Rightarrow I \uparrow \Rightarrow Y \uparrow$

(3) Trade Policy (fig. 12-6)

- Trade restrictions (Tariff or import quota)

  $\Rightarrow NX \uparrow \Rightarrow e \uparrow \&$ no effect on $Y$

5. Should Exchange Rates Be Floating or Fixed?

- Most economists have favored a system of floating exchange rates

- In recent years, some have advocated a return to a fixed exchange rate

- The role of monetary policy

  \hspace{1cm} Fixed rates: the single goal of maintaining the exchange rate at its announced level

  \hspace{1cm} Floating rates: monetary policymakers free to pursue other goals; stabilizing employment (output) or price
- Advocates of fixed exchange rates
  - EXRA uncertainty makes int’l trade more difficult
  - Irrational and destabilizing speculation by int’l investors

6. The Mundell-Fleming Model with a Changing Price

IS*: \[ Y = C(Y - T) + I(r^*) + G + NX(e) \]

LM*: \( \frac{M}{P} = L(r^*, Y) \)

- Aggregate Demand: negative relationship b/t \( P \) and \( Y \)

\[ P \downarrow \Rightarrow \left( \frac{M}{P} \right) \uparrow \Rightarrow \text{LM* shifts to the right (fig. 12-12)} \]

\[ \Rightarrow e \downarrow & \ Y \uparrow \]

- SR and LR equilibria in a small open economy (fig. 12-13)