

ECONOMICS 2

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Course Material Developed by Department of Economics,
Faculty of Social Sciences, Eötvös Loránd University Budapest (ELTE)

Department of Economics, Eötvös Loránd University Budapest

Institute of Economics, Hungarian Academy of Sciences

Balassi Kiadó, Budapest



Authors: Anikó Bíró, Gábor Lovics

Supervised by Gábor Lovics

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Week 9

Aggregate demand in the open economy

Chapters 11

Outline

- What do we know about small open economies?
- IS*–LM* curves, i.e. the Mundell–Fleming-model
- Floating and fixed exchange rates
- Long run

What we know about small open economies

$$Y = C(Y - T) + I(r) + G + NX(\varepsilon)$$

$$M/P = L(r, Y)$$

$$r = r^*$$

Assumptions:

- Small open economy, the interest rate equals the foreign interest rate.
- We analyze the short run, thus the price level is constant, therefore $e = \varepsilon$.

The Mundell–Fleming model

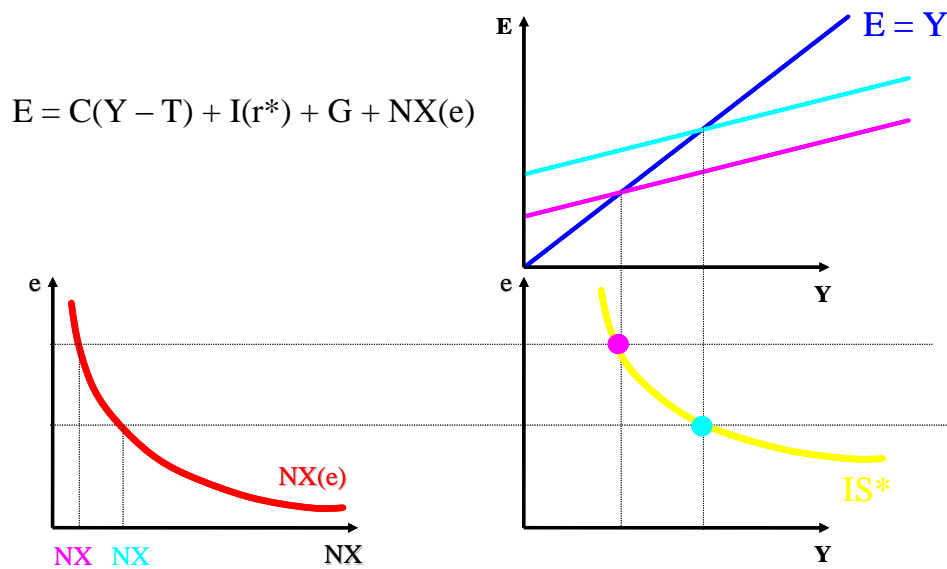
$$Y = C(Y - T) + I(r^*) + G + NX(e)$$

$$M/P = L(r^*, Y)$$

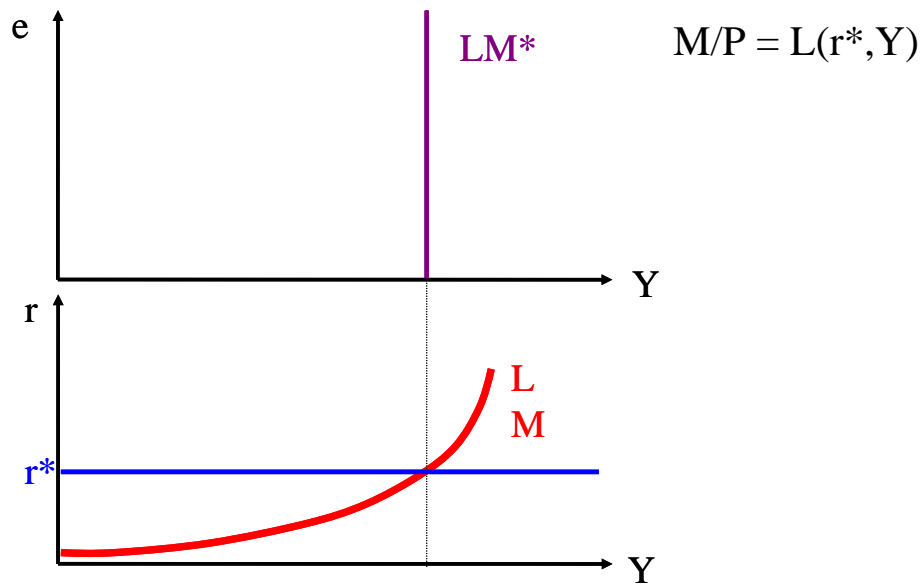
$$NX = Y - (C + I + G)$$

$$NX = S - I$$

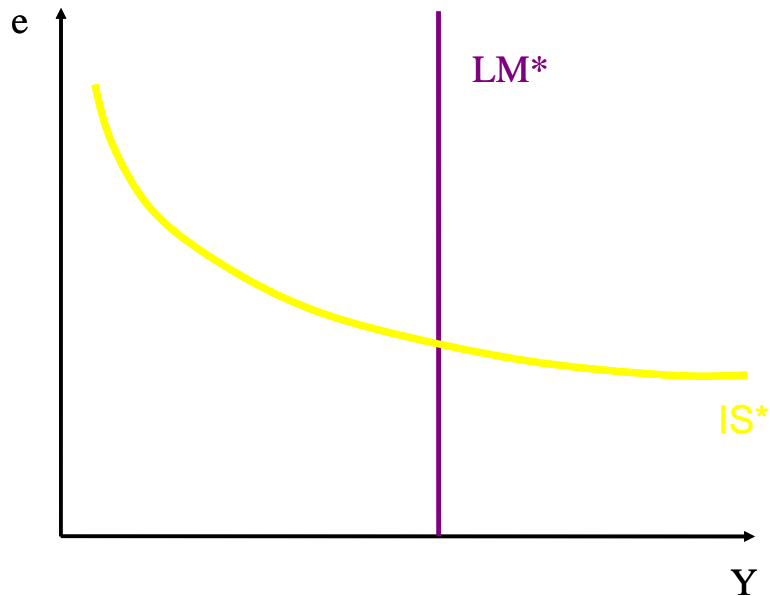
The Keynesian-cross



LM curve



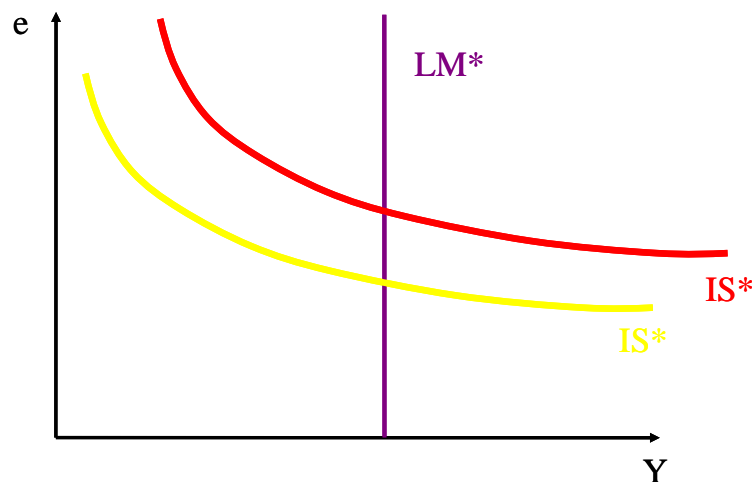
The Mundell–Fleming-model



Monetary policy strategies

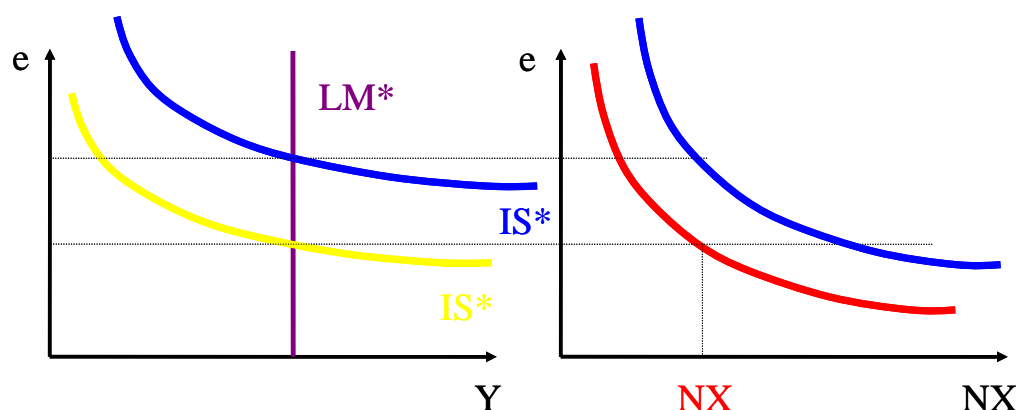
- **Floating exchange rate:** the price of the domestic currency denominated in the foreign currency can change freely.
- **Fixed exchange rate:** the price of the domestic currency denominated in the foreign currency is on a constant level, defined previously by the central bank. It can deviate from this level only if the central bank decides so. Then we can talk about **de-** or **revaluation**.

Floating exchange rate, fiscal expansion

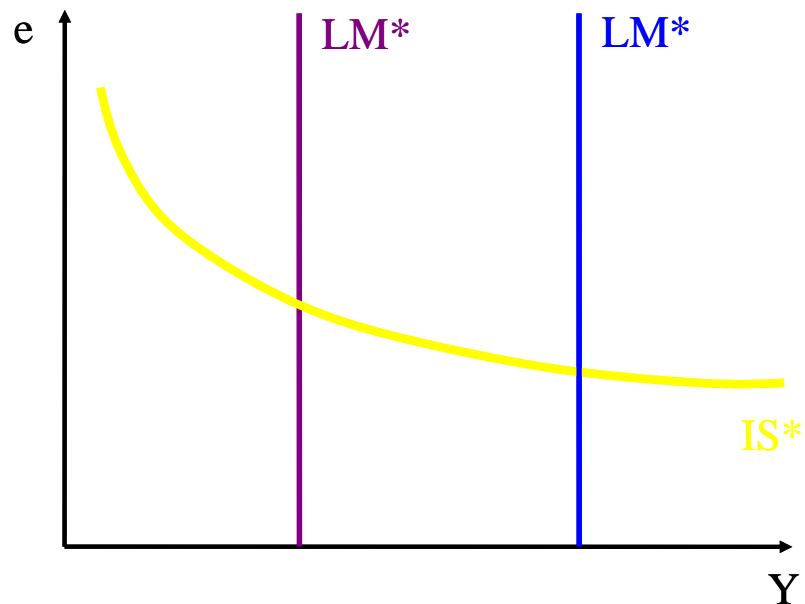


Floating exchange rate and import restrictions

$$NX(e) = Y - C(Y - T) - I(r) - G$$



Floating exchange rate and monetary policy



Monetary transmission mechanism

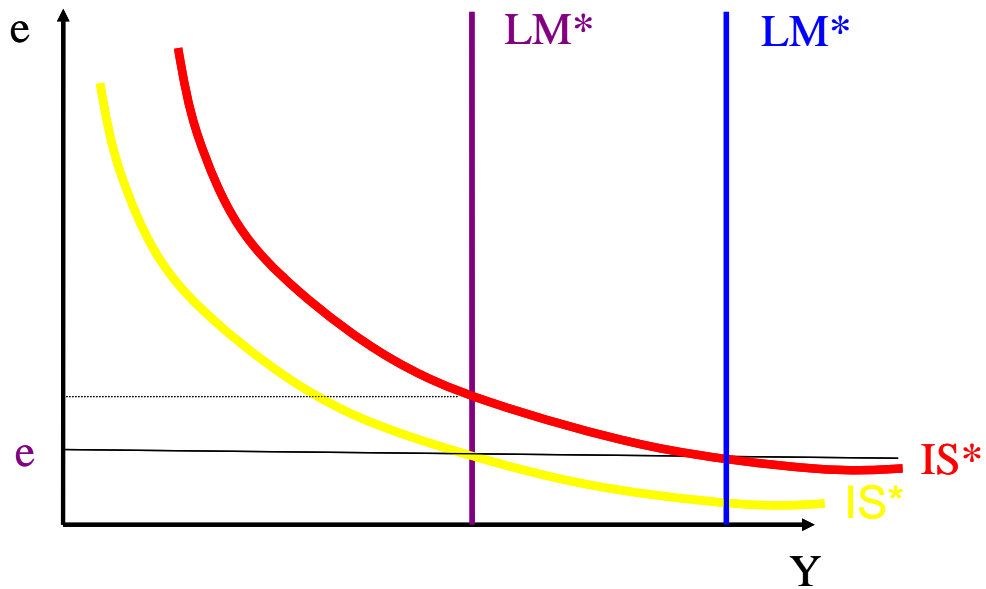
- In a small open economy with floating exchange rate the monetary policy can influence the income in the short run, just as in closed economies. However, the transmission mechanism is different.
- In a closed economy higher quantity of money decreases the interest rate and enhances investments.
- In an open economy the capital flows out if interest rates decrease, and eventually the interest rate remains the same. At the same time the import increases and the currency becomes stronger.

Small open economy, fixed exchange rate

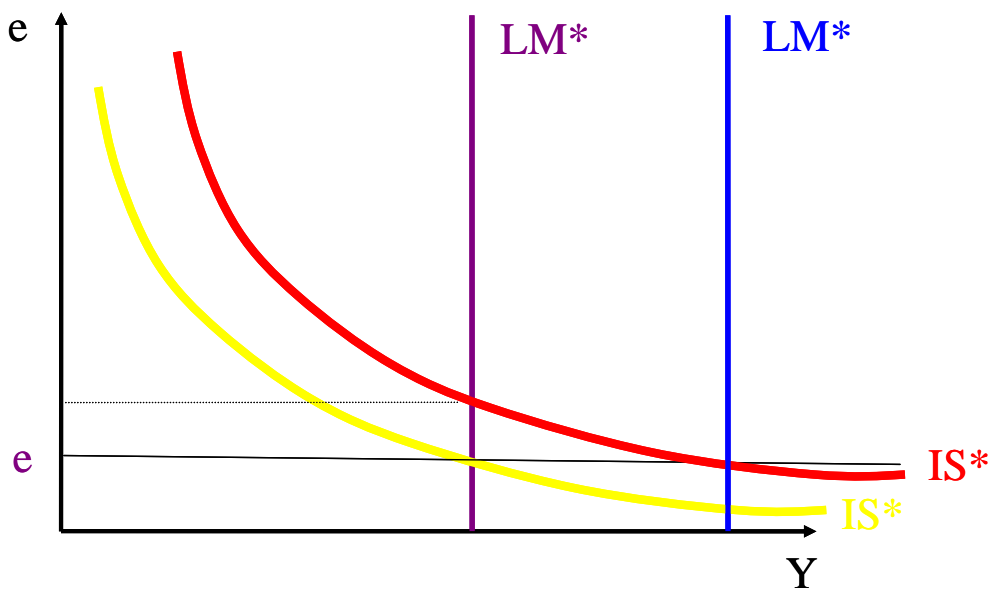
- If exchange rates are fixed then the central bank is willing to buy and sell the domestic currency at the given exchange rate.
- The predictable exchange rate can support international trade.
- The central bank has to accumulate reserves both in the domestic and foreign currencies, so as to maintain the system.
- Speculations become possible.

- The monetary policy cannot follow other targets.

Fiscal policy, fixed exchange rates



Fixed exchange rates and import restrictions



Different interest rates

- In reality the interest rates vary across countries even if those are open economies. The reason for this is that risks are different in the different countries.
 - Risks can be due to the fact that some countries might go bankrupt, whereas it has practically no chance in other countries.
 - The volatility of the exchange rates is also a source of risks.

Country risk

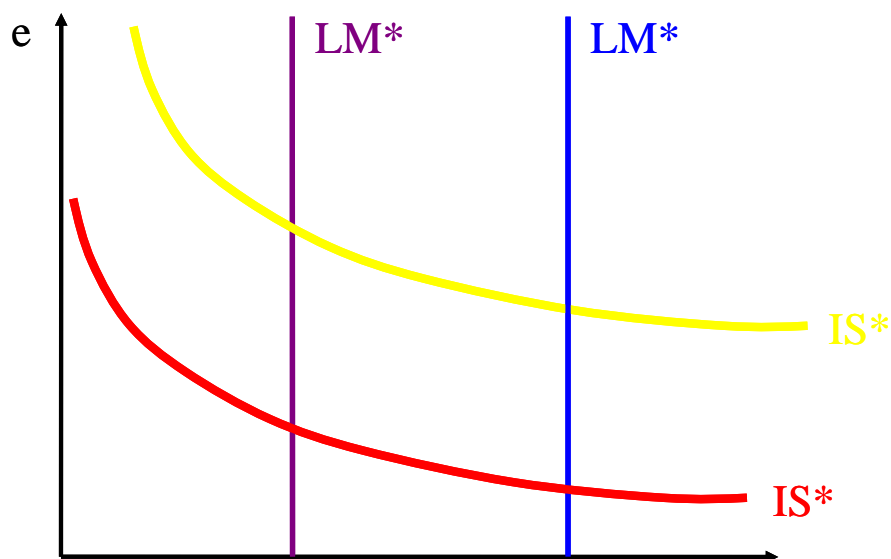
Risk premium can be included in our model. Assume that the domestic interest rate is $r^* + \theta$.

Then our model is:

$$Y = C(Y - T) + I(r^* + \theta) + G + NE(e)$$

$$M/P = L(r^* + \theta, Y)$$

Increasing risk premium



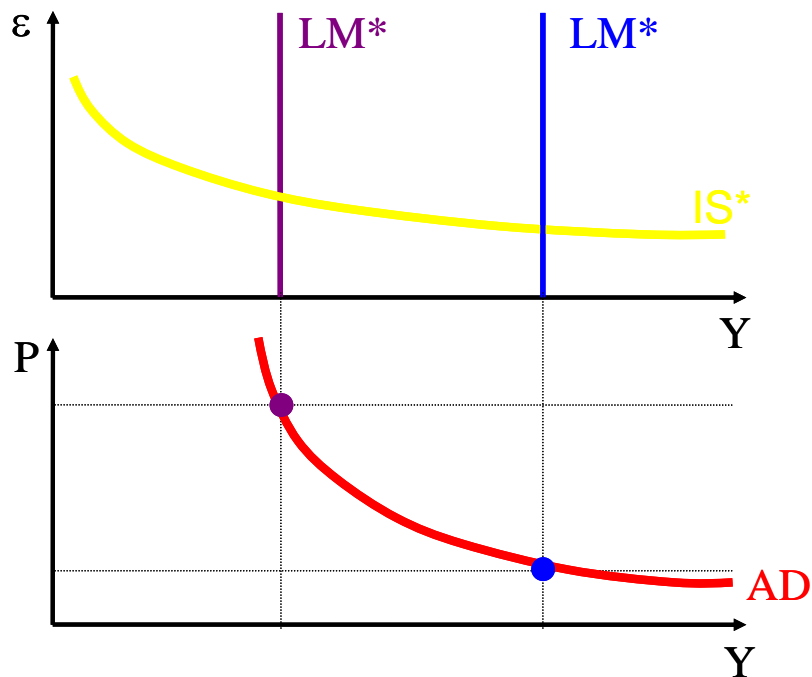
The Mundell–Fleming model in the long run

$$Y = C(Y - T) + I(r^*) + G + NX(\varepsilon)$$

$$M/P = L(r^*, Y)$$

In the long run the exchange rate is not fixed, thus $e = \varepsilon$ is not true any more.

Price adjustment



Short run and long run

