

# ECONOMICS 2





NEW

SZÉCHENYI PLAN

# ECONOMICS 2

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Course Material Developed by Department of Economics,

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# ECONOMICS 2

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## Week 9

### **Aggregate demand in the open economy**

#### Chapter 11

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# 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

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

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

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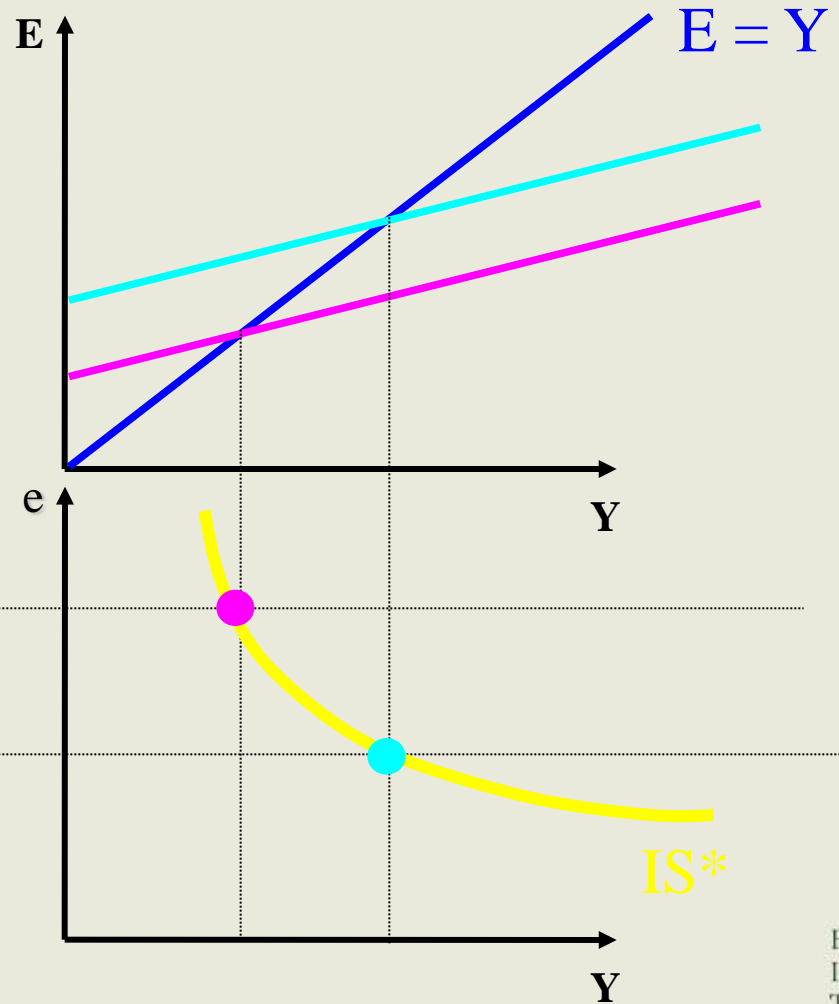
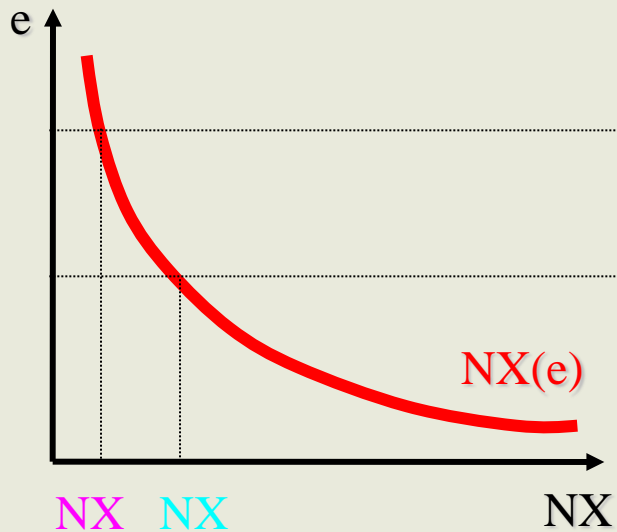
$$NX = Y - (C + I + G)$$

$$NX = S - I$$

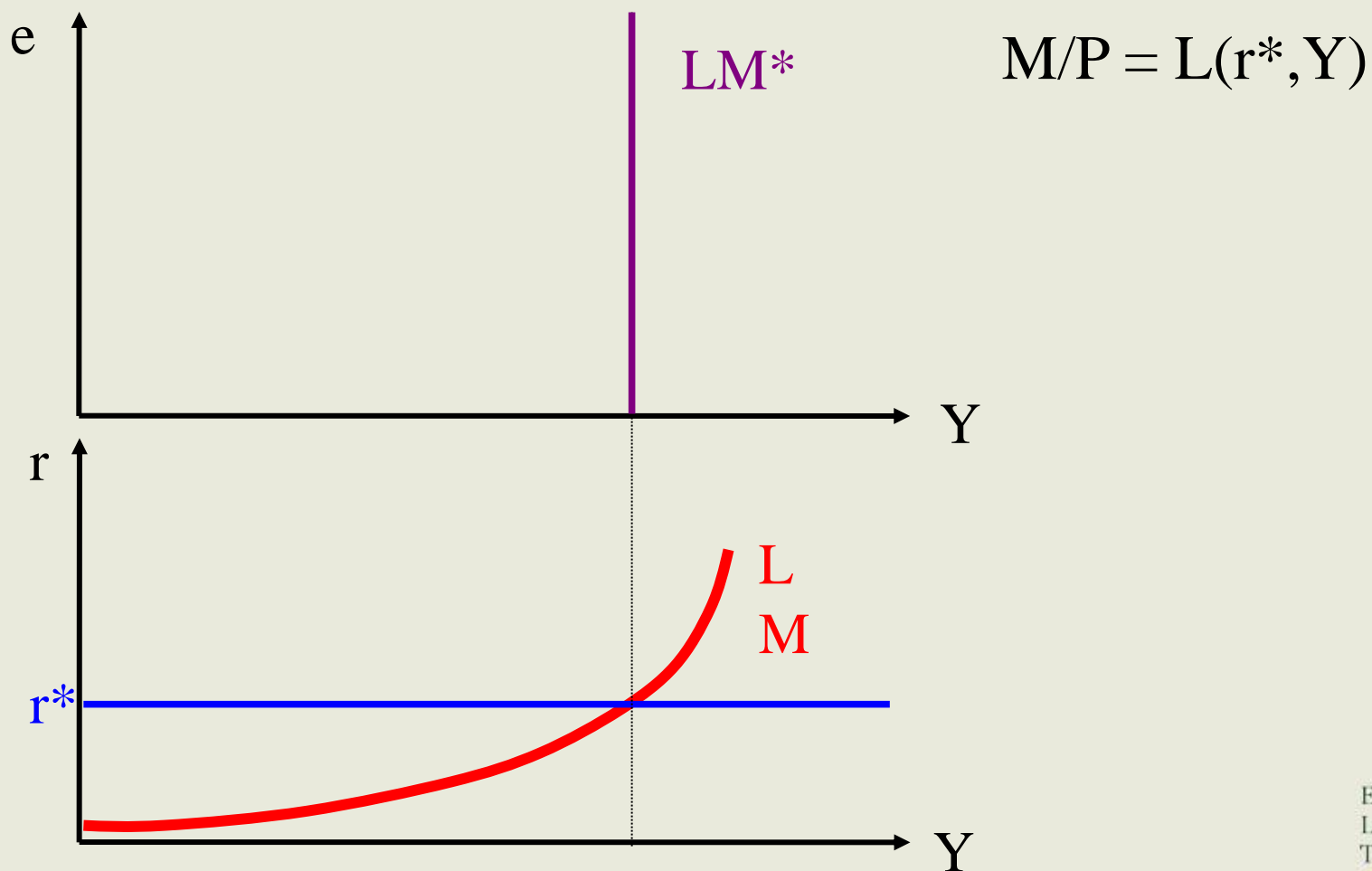


# The Keynesian-cross

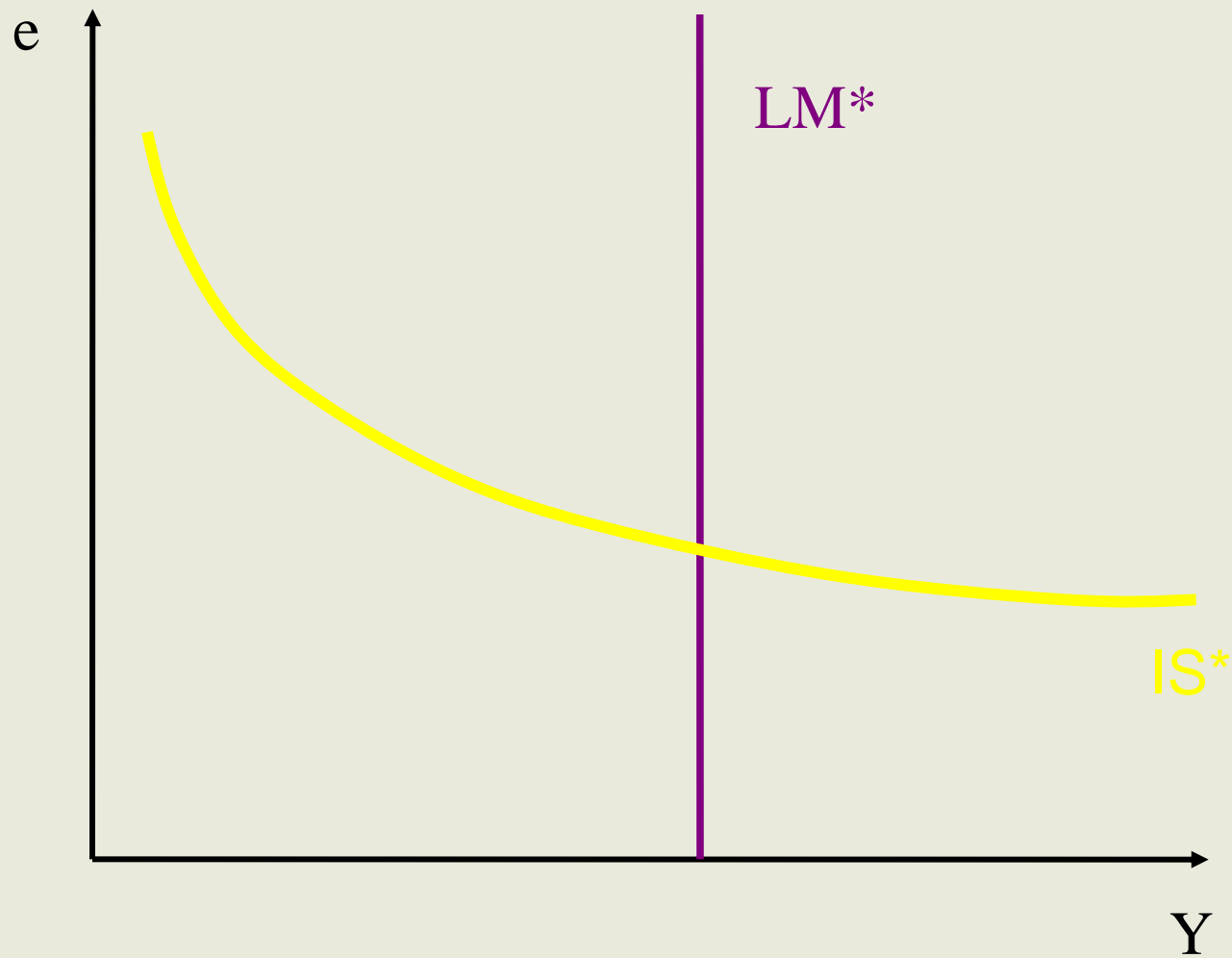
$$E = C(Y - T) + I(r^*) + G + NX(e)$$



# LM curve



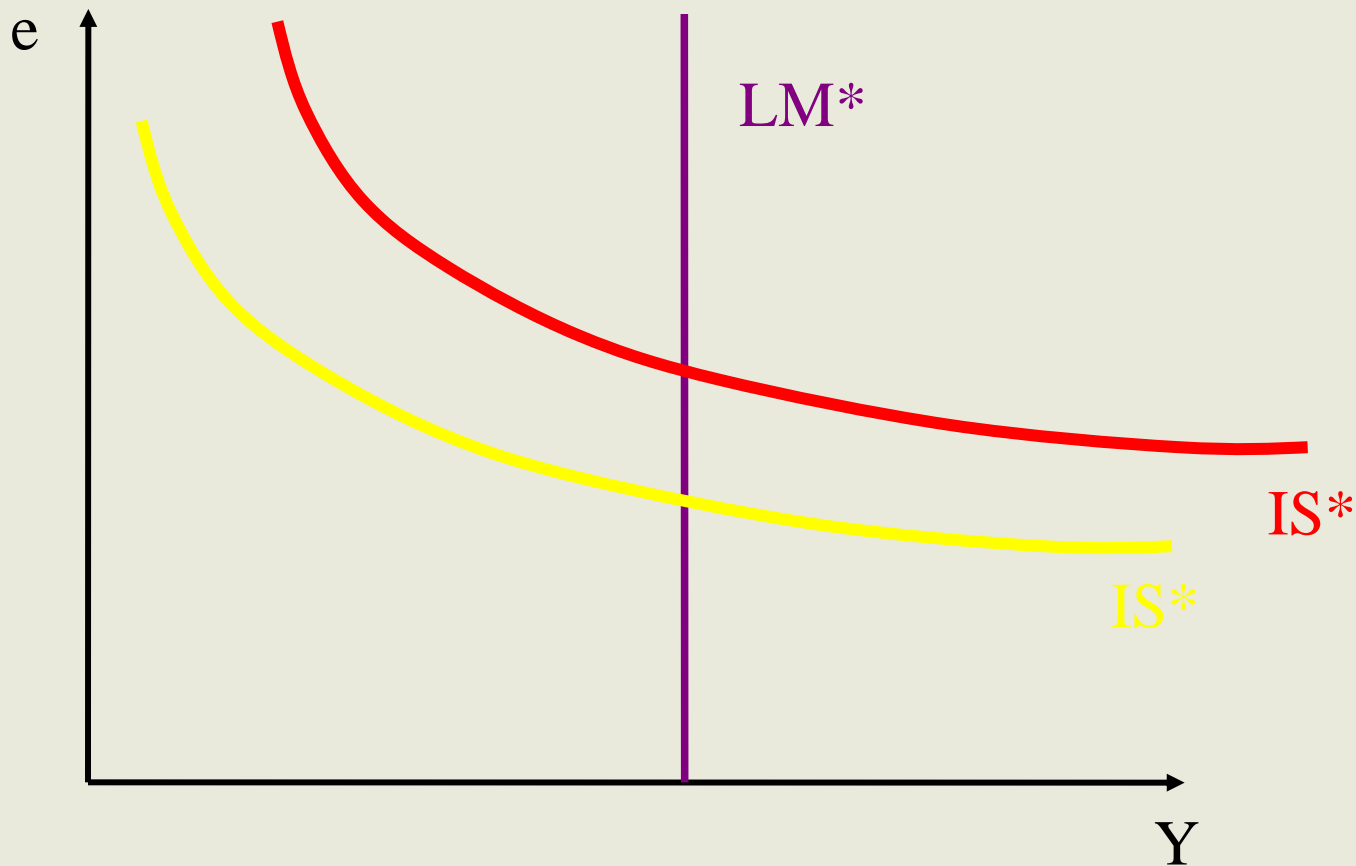
# The Mundell–Fleming-model



# Monetary policy strategies

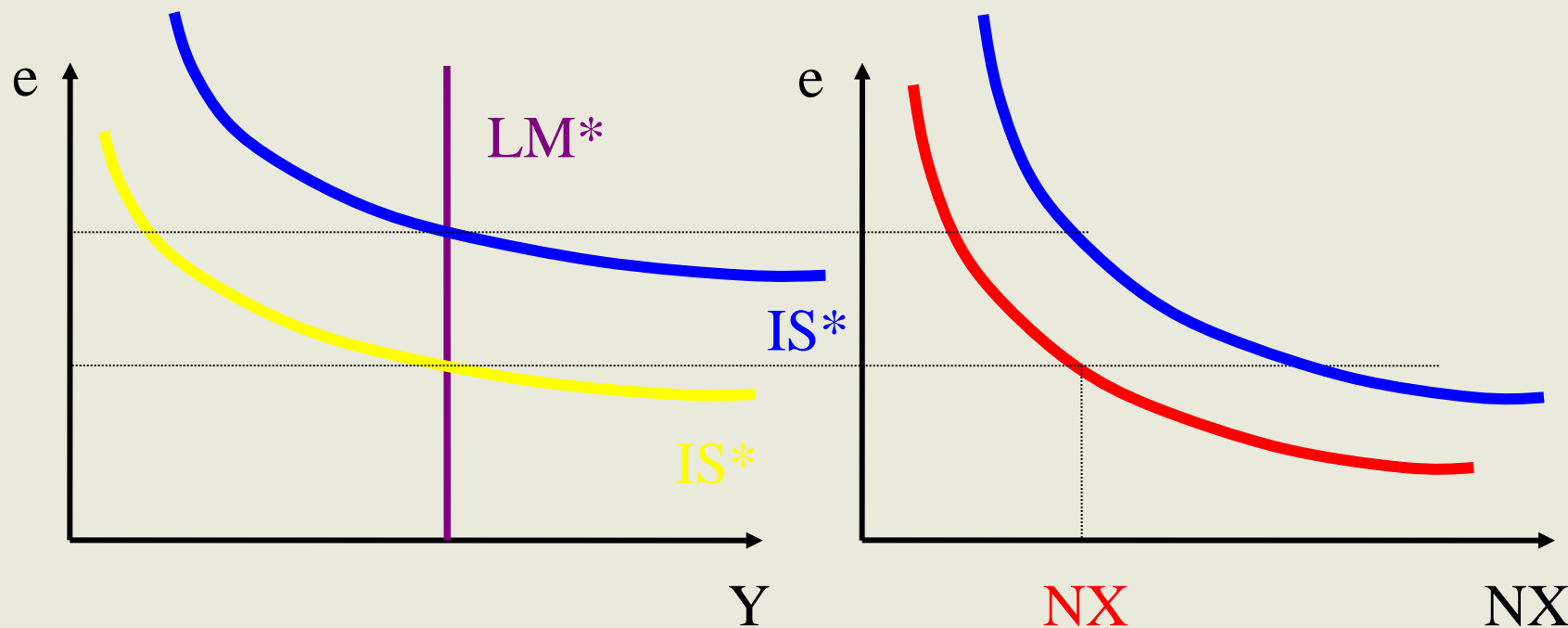
- **Floating exchange rate:** the price of the domestic currency denominated in the foreign currency can change freely.
- **Fixed exchange rate:** the price of the domestic currency denominated in the foreign currency is on a constant level, defined previously by the central bank. It can deviate from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

# Floating exchange rate, fiscal expansion

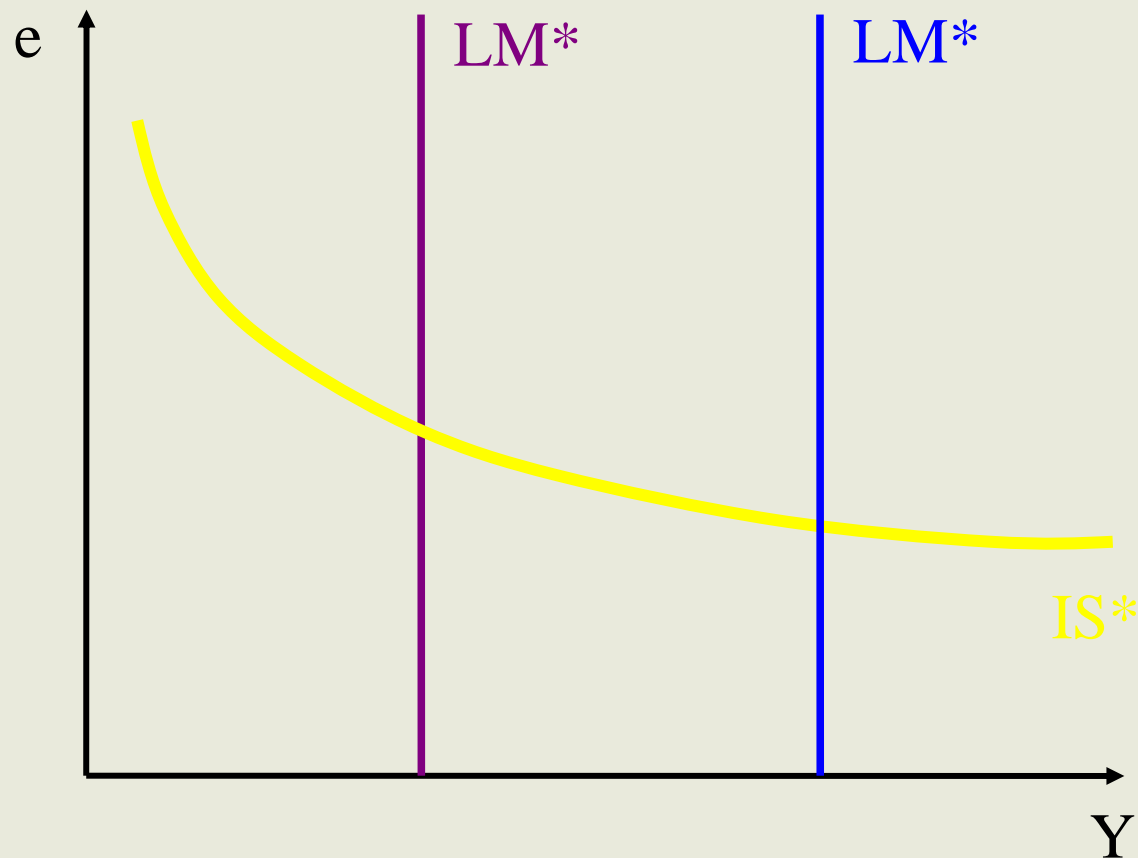


# Floating exchange rate and import restrictions

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



# Floating exchange rate and monetary policy



# Monetary transmission mechanism

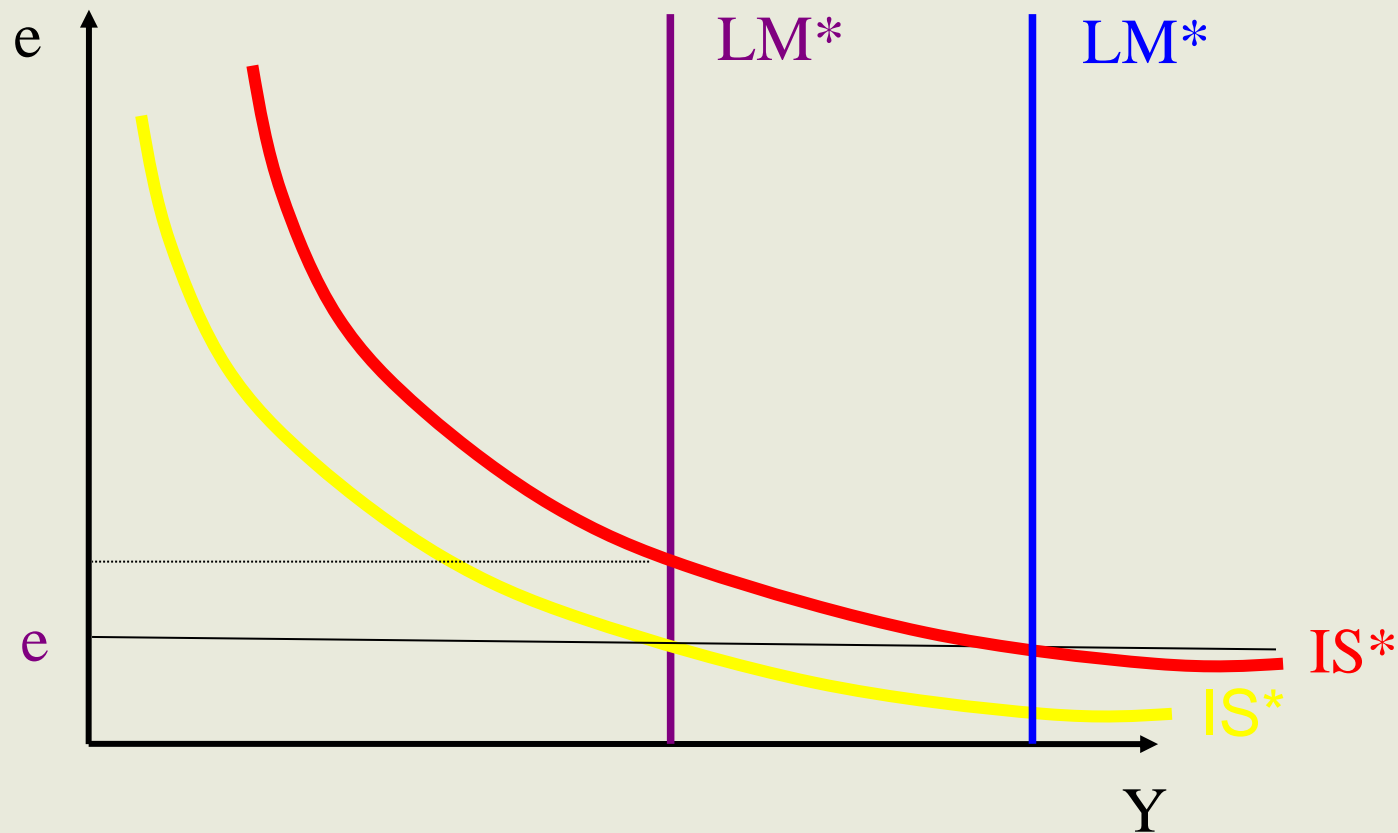
- In a small open economy with floating exchange rate the monetary policy can influence the income in the short run, just as in closed economies. However, the transmission mechanism is different.
- In a closed economy higher quantity of money decreases the interest rate and enhances investments.
- In 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.



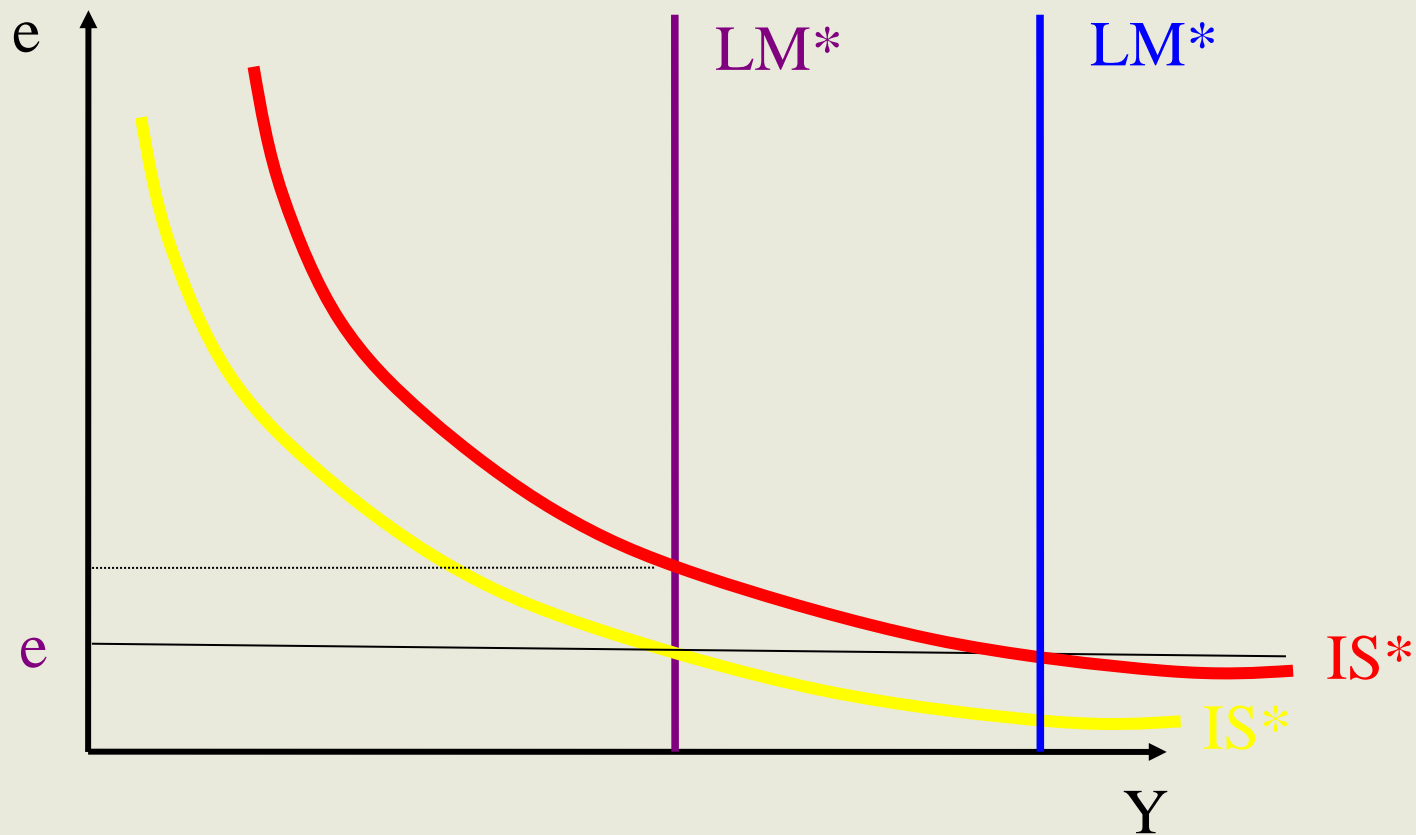
# Small open economy, fixed exchange rate

- 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

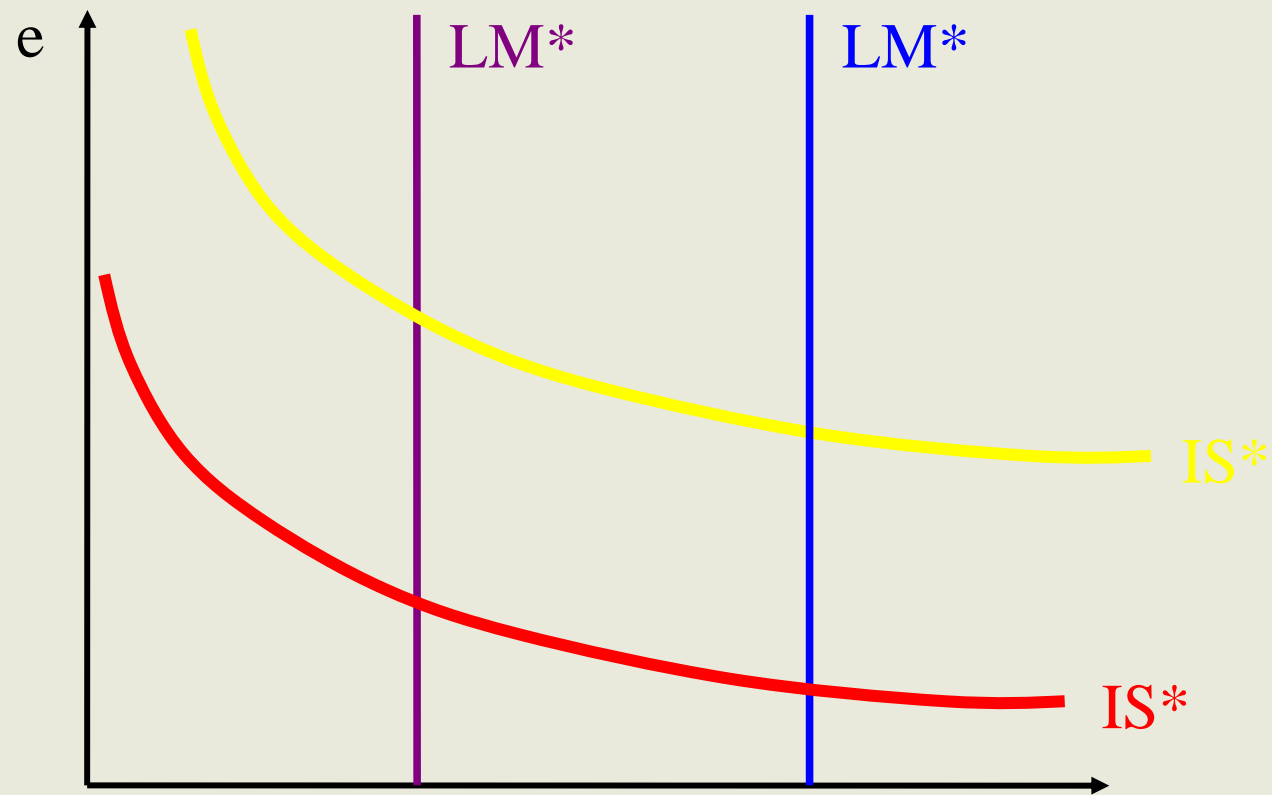
Risk premium can be included in our model.  
Assume that the domestic interest rate is  $r^* + \theta$ .

Then our model is:

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

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

# Increasing risk premium



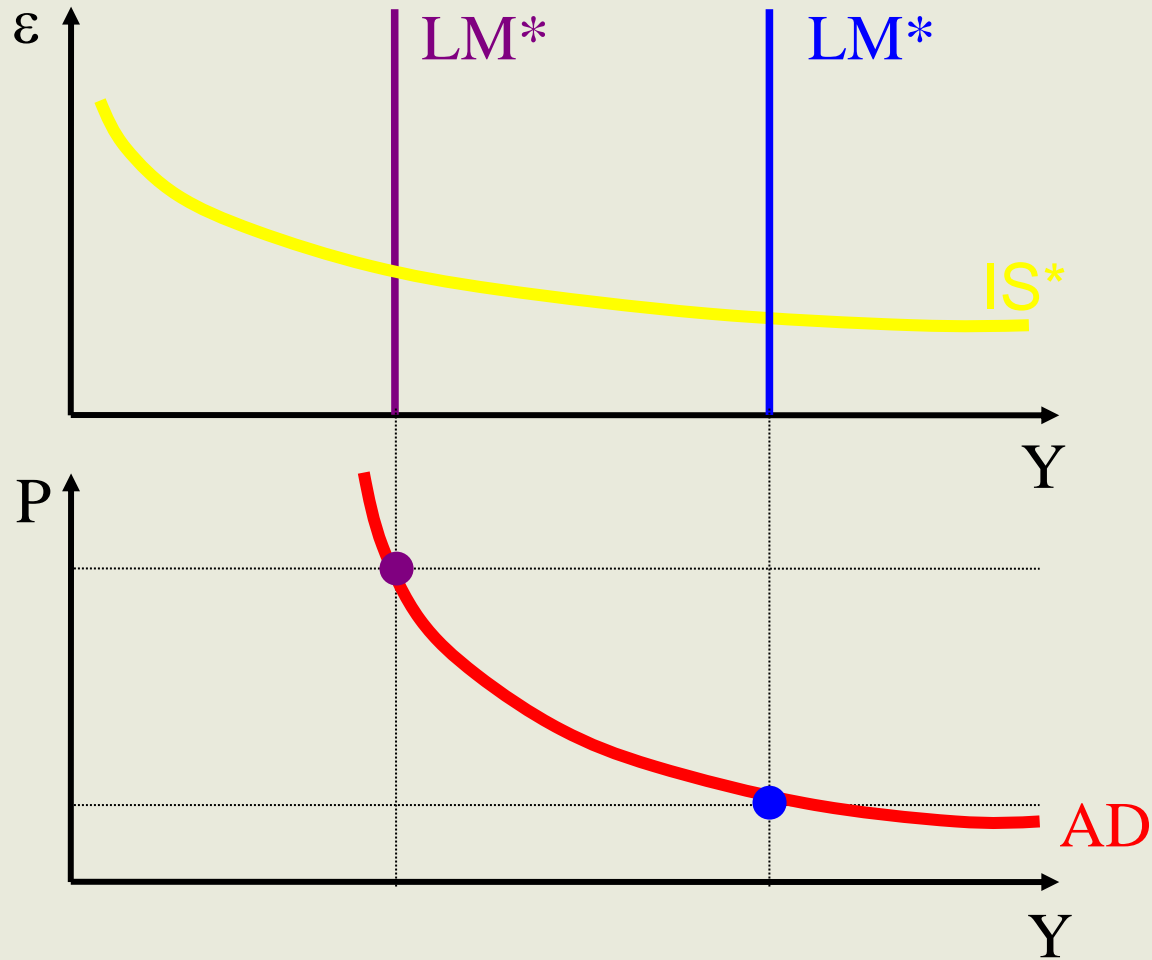
# The Mundell–Fleming model in the long run

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

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

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

