Open Economy Macroeconomics

Unit 3

Macroeconomic Policy in an Open Economy. Mundell-Fleming model

Previous conclusion

The ultimate effects of a devaluation are in large part dependent upon the economic policies that accompany the devaluation.

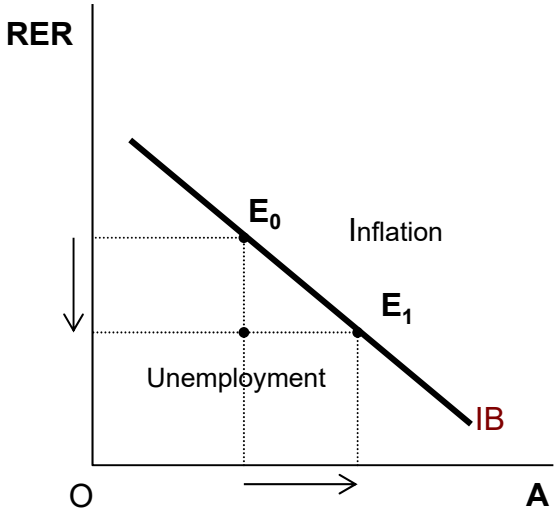
Economic objectives

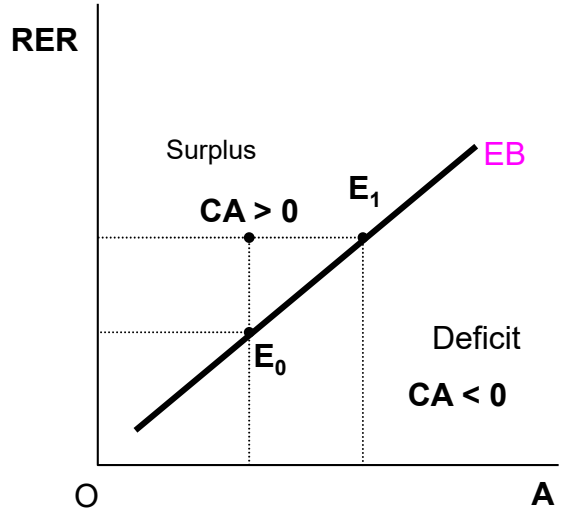
- Internal Balance:
  - Price stability
  - Full employment
- External Balance:
  - Equilibrium in the BP

Economic policies

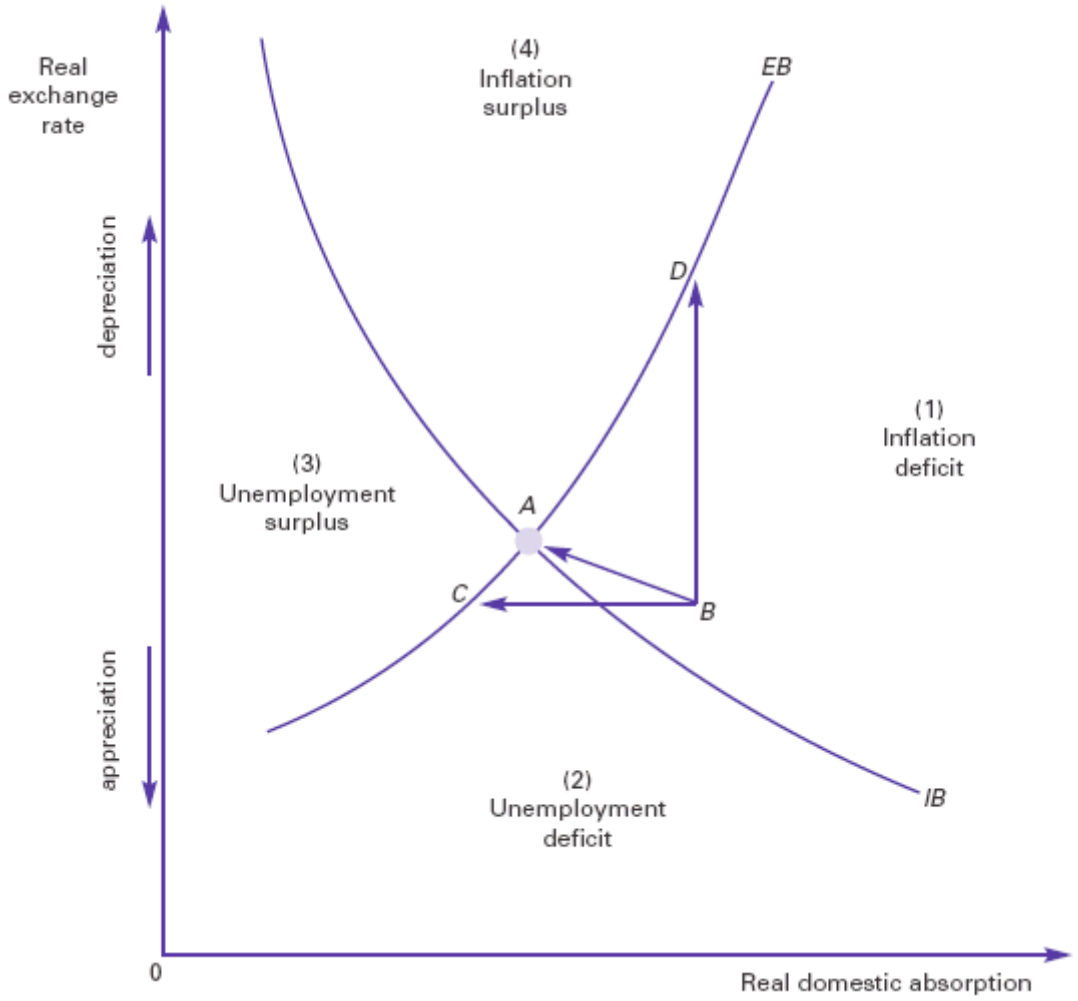
- Aggregate supply policies
- Aggregate demand policies:
  - Expenditure changing policies. Aim to influence the level of AD
  - Expenditure switching policies. Aim to influence the composition of AD

Internal and external equilibrium: the SWAN diagram





The Swan diagram



Mundell-Fleming model (IS-LM-BP model)

Aim: Analyze the effectiveness of fiscal and monetary policy

Assumptions:
- Domestic and foreign prices are constant
- Unemployment
- International capital mobility

Economic relationships (Equations).

The goods market

$$Y = C + I + G + X - M$$

$$S + M = I + G + X$$

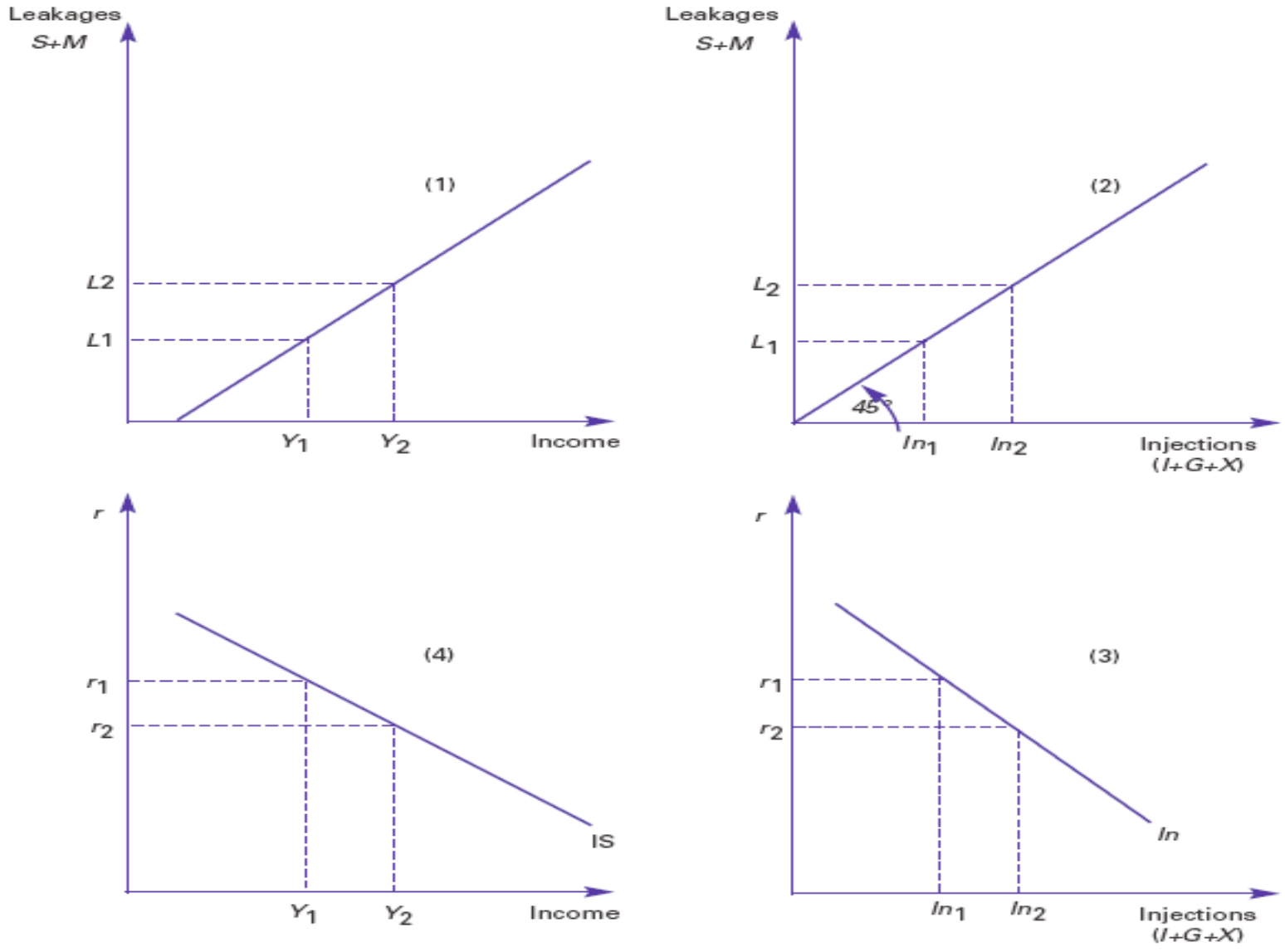
$$S = S_a + sY$$

$$M = M_a + mY$$

$$I = I(r) \qquad dI/dr < 0$$

Exports and Government expenditure are considered to be autonomous

Derivation of the IS schedule



The money market

$$M_d = M_s$$

$$M_t = M_t(Y) \qquad M_{sp} = M_{sp}(r)$$

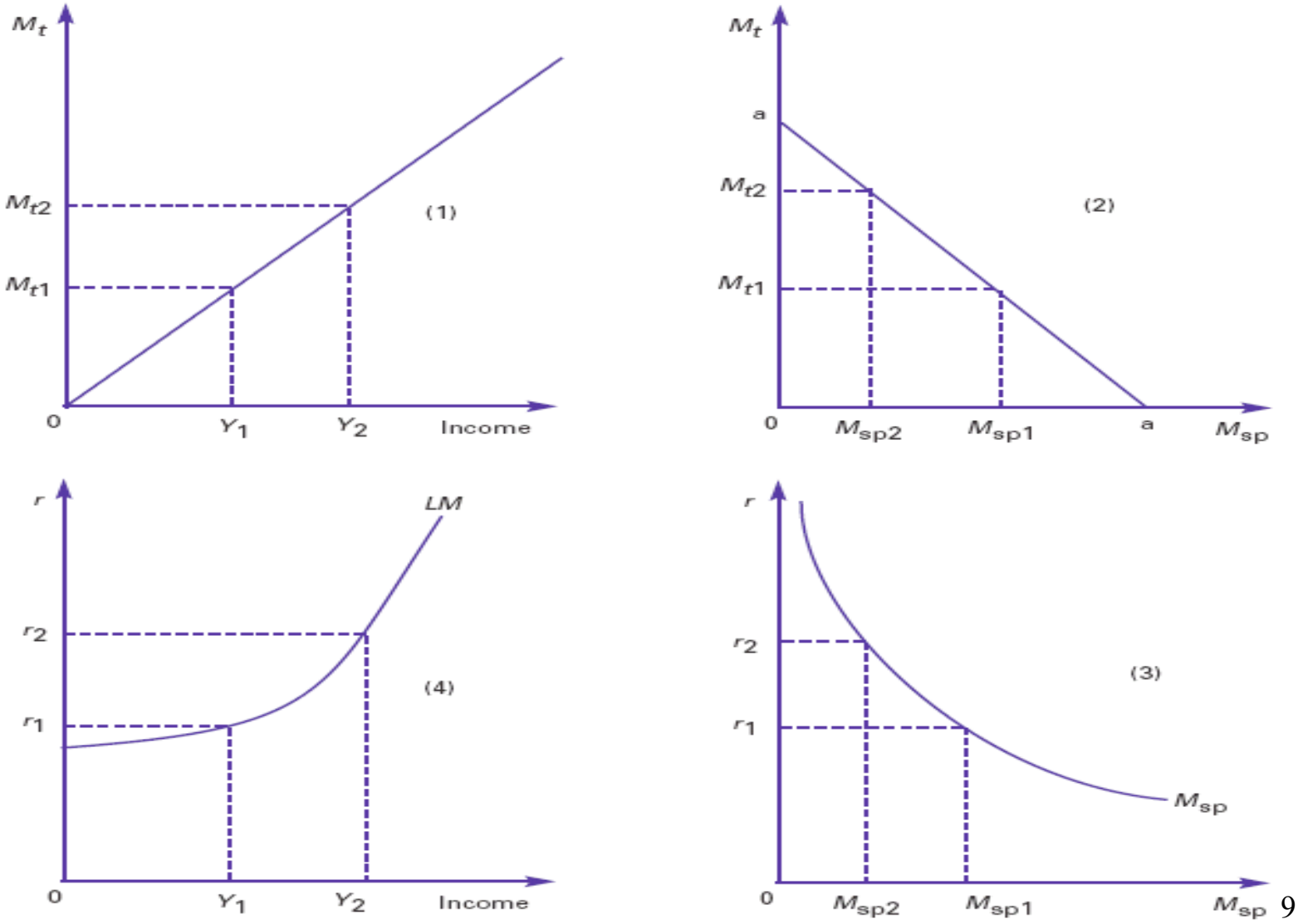
$$M_s = D + R \ (\phi = 1)$$

D = Domestic asset (bond) holdings of the monetary authorities = Domestic credit

R = Foreign asset holdings (Foreign exchange and any other internationally acceptable assets) of the monetary authorities, valued in domestic currency = International reserves

$$M_t + M_{sp} = M_s$$

Derivation of the LM schedule



The foreign sector

$$BP = CA + K = 0$$

$$X - M + K = 0$$

$$M = M_a + mY$$

$$\boldsymbol{X} \text{ is exogenous}$$

$$K = K(r - r^*) \qquad K = K(r)$$

Derivation of the BP schedule

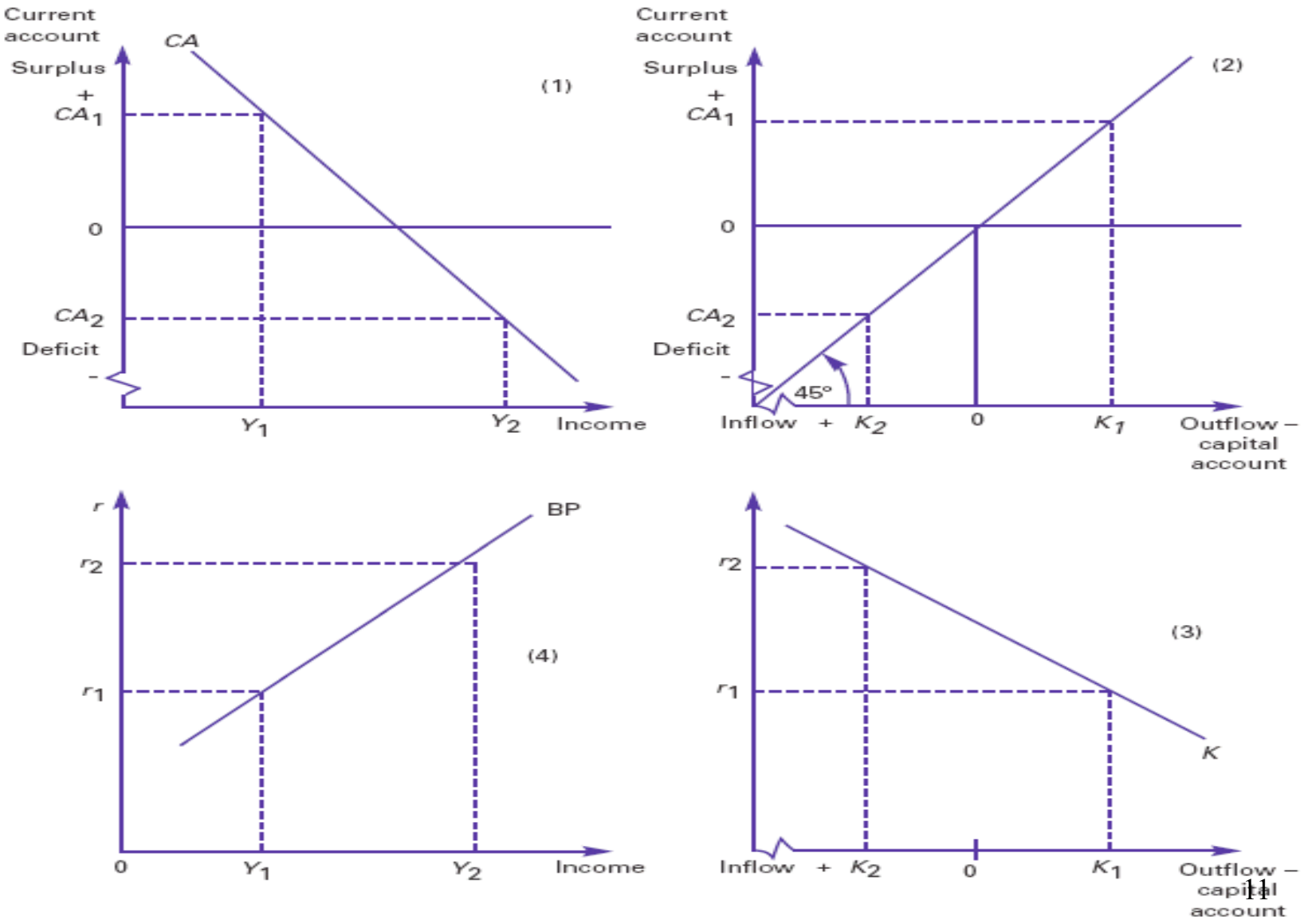
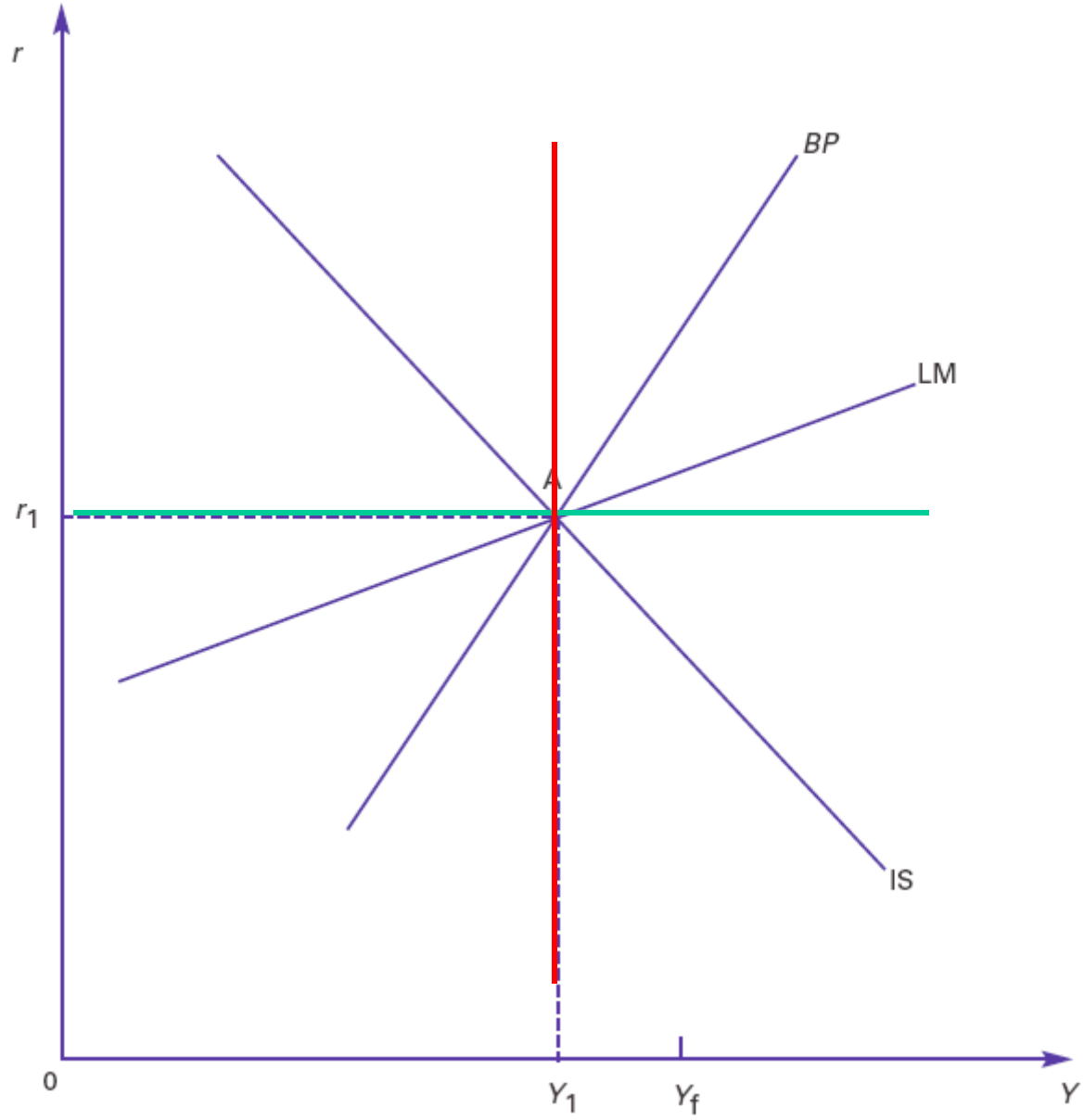


Figure 4.5 Equilibrium of the model



Monetary policy (Example of expansionary MP)

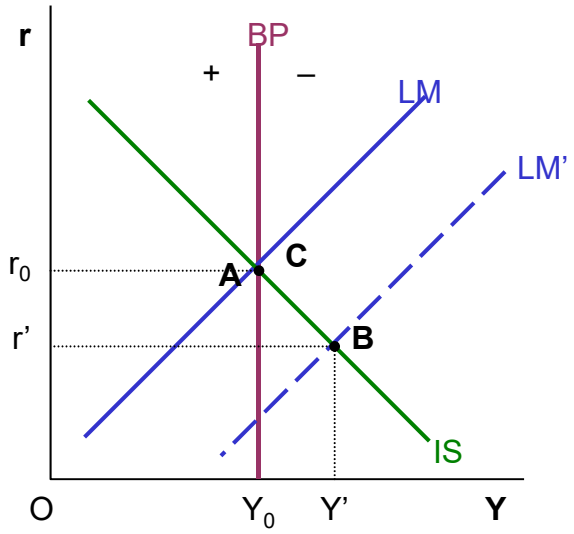
–The Central Bank purchases bonds from the public and injects newly created money. LM to the right
–Prices of bonds go up
–Interest rates go down
–Investment, consumption and income increase
–BOP goes into deficit or the domestic currency depreciates

Fiscal policy (Example of expansionary FP)

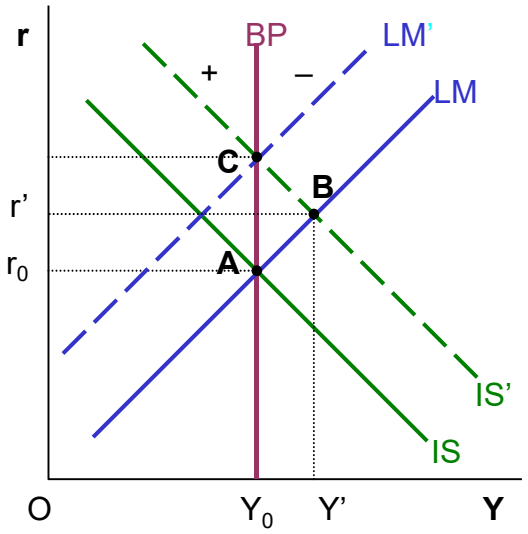
–G increases (The government pays for this increase by selling bonds) and this increases income. IS to the right
–Price of bonds go down
–Interest rates go up
–Investment, consumption and income decrease
–Final result on Y: increases but by less than the increase in G
–The CA deteriorates and the K improves: BOP changes? Exchange rates?

As we will see, the exchange rate regime turns out to be crucial to the behaviour of the economy

No capital mobility and fixed exchange rates

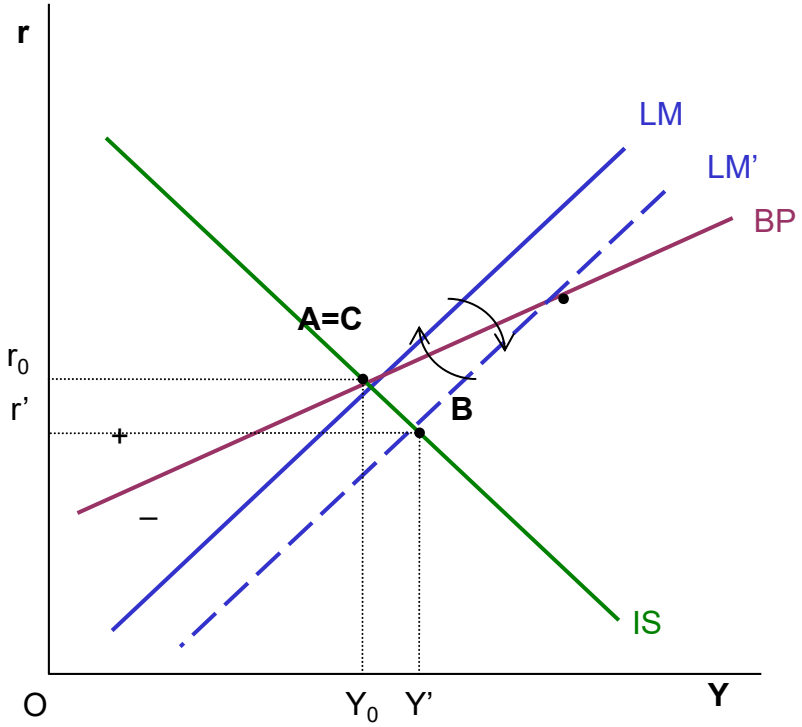


MP



FP

Imperfect capital mobility and fixed exchanges rates



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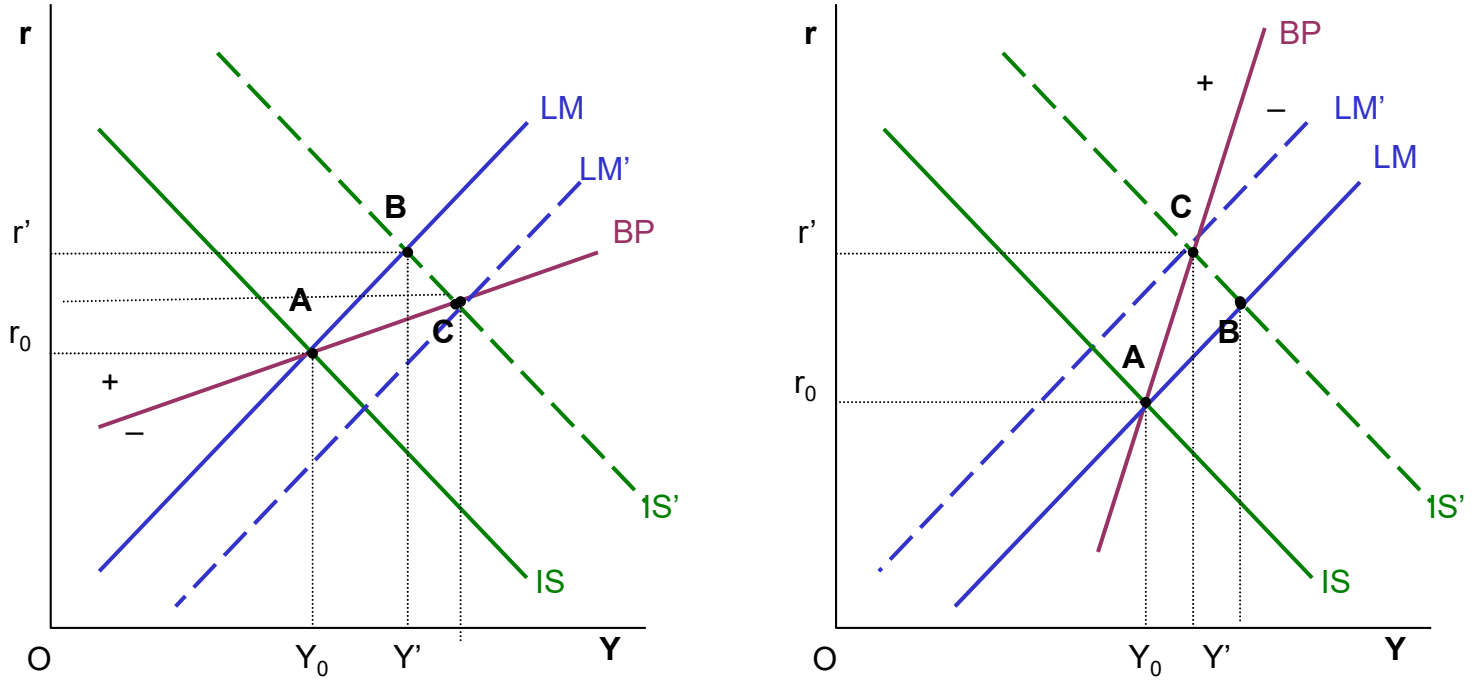

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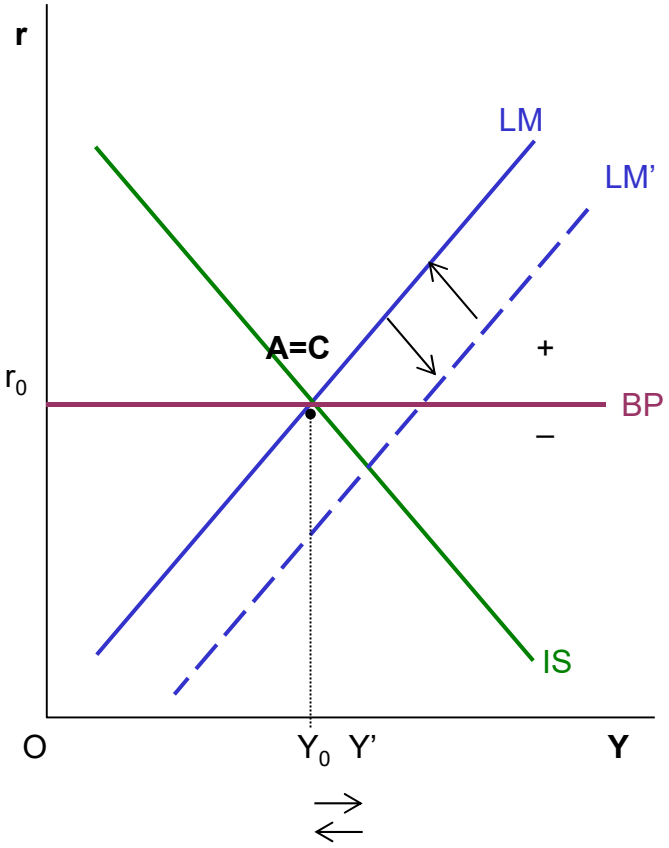

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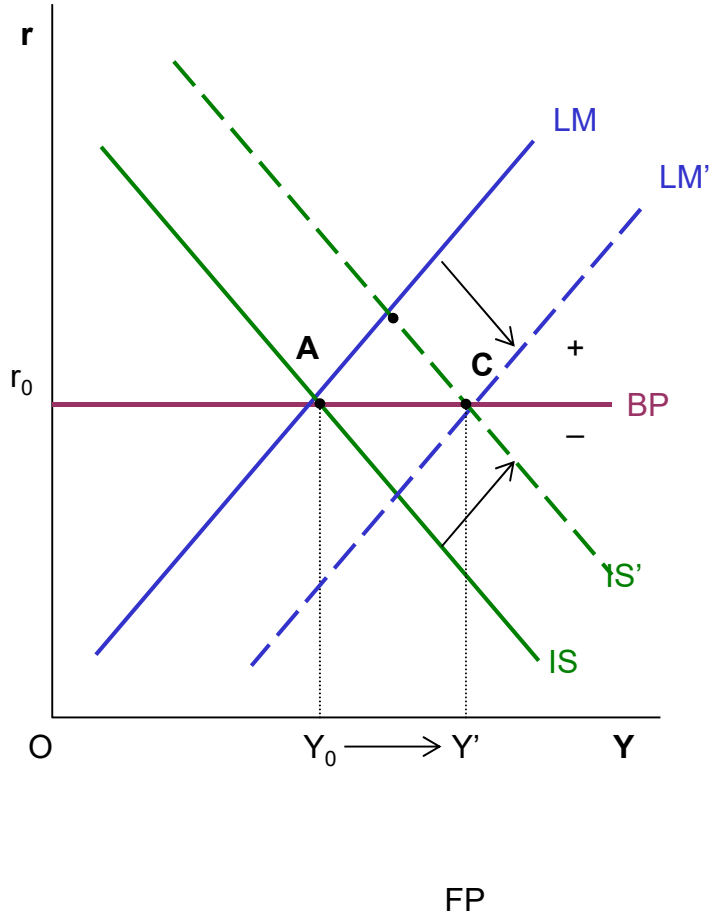
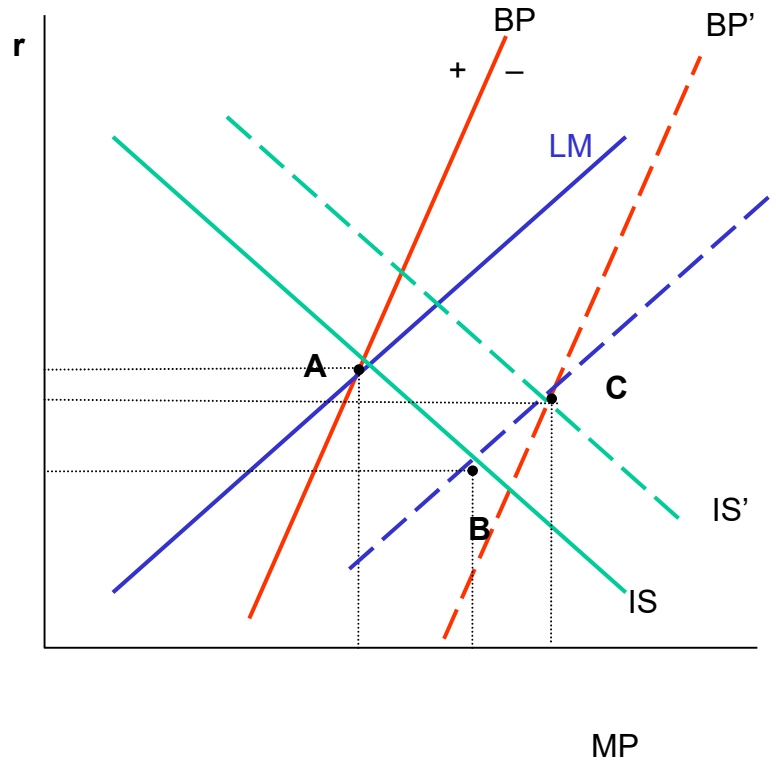
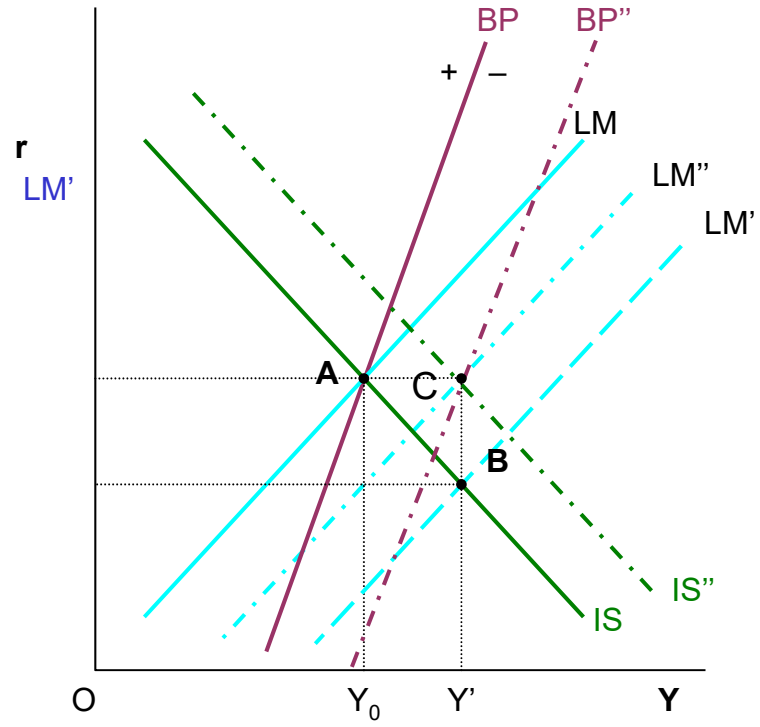


FP

Imperfect capital mobility and flexible exchange rates

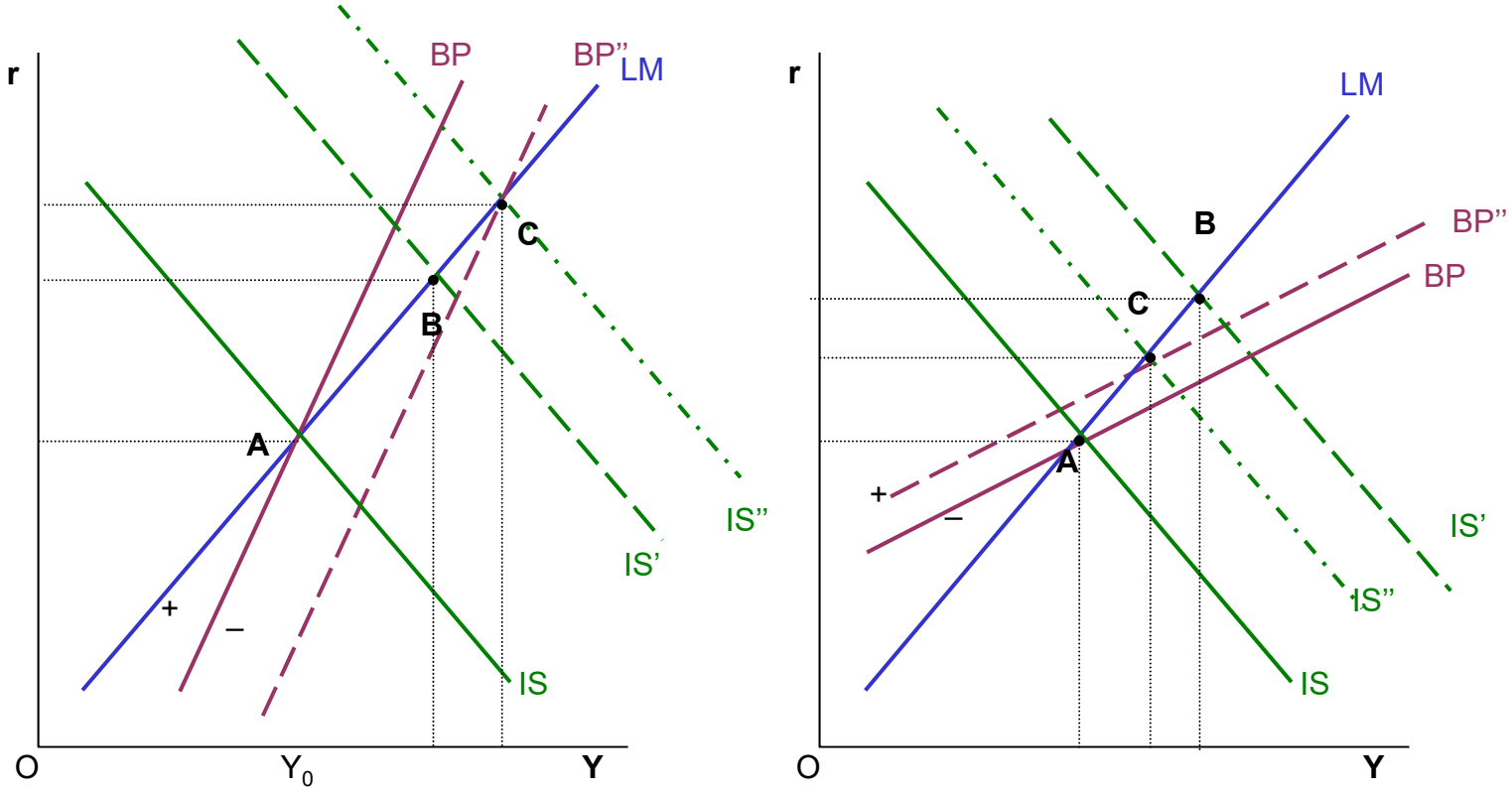


Negligible effect on LM



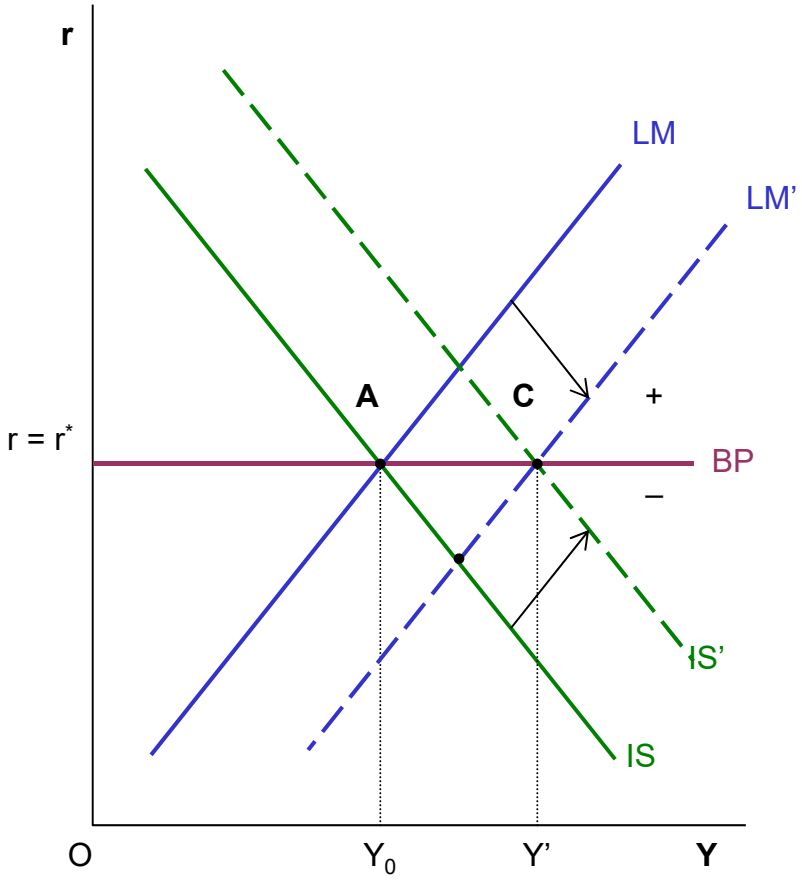
Non-negligible effect on LM

Imperfect capital mobility and flexible exchange rates

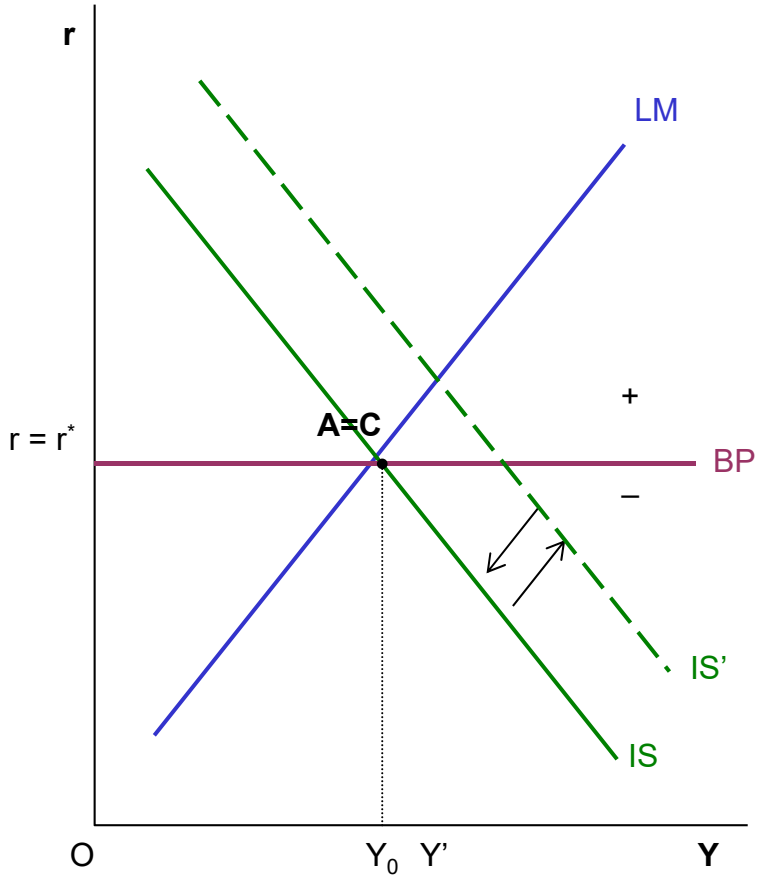


FP

Perfect capital mobility and flexible exchange rates



MP

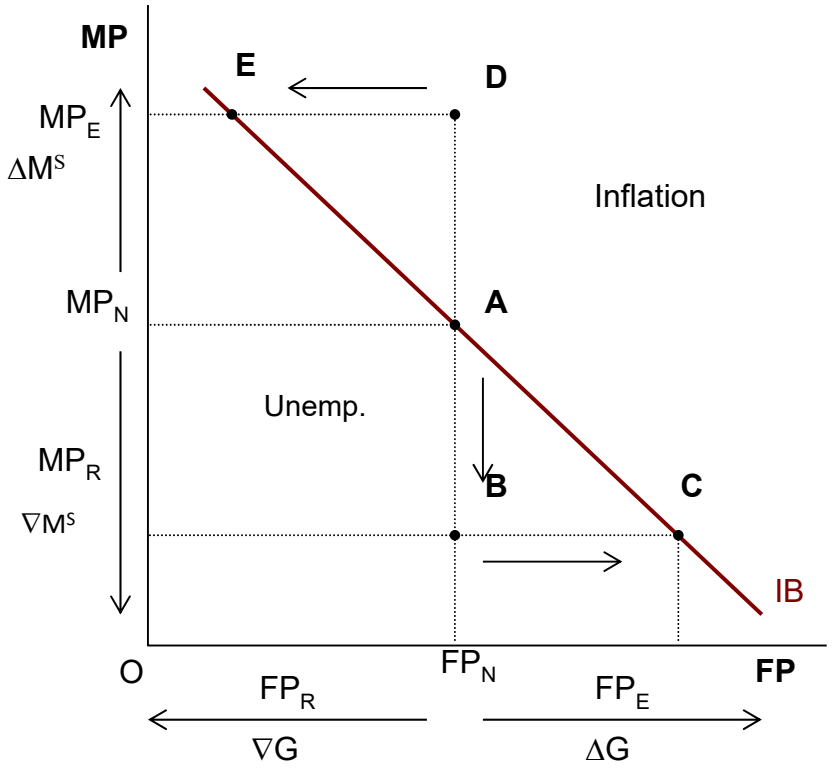


FP

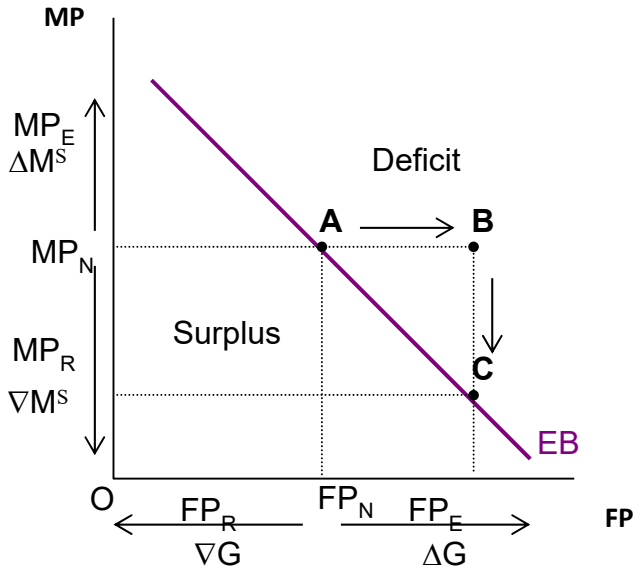
Monetary and fiscal policies: Summary effects

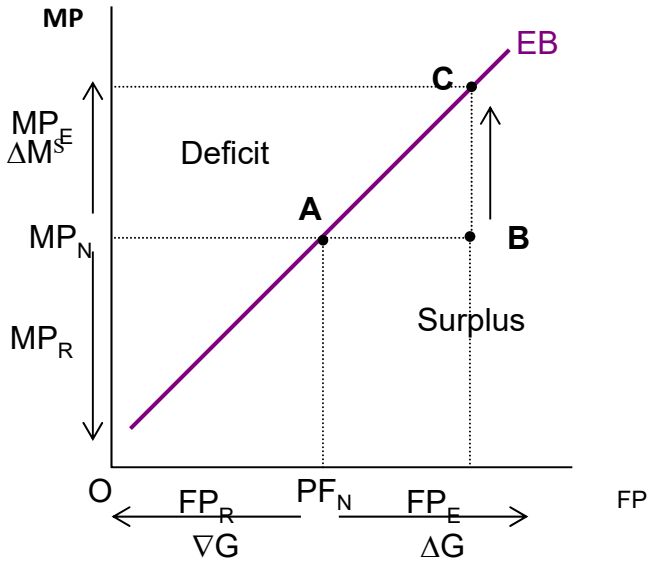
ER regime	Degree of K mobility	Monetary Policy		Fiscal Policy	
		SR	**LR**	**SR**	**LR**
Fixed ER	**NKM**	E	I	E	I (Crowding out)
	IKM	E	I	E	E (the more effective the flatter the BP curve)
	PKM	I (totally)		E (totally)	
Floating ER	**IKM**	E S increases	E S increases	E	E
				(the more effective the stepper the BP curve) S increases if BP slope>LM slope. S decreases if BP slope<LM slope	
	PKM	E S increases		I (totally) S decreases	

The principle of effective market classification: the assignment problem



The assignment problem





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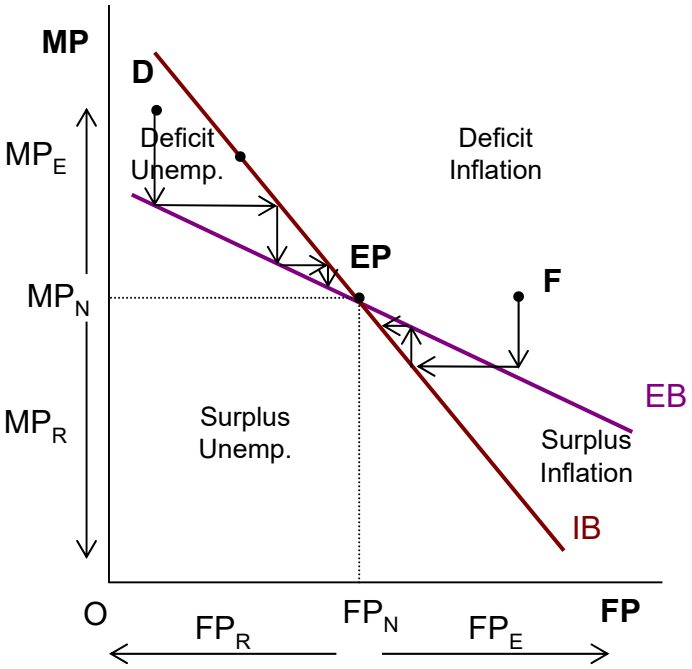

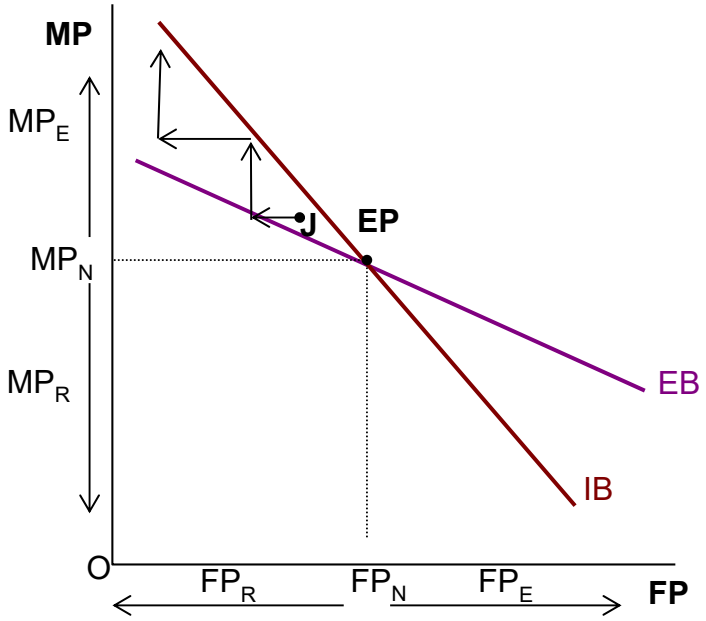

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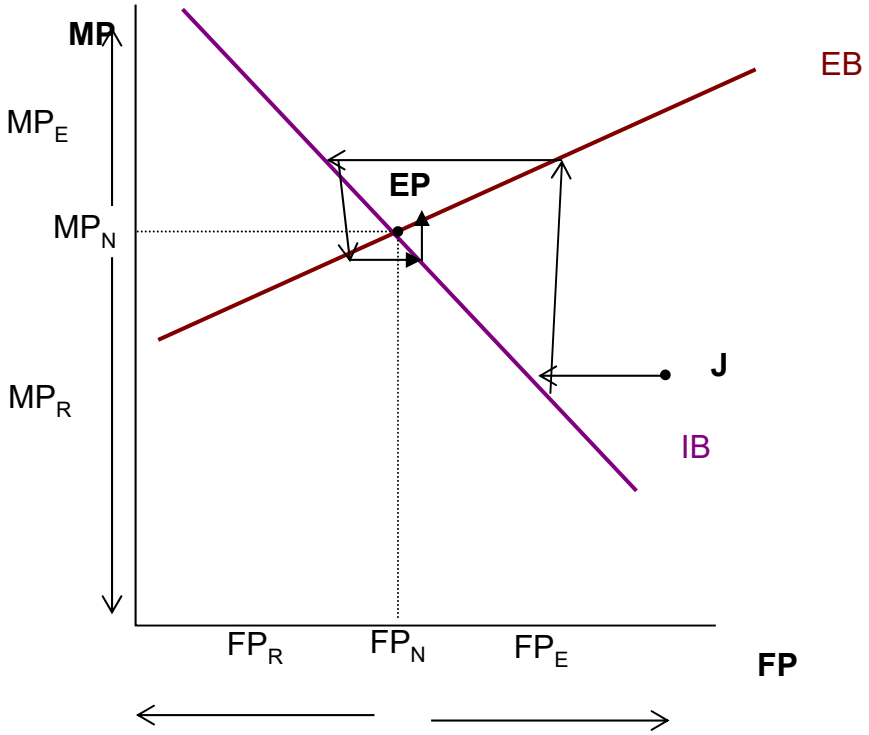

Limitations of the Mundell-Fleming model

1. Marshall-Lerner condition
2. Interaction of stocks and flows
3. Neglect of long run budget constrains
4. Aggregate supply curve is horizontal
5. Treatment of capital flows
6. Monetary and fiscal policies are not that flexible
7. Exchange rate expectations