

Model Summary

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Econ520

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Topics

- ▶ We have seen a variety of models with different assumptions.
- ▶ The following is a synthesis.
- ▶ For each case, we will work through a rise in G

IS/LM

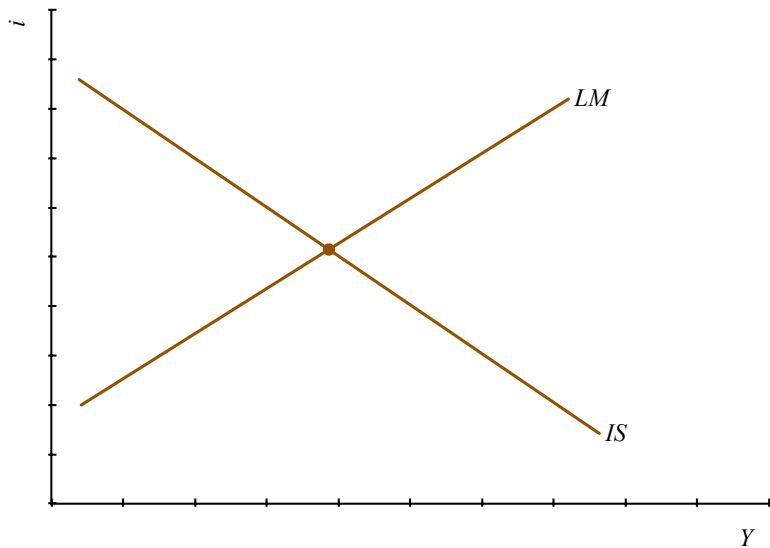
Assumptions:

1. P is fixed
2. supply constraints do not bind (e.g. deep recession)
3. closed economy

$$\text{IS: } Y = C(Y - T) + I(Y, i) + G$$

$$\text{LM: } M/P = YL(i)$$

IS/LM Analysis



AS/AD

Assumptions:

1. P is endogenous
2. supply constraints do bind
3. expectation effects not important

$$\text{AS: } P = (1 + m)P^e F(1 - Y/L, z)$$

$$\text{AD: } Y = C(Y - T) + G + I(Y, i)$$
$$M/P = YL(i)$$

AS/AD: Analysis

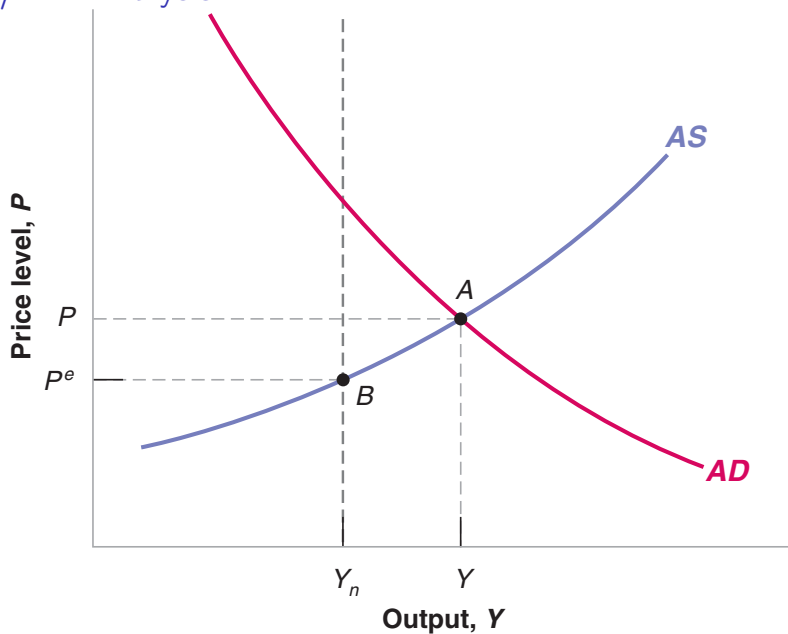
Short run: P^e given

- ▶ AS/AD jointly determine Y, P

Medium run: $P^e \rightarrow P$

- ▶ vertical AS $F(1 - Y_n/L, z) = 1/(1 + m)$ determines Y_n
- ▶ AD determines P

AS/AD: Analysis



Expectations of Future Y, r

Assumptions:

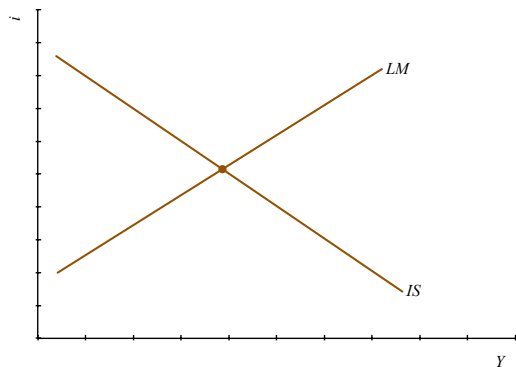
- ▶ no inflation expectations
- ▶ short run only
- ▶ supply constraints do not bind

IS/LM model with one modification

- ▶ Y', r' shift IS

Note: We have not done this, but one could easily built this into the AS/AD analysis as well.

Expectations: Analysis



1. Direct effect (e.g. $G \uparrow$)
2. Indirect effect (expectations shift IS)

Open Economy IS/LM

Assumptions:

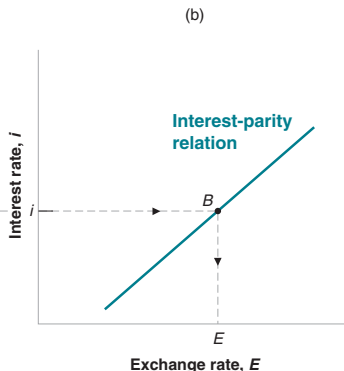
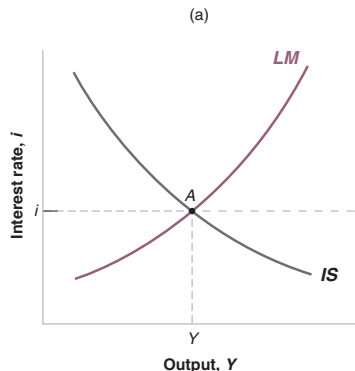
1. no supply constraints, no expectations
2. P fixed
3. floating exchange rate
4. perfect capital mobility

$$IS : Y + C(Y - T) + I(Y, i) + G + NX \left(Y, Y^*, \frac{1+i}{1+i^*} E^e \right) \quad (1)$$

$$LM : M/P = YL(i) \quad (2)$$

$$UIP : E = \frac{1+i}{1+i^*} E^e \quad (3)$$

Open IS/LM Analysis



Looks like closed economy IS/LM with additional shifters of IS (e.g. Y^*)

Open Economy AS/AD

Assumptions:

1. supply constraints bind
2. fixed exchange rate
3. perfect capital mobility
4. no expectations

Open AS/AD: Analysis

Analysis is the same as in closed economy AS/AD

- ▶ but different shifters of AD

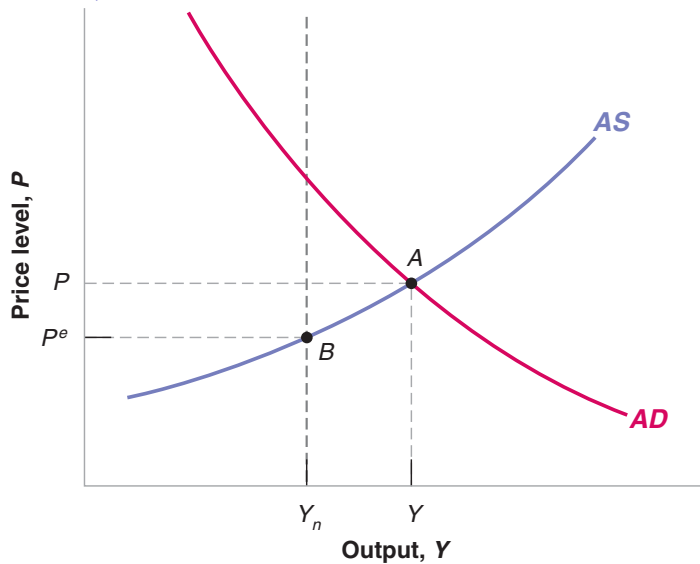
Short run:

- ▶ AS as before with fixed P^e
- ▶ UIP $i = i^*$
- ▶ IS + LM = AD: $Y = Y(\bar{E}P/P^*, G, T)$

Medium run:

- ▶ $P^e = P$: vertical AS fixes $Y = Y_n$.
- ▶ AD determines P

Open AS/AD: Analysis



Adjustment looks like closed economy

Tips

- ▶ You don't have to remember equations
 - ▶ Each exam question will clearly state the model assumptions
- ▶ Let the model tell you the answer
 - ▶ There is a shock
 - ▶ Figure out how it shifts each curve
 - ▶ Get the new equilibrium
 - ▶ Then think about intuition / does the answer make sense?