Model Summary

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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

Model Summary

Note that all models are built from the same set of market clearing conditions:

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

$$LM: M/P = YL(i)$$

$$UIP: E = \frac{1+i}{1+i^*}E^e$$

$$AS: \ Y^s = F\left(\frac{P}{P^e}\frac{1}{1+m}, z\right)$$

Special Cases

Closed economy:

- Drop UIP and NX.

Short-run:

- Drop AS.
- IS-LM diagram.

Fixed exchange rate:

- $E = E^e = \bar{E}$.
- M endogenous (Fed is busy fixing $i = i^*$).

Graphs for all AS/AD models look the same (closed, fixed, floating).

IS/LM

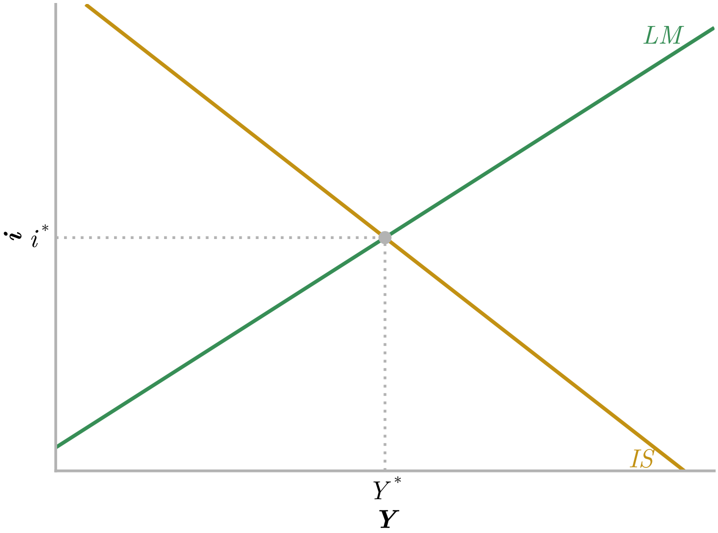
Assumptions:

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

IS: $Y = C(Y-T) + I(Y,i) + G$

LM: $M/P = YL(i)$

IS/LM Analysis



Expectations of Future Y, r

Assumptions:

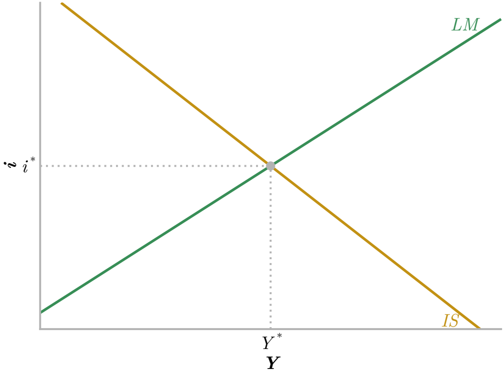
- no inflation expectations
  - short run only
  - supply constraints do not bind

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)

AS/AD

Assumptions:

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

AS: $Y = F\left(\frac{P}{P^e}\frac{1}{1+m}, z\right)$

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

AS/AD: Analysis

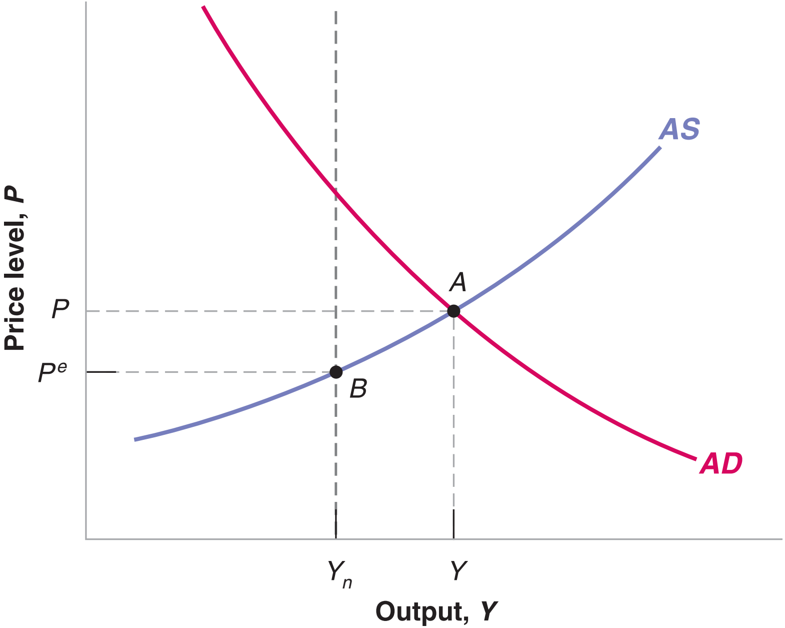
Short run: P^e given

- AS/AD jointly determine Y, P

Medium run: $P^e \to P$

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

AS/AD: Analysis

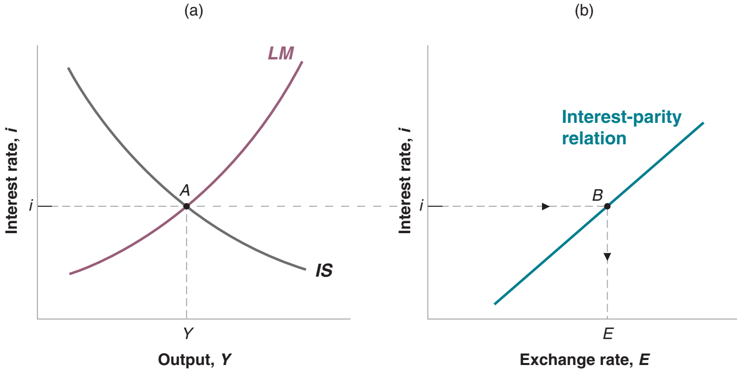


Open Economy IS/LM

Assumptions:

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

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

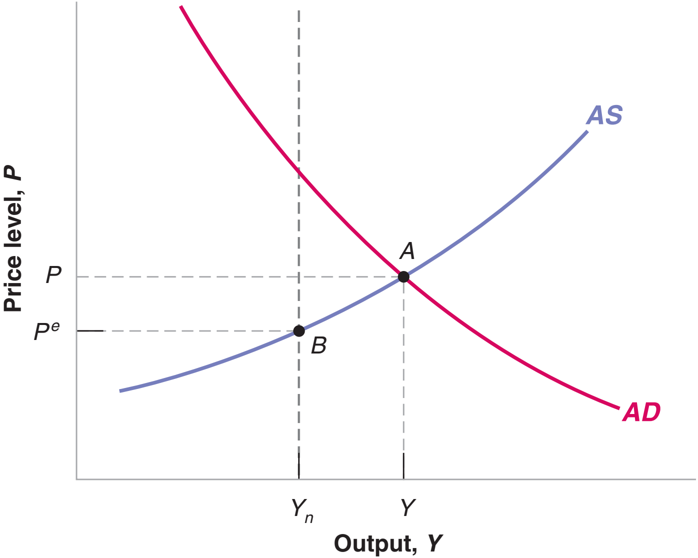
Short run:

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

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?