

# Some Key International Macroeconomic Relationships

$$BP = K + (X - M)$$

K inflows (+)  
outflows (-)

$$\begin{aligned} BP(+) &\Rightarrow R \uparrow (\text{fixed}) \text{ or } e \uparrow (\text{flex}) \\ (-) &\Rightarrow R \downarrow \qquad \qquad \qquad e \downarrow \end{aligned}$$

## Classical Monetary Model

$Y$  is fixed +  $P$  flexible

$$MV = PY$$

with no sterilization under fixed rates

$$BP(+) \Rightarrow R \uparrow \Rightarrow M_s \uparrow \Rightarrow P \Rightarrow (X - M) \downarrow$$

Self correcting mechanism

Under flex exchange rates the exchange rate rather than price levels does the adjustment

The classical model assumes  $Y$  + the real exchange rate ( $re$ ) remain constant hence PPP holds in equilibrium.

$K$  flows =  $f(i_d - i_f)$  where these  $i$ 's are the interest rates that would hold in a closed economy.

With perfect  $K$  mobility the domestic and foreign interest rates will be equalized  
(1)

With automatic adjustment the K flows will generate changes in X-m of equal magnitude and opposite sign.

In Keynesian Open Economy Models it is typically assumed that reserve flows are sterilized, i.e., the effects of  $\Delta R$  on the monetary base are offset by changes in the domestic component of the monetary base so that  $M_s$  doesn't change with  $\Delta R$ .

This breaks the automatic adjustment mechanism, i.e. it creates an international disequilibrium system.

Eventually BP equilibrium is required but in the SR there may be a need for policy adjustments to deal with international and/or domestic conditions.

Since prices are fixed in the Keynesian model there may be conflicts between domestic and external balance. In such cases adjustments in exchange rates are often called for since

$$(X-m) = f(Y, P_d - P_f, e)$$

(+)      (-)      (-)

Since prices are fixed the trade-off becomes between  $\Delta Y + \Delta e$

(2)

The relationship between  $(X-M)$  +  $Y$  comes from the MPM  
 i.e.  $\Delta M = mpm \cdot \Delta Y$   
 just as  $\Delta C = mpc \cdot \Delta Y$  (with no taxes)

Both taxes and imports that vary with  $Y$  reduce the Keynesian multiplier

i.e.,

$$K = \frac{1}{1 - (mpc + mpt + mpm)}$$

Thus in the face of domestic demand shocks both taxes and imports act as automatic stabilizers for the economy, i.e. they reduce the aggregate effects on the economy from shifts in the IS curve. They make the IS curve (which is really the IS-GT-XM curve) steeper.

The higher is international capital mobility the flatter is the BP curve.

A shift out in the IS curve  $\Rightarrow$   
 i↑ causing  $K$ ↓ flows +  $Y$ ↑ causing  $(X-M)$ ↓  
 so the next effect on the BP or e depends on the relative magnitude of these two effects

A depreciation of the currency shifts the IS and BP curves to the right  
 (3)