A.

Expectations of future exchange rates:

- Signs that long-run equilibrium exchange rates have to change

Changed perceptions of risk

Liquidity concerns

Changes in the wealth distribution

B.

1. Temporary equilibrium:

Equilibrium for given levels of F_* and P.

$$Y = C\left(Y, -\frac{EF_*}{P}, i_*\right) + X\left(\frac{EP_*}{P}, Y, Y_*\right) \qquad (6)$$

Values o Y, W, $\dot{P}$ and $\dot{F}_*$ that result from given levels of F_* and P.

. Stationary e uilibrium:

Equilibrium where F_* and P are constant

Values of F_* and P that make $\dot{F}_* = \dot{P} = 0$.

2.

ϕ_{21} effect of P on $\dot{F}_*$ in (5), taking account of (6)

P↑ Three effects on trade balance:

- Direct real exchange rate effect: PX/E ↓

$X'_1 > 0$, X close to 0, Mars ner

- Indir ct real exchange rait :

P↑ → X ↓ → Y ↓ (multiplier) → X ↑

Smaller than direct effect

- Wealth effect: P↑ → |W| ↓

$F_* > 0$, P↑ → W↑ → Y↑ ($C_W > 0$) → PX/E ↓ (X'_2 <0

$F_* < 0$, P↑ → PX/E ↑

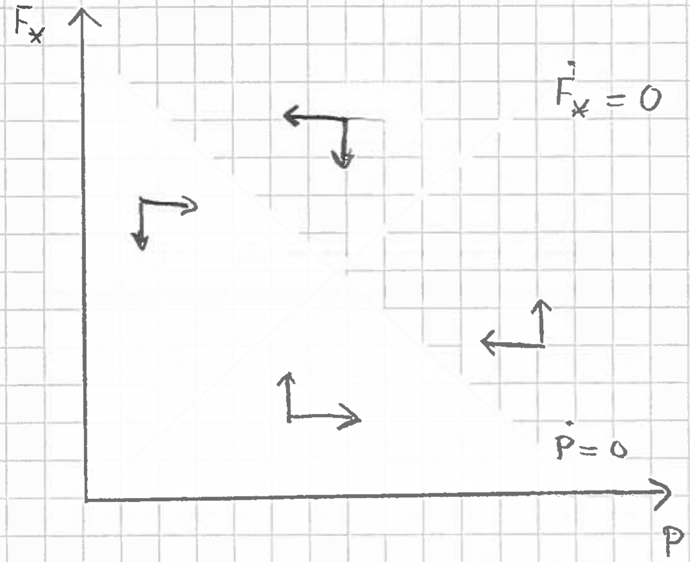
$F_* > 0$	$\phi_{21} > 0$	total effect
$F_* < 0$	ϕ_{21} ambiguous sign	

3)

Trace condition: $\overset{-}{\phi_{11}} + \overset{-}{\phi_{22}} < 0$

Determinent condition: $\underbrace{\overset{-}{\phi_{11}}\overset{-}{\phi_{22}}}_{+} - \underbrace{\overset{-}{\phi_{12}}\overset{+}{\phi_{21}}}_{+} > 0$

4)



move anti-

$\phi_{11}, \phi_{22} < 0$ means arrows point towards the equilibrium curves.

$\dot{P} = 0$

$P\uparrow \to Y\downarrow$ (as discussed in 2), less demand pressure $\dot{P}\downarrow$

$F_*\uparrow \to Y\downarrow$ wealth effect on consumption $\dot{P}\downarrow$

To keep $Y = \bar{Y}$, P has to be lower when F_* is higher

$\dot{F}_* = 0$

$P\uparrow \to CA\downarrow \to \dot{F}_*\uparrow$ (as discussed in 2)

$F_*\uparrow$
- Direct effect in (5) $\dot{F}_*\uparrow$
- $\phi_{22} < 0$ means this is dominated by another effect:
- $F_* \to W\downarrow \to C\downarrow \to Y\downarrow \to \bar{X}\uparrow \to \dot{F}_*\downarrow$

To keep $CA = 0$, F_* has to be higher when P is higher

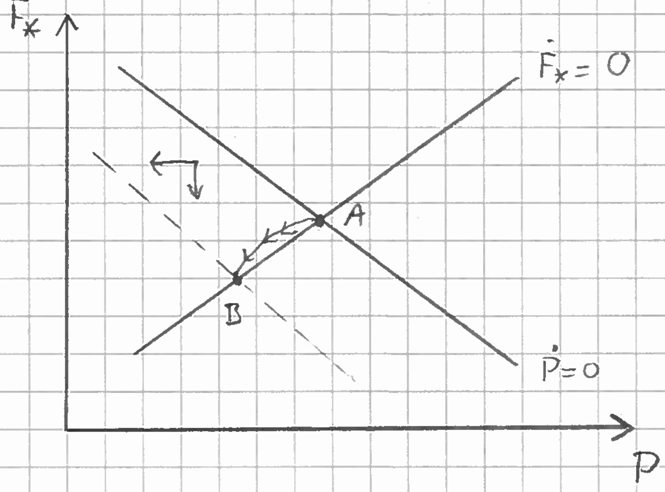
5) $\bar{Y}\uparrow$

Note: In temporary equilibrium: Y does not depend on $\bar{Y}$, see (1).

Curve for external balance does not shift.

Curve for internal balance shifts left:

For any given F_*: Higher $\bar{Y}$ requires higher Y which requires lower P.



A initial point

Arrows after the shift.

B new stationary point

$F_*\downarrow$, $P\downarrow$ seen from the graph (long run equilibrium)

Transitional path: Spiral or smooth?

- Output below capacity
- Falling prices
- CA surplus

} Between A and B

$P\downarrow \Rightarrow R = EP_*/P\uparrow$ Real depreciation

Long run effect on W?

Stationarity conditions:

(a) $\bar{Y} = C(\bar{Y}, W, i_*) + X(R, \bar{Y}, Y_*)$

(b) $X(R, \bar{Y}, Y_*) = i_* E F_* / P = -i_* W$

(a) & (G) $\Rightarrow$ $\bar{Y} = C(\bar{Y}, W, i_*) - i_* W$

$$d\bar{Y} = C_1' \, d\bar{Y} + C_2' \, dW - i_* \, dW$$

$$\frac{dW}{d\bar{Y}} = \frac{1 - C_1}{C_2 - i_*} > 0 \text{ if } C_2 > i_*$$

$C_2 > i_* \iff$ Higher wealth raises expenditures more than income.

(This assumption is necessary for $\phi_{22} < 0$, and equivalent to determinant condition).

6.

Remember Ch. 1.4 in Obstfeld - Rogoff.

Profit maximization: $\Phi_2'(\bar{N}, \bar{K}) = i_*$

If Φ has constant returns to scale, $\bar{K}$ is proportional to $\bar{N}$ when i_* is given. Hence, with $\bar{K}$ endogenous $\bar{N}\uparrow \rightarrow K\uparrow$

This seems to reinforce the increase in W.

However, need to take account of that the increase in $\bar{K}$ has to be financed. This will increase the foreign debt. Total effect seems ambiguous.

In OR total wealth $(W^T = W + K)$ is determined by savings behavior, while the demand for real capital then determines net foreign assets. Intuitively something similar must happen here, but formalizing this by modifying the model takes too much time.

Appendix: Q2 for those who prefer derivatives

From (6):

$$\frac{dY}{dP} = \frac{C_2' \, EF_* / P^2 - X_1' \, EP_* / P^2}{1 - C_1' - X_2'}$$

$$= \frac{C_2' F_* - X_1' P_*}{1 - C_1' - X_2'} \quad \frac{E}{P^2}$$

From (5):

$$\frac{\partial \dot{F}_*}{\partial P} = -\frac{1}{E} X + \frac{P}{E} X_1' \frac{EP_*}{2} - \frac{P}{E} X_2' \frac{dY}{dP}$$

Disregard X $(X \approx 0)$.

$$\frac{\partial \dot{F}_*}{\partial P} = X_1' \cdot \frac{P_*}{P} - \frac{X_2' C_2' F_* - X_2' X_1' P_*}{1 \;\; C_1' - X_2'} \quad \frac{1}{P}$$

$$= \frac{X_1' P_* - X_1' C_1' P_* - X_1 X_2' P_* - X_2' C_2' F_* + X_1 X_2 P_*}{(1 - C_1' - X_2') P}$$

$$\frac{\partial \dot{F}_*}{\partial P} = \frac{1}{P} \cdot \frac{\overset{+}{-X_2' C_2' F_*} + \overbrace{X_1' (1 - C_1) P_*}^{+}}{\underbrace{1 - C_1' - X_2'}_{+}}$$