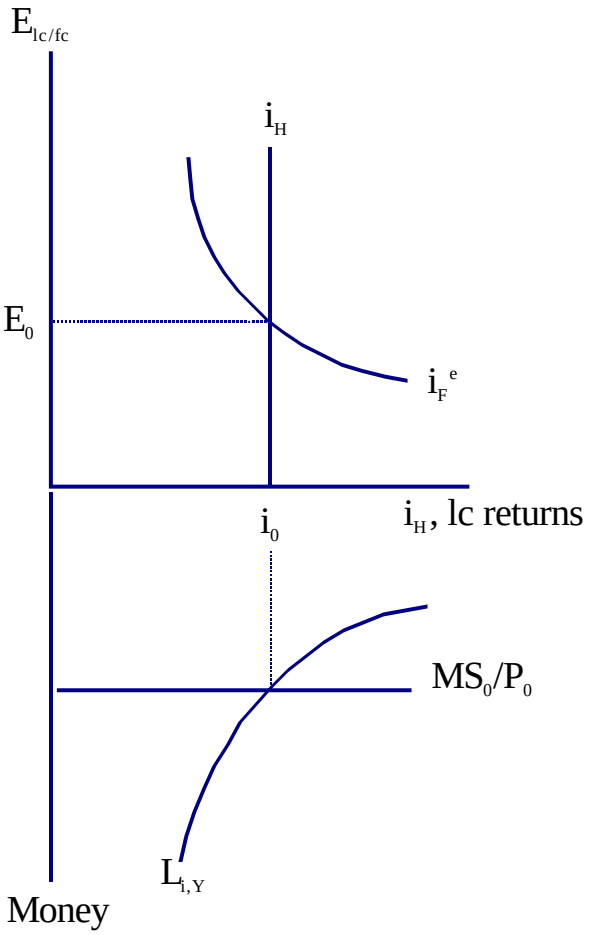
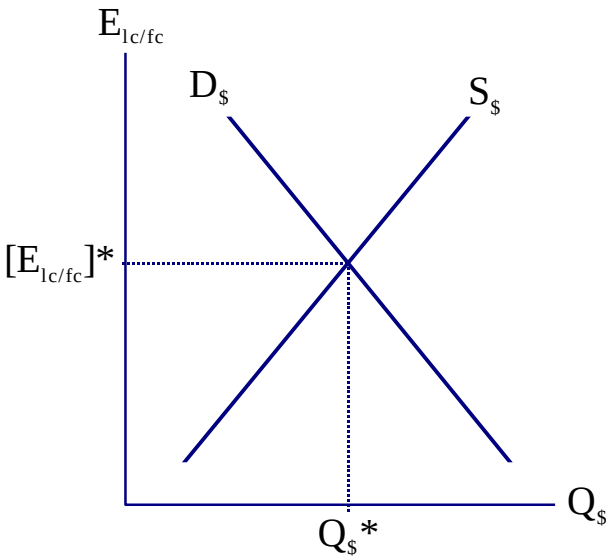
Concepts for final exam review

Concept	Cause-effect relationship	Issue(s)
1. Macroeconomic accounting identity: $Y = C + I + G + (X - M)$	Factors affecting changes in GDP; link between trade sector and GDP	External sector affects domestic economy and vice versa
2. Balance of trade (BOT): $BOT = (X - M) = (S^P - I_D) - (G - T)$	Domestic macroeconomic imbalances linked to BOT imbalances	Saving-investment imbalances; budget deficit/surplus
3. Balance of payments (BOP): BOP = BOT – [K-out – K-in] – $\Delta R = 0$	BOT related to the K-acct (private outflows/ inflows) and changes in the official reserve position (R)	BOT imbalance must be offset by K flows; under fixed E regime ΔR matters too
4. Exchange rate (E):		
4.1 Purchasing power parity $E_{lc/fc} = P_H / P_F$	E, P relationship; $\Delta E = \Delta P$, $\Delta CPI_H = \Delta CPI_F$, $\Delta E = \Delta P^e$; ↑ (↓) E → ↓ (↑) lc value	E is the mechanism to ensure LOOP and TOT hold for goods/services. E is the mechanism to ensure LOOP for assets. ΔE ensures eqlbm in international transactions (BOP)
4.2 Interest rate parity $i_H = [i_F]^e + [(E^e - E_0)/E_0]$	E, i relationship; ΔE ensures that i_H, $[i_F]^e$ give same return on lc, fc assets $i_H > [i_F]^e \rightarrow \uparrow E^e$	
4.3 Risk and the exchange rate $i_H = [i_F]^e + [(E^e - E_0)/E_0]$ + risk premium	Risk implies ΔE^e, ΔP^e, $[i_F]^e$ An ↑ in general inflation faster than expected: $\uparrow \pi_H \rightarrow \uparrow P^e$, E^e, and $[i_F]^e$	If risk is not the same, investors will requie a premium to hold risky asset; Δ Expectations can affect real economy
5. Modeling exchange rates and changes in equilibrium:		
5.1 Determination of exchange rate Demand, supply of fc (D_{fc}, S_{fc}) and E	ΔD_{fc} and $S_{fc} \rightarrow \Delta$ E Market for fc can behave like any other market	Intervention in currency markets is similar to the effects of trade policy (tax on X, M; subsidy on X, M or quotas)
5.2 Modeling trade flows from Δ E Houck 3-country model: ES, ED in lc, fc	$\Delta E \rightarrow \Delta$trade (X, M) and export earnings, import payments, and production and consumption	ΔE effects on trade depend on elasticities; Depreciating/devaluing lc can improve BOT
5.3 J-curve effect Implication of decreasing currency value (competitive depreciation)	↑E → ↑BOT→ ↑ Y under the right conditions; or just to improve BOT and BOP situation. BOT can worsen in short run with ↑ E (↓ lc value)	$\Delta E \rightarrow$ slow ΔP, e.g., long-term contract, buyer-seller relations), so P in lc terms can change faster than in fc terms, and trade quantities are inelastic
5.4 Marshall-Lerner condition: ES, ED elasticities with respect to ΔE	$\xi^{ES}_E + \xi^{ED}_E \geq 1$ to improve BOT; if < 1 then ↑ E worsens BOT.	Degree to which ES and ED are affected by ΔE are an empirical matter.
6. General equilibrium:		
6.1 Goods market equilibrium: $Y = C(Y) + I(i) + G + BOT(E \cdot P_F/P_H; Y)$ $AD = C(Y) + I(i) + G + E \cdot P_F/P_H = AS$	Two relationships of interest: i, Y and E, Y. ΔIS: anything causing ↑Y (holding $i = i_0$) ΔDD: anything causing ↑Y (holding $E = E_0$)	IS curve: all combos of i, Y in which goods mkt is in eqlbm. DD curve: all combos of E, Y in which goods mkt is in eqlbm.

4.1 Interest rate parity, asset market eqlbm



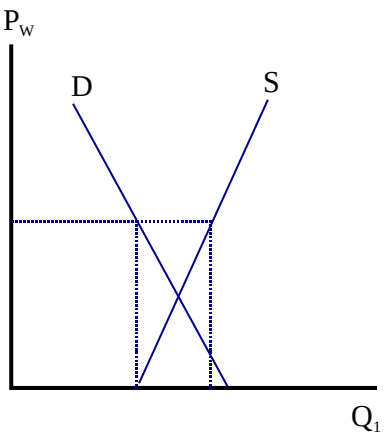
5.1 Foreign exchange market



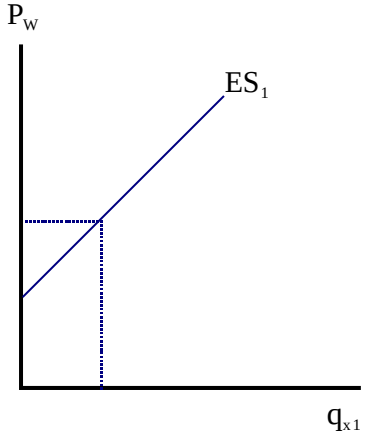
5.2 Modeling exchange rate changes on trade

Good priced in lead (international reserve) currency terms, P_W

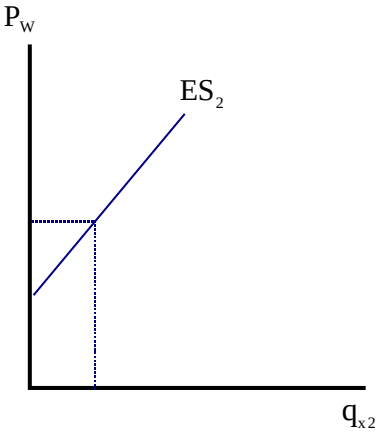
Domestic market of lead exporter



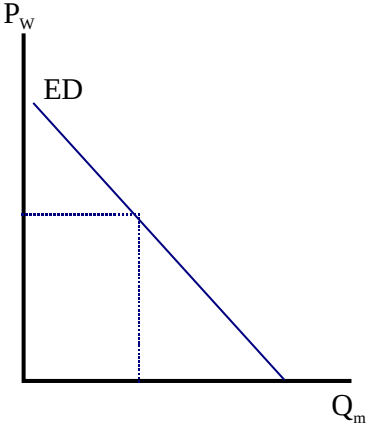
Trade position of lead exporter



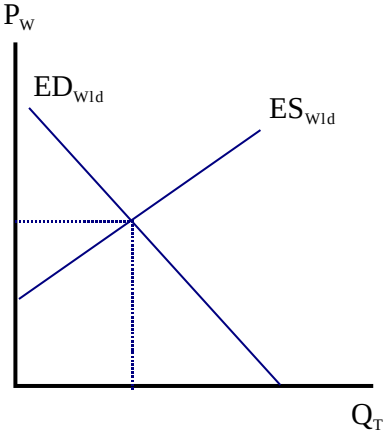
Trade position of exporter 2



Trade position of importer



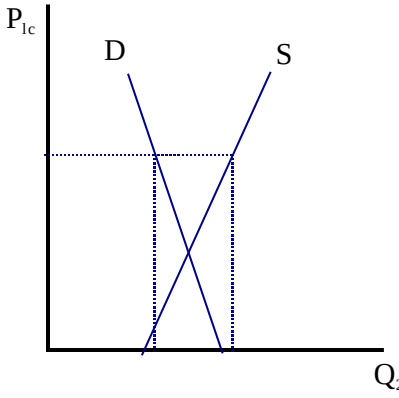
World market



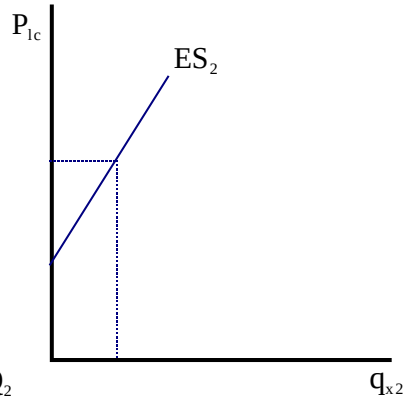
Good priced in local currency terms, P_{lc}

Market situation from the perspective of exporter 2

Domestic mkt of exporter 2

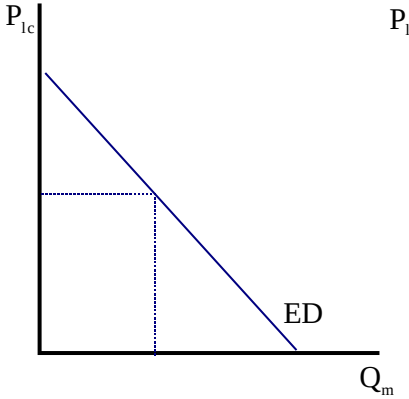


Trade position of exporter 2 (ES_2)

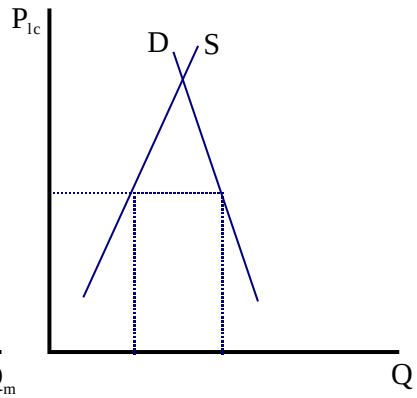


Market situation from the perspective of importer

Trade position of importer (ED)



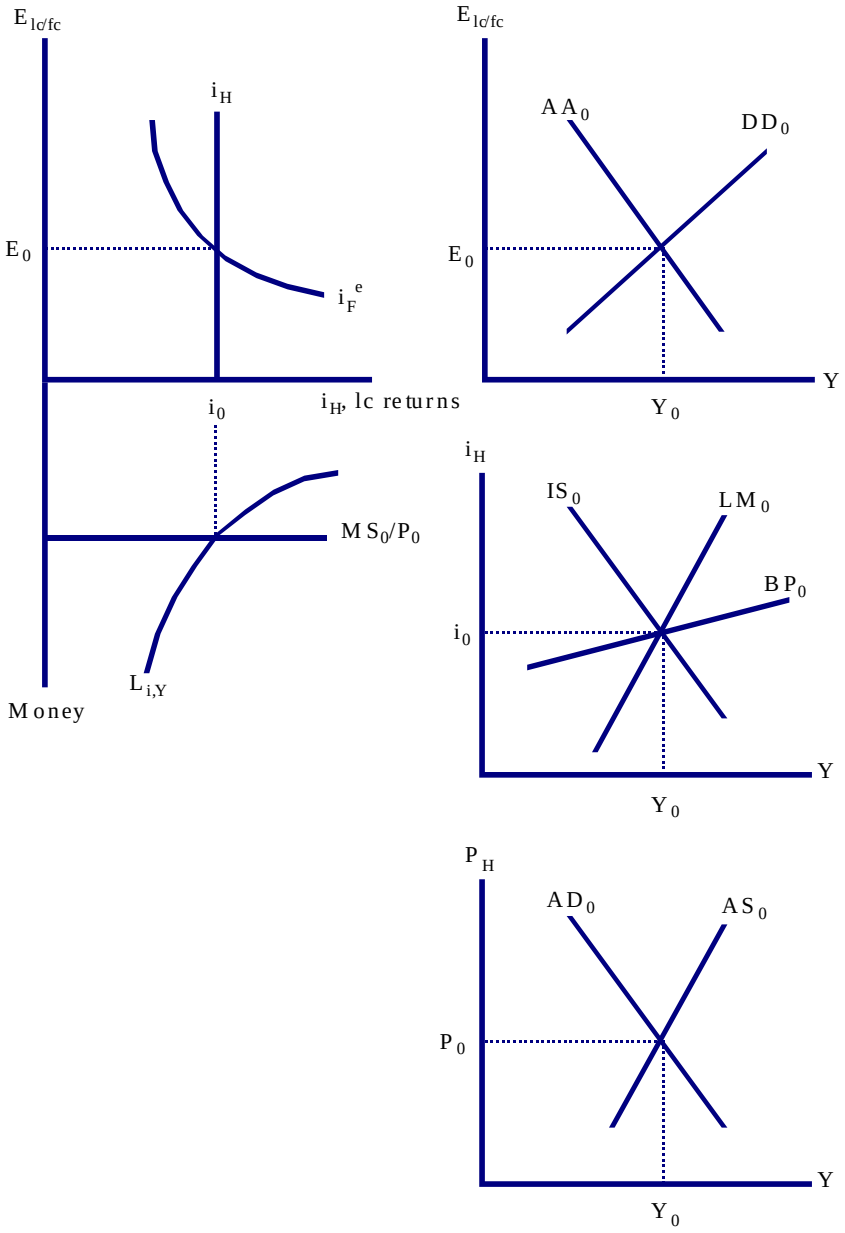
Domestic mkt of importer



Concept	Cause-effect relationship	Issue(s)
6. General equilibrium:		
6.1 Goods market equilibrium: $Y = C(Y) + I(i) + G + BOT(E \cdot P_F/P_H; Y)$ $AD = C(Y) + I(i) + G + E \cdot P_F/P_H = AS$	Two relationships of interest: i, Y and E, Y. ΔIS: anything causing ↑Y (holding $i = i_0$) ΔDD: anything causing ↑Y (holding $E = E_0$)	IS curve: all combos of i, Y in which goods mkt is in eqlbm. DD curve: all combos of E, Y in which goods mkt is in eqlbm.
6.2 BOP equilibrium: $BOP = BOT(E \cdot P_F/P_H; Y) = K\text{-}in(i)$	Interest in the i, Y relationship. ΔBP: anything causing ↑Y (holding $i = i_0$) The flatter is BP curve the more mobile is capital.	BP curve: all combos of i, Y in which BOP is in eqlbm. Slope of BP curve relates to the degree of K mobility.
6.3 Money – asset market equilibrium: $[MS/P] = [MD/P] = L_{i,Y}$	Two relationsships of interest: i, Y and E, Y. ΔLM: anything causing ↑Y (holding $i = i_0$) ΔAA: anything causing ↑Y (holding $E = E_0$)	LM curve: all combos of i, Y in which money mkt is in eqlbm. AA curve: all combos of E, Y in which money mkt is in eqlbm.
6.3.1 Money – asset market confirms covered interest parity E*, i_0 in both asset market and money market	ΔMS/P: ↑MS/P → ↓i, ↑E ΔMD/P: ↑MD/P → ↑E, ↓i	Changes in MS or MD affect real economy only if P are slow to change. Dynamic effect when P start to change.
6.3.2 Fisher effect: effect of ΔP $i_{Real} = i_{Nominal} - P_H$	P, i-rate relationship; Δ in i-rate follow Δ P to keep real rates same: $\uparrow P_H \rightarrow \uparrow i_H$	Investors are interested in real interest rates
6.3.3 Overshooting hypothesis: ΔP and Δexpectations on E^e, P^e and $[i_F]^e$	↑P – if it affects expectations – can result in the following causal effect → $\uparrow P^e \rightarrow \uparrow E^e \rightarrow \uparrow [i_F]^e$ (shift up in $[i_F]^e$ curve)	KOM text: effect of overshooting can move E away from PPP.
6.4 Changes in general equilbrium IS-LM-BP curves AA-DD curves $MS/P = L_{i,Y}$ and i_H-$[i_F]^e$ eqlbm	Allow some variable to change and their effect through system Δi,Y and ΔE,Y	Understand the changes as they relate to the type of exchange rate regime and the degree of capital mobility.
7. Fiscal and monetary policy		
7.1 Fiscal policy (FP) G, T, (G-T) and debt	ΔG → Δ IS → Δi,Y ΔG → Δ DD → ΔE,Y	The degree to which Y changes depends on how much i, E change.
7.1.1 Effectiveness of FP Use of the IS-LM-BP framework, AA-DD, and $MS/P = L_{i,Y}$ and i_H-$[i_F]^e$ eqlbm	ΔG, ΔY relationship depends on how i, E are affected; how BP curve is affected and what central bank might do (AA, LM curves).	Depends on exchange regime and degree of capital mobility. It also depends on how fast prices change.
7.1.2 Crowding out effect Governments compete for loanable funds with private sector	↑ G → ↑ i → ↓ I The ↑ G → ↑ Y is offset by ↓ I → ↓ Y	If K-inflows are limited and domestic savings are low, then loanable funds for the private sector become scarcer.

7.2 Monetary policy (MP) MS, i-rate, bank reserves, central bank reserves (R), open market operations, cost of borrowing	ΔMS, ΔY relationship depends on how i, E are affected; how BP, IS, and DD curves are affected.	Depends on exchange regime and degree of capital mobility. It also depends on how fast prices change.
7.2.1 MP and fixed exchange rate regime Advantages and disadvantages of a fix	Fixed $E_{lc/fc}$ at E_0 implies $\Delta E = 0$, then $\Delta P_H = \Delta P_F$ and $i_H = [i_F]^e + \Delta E = 0$; central bank must use MP to keep E at E_0	There are various types of fixed exchange regime. The stricter is the fix, the more these conditions must hold.
7.2.2 MP and flexible exchange regimes Central bank independence	Central bank targets either MS growth or inflation; inflation targeting came about from central bank's ability to control inflation	When E is flexible MP is more effective and central banks have more independence.
7.2.3 Trilemma or impossible trinity	A country cannot have a fixed E, free movement of K and independent central bank all at the same time.	A choice of two is possible or some trade-off of the three.
7.2.4 Inflation and unemployment Inflation targeting as a means to keep Y at Y_n and u at u_n at low, stable inflation	Phillips curve relationship of low inflation, high unemployment has broken down	Low unemployment and low or deflation (high rates of employment without upward wage pressure)
7.2.5 Unorthodox monetary policy Quantitative easing and negative i-rates	Low inflation, deflation → ↓ domestic demand → ↓ Y	Traditional MP unable to work to ↑ AD; QE and negative i-rates serve to add liquidity and spending
8. Aggregate demand and supply:		
8.1 AD, AS and relationship with price AD: downward sloping in P + - + + + + + - - Y(M/P; C(Y), I(i,Y), G, BOT(E·P_F/P_H;Y) AS: upward sloping in P AS = g(P, P^e …)	P, Y relationship: AD: ↑P_H → ↓M/P, ↓BOT→ ↓Y AS: ↑ Y → ↑ P and ↑ P^e → ↑P (one for one relationship) Process: ↑ Y → ↑ N (employment); ↑ N → ↓ u (unemployment); ↓ u → ↑ W (wage); ↑ W → ↑ P AD = AS = P* = P^e	AD here includes the effect of the money market on goods to ensure money market changes effect on goods mkt is taken into account. AS is linked to the labor market; Y_n is the natural rate of output and N* is the optimal employment level, when unemployment is at its natural rate, u_n. At Y_n, P = P* = P^e
8.2 Determination of P (inflation, π) Changes in AD Changes in AS	A Δ factor affecting AD → shift in AD; ΔP is movement along AD curve AS shifts: Δ productivity and Δ P^e; ΔP is movement along AS curve ↑P^e → ↑W; ↑W → ↑costs → ↑P by firm and general prices, (inflation, π)	Changes in AD and AS affect rate of inflation. Changes in prices can result in changes in expectations and changes in expectations can result in changes in prices.
8.3 Use of AD-AS to show ΔP in general equilibrium	Link between ΔP and IS-LM-BP; AA-DD; and MS/P=$L_{i,Y}$	Add AD-AS framework to IS-LM-BP; AA-DD and MS/P = $L_{i,Y}$ and i_H-$[i_F]^e$

6.0 – 8.3 General equilibrium: AA-DD, IS-LM-BP and asset mkt-money market



Concept	Cause-effect relationship	Issue(s)
9. Alternative exchange regimes: optimal currency area and monetary union		
9.1 Range of fix/flexible regimes	Recall the implications of a fix/flexible and the advantages and disadvantages	
9.2 Optimal currency area Economic criteria for an optimal currency area	• Free trade in goods and services • Capital/labor markets are integrated, flexible and mobile • No asymmetric shocks • Fiscal stabilization	The theory is not precise on the goodness of any type of exchange regime.
9.3 Monetary union	The application of the optimal currency criteria to real-world situations is not straightforward. Among nation states there is much political integration that is necessary: a supranational central bank, constraints over FP, mutualization of debt.	The euro area is an example of proceeding with economic integration before completing the political integration.