

Open Economy Macro: Course Summary

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1, International prices

- ▶ Start: Goods market and the law of one price (LOP)
 - ▶ Identical goods share the same price
- ▶ Generalizing to the aggregate level: Purchasing power parity (PPP)
 - ▶ Absolute PPP: domestic price level is equal to the foreign price level when converted to domestic currency $P = SP^f$
 - ▶ Relative PPP: the real exchange rate $Q = SP^f/P$ is constant; domestic inflation is equal to the sum of foreign inflation and rate of exchange rate depreciation of the domestic currency $\pi = \pi^f + \Delta s$
- ▶ Financial market prices: uncovered and covered interest rate parity
 - ▶ UIP: risk not covered
 - ▶ CIP: risk covered

2. Exchange rate determination

- ▶ Flex e-rates: Monetary model of s-determination
 - ▶ Displays classical features of the economy; flex prices, absolute PPP, classical dichotomy
- ▶ Fixed e-rates: monetary model of the balance of payment
- ▶ IS-LM model
 - ▶ Keynesian model of income determination; handy for policy thought experiments
 - ▶ Liquidity trap: liquidity effect of monetary policy vanishes; Pigou effect, fiscal policy
 - ▶ Financial market 'shocks', use fixed interest rate rule (money endogenous); goods market 'shocks', use money supply rule (interest rate endogenous)
- ▶ IS-LM of open economies: Mundell-Flemming model
 - ▶ Policy effectiveness: flex e-rates and monetary policy; fixed e-rates and fiscal policy
 - ▶ Capital mobility!

3. Overshooting á la Dornbusch

- ▶ Explaining huge volatility of nominal e-rates
 - ▶ Dornbusch 1976 model; asymmetric price adjustment at the core of the analysis; saddle path dynamics (jump vs state variable)
 - ▶ Long-run properties very classical: full price flexibility, classical dichotomy
 - ▶ Short-run properties like in the Mundell-Flemming model: price level fixed at the time of the announcement of a permanent increase in the money supply

4. Interaction between financial and real side of the economy

- ▶ Portfolio balance (PB) approach
 - ▶ Portfolio shares of different assets; domestic money and bonds as well as foreign bonds (assets)
 - ▶ Expected return of an asset raises its portfolio share and (implicitly) its riskiness reduces the share
 - ▶ Current account adjustment at the core of especially the long-run adjustment of the economy; interaction between the financial and real side of the economy explains the nature of the long-run equilibrium
- ▶ Currency substitution approach
 - ▶ Closely related to PB approach
 - ▶ Portfolio of domestic and foreign currency; e-rate the critical price determining the portfolio shares; real side of the economy consists of non-tradeable and tradeable sector, where the non-tradeable sector is in continuous equilibrium (relative price adjustment!); current account adjustment critical; “overshooting” (e-rate vs domestic P)

5. Uncertainty: Rational expectations (RE) and news

- ▶ RE = Model consistent expectations
 - ▶ Forecast errors: RE imposes heavy restrictions on forecast error - non-predictability given available info → unbiasedness
 - ▶ Efficient market hypothesis: RE does not force us to stick to the random walk model of an asset price → forecast error of an asset price tightly related to the forecast error of the fundamentals
- ▶ 'News': Do they explain the huge volatility of flex e-rates?
 - ▶ RE context: most like not
 - ▶ 'News shocks' have to be implausibly large and persistent to explain high and persistent e-rate volatility

7. Risk premium

- ▶ Analysis in the context of forward markets for foreign exchange
- ▶ Simple models of the determination of the investor's equilibrium
 - ▶ Expected consumption - std of consumption indifference graphs
 - ▶ Expected utility maximizer: constraint dictates feasible forward positions, given initial wealth
 - ▶ Quadratic utility maximizer gives some support for the indifference curve analysis
- ▶ Relation to PB approach: need to generalize to multi-asset environment → complexity increases a lot
- ▶ Empirics: risk premia are, overall, too small and not too time-varying to be able to explain e-rate volatilities → CIP vs UIP!