Flexible Exchange Rates

Mundell-Fleming Floating
Floating

• Assume that exchange rates float freely
  
  – Authorities commit to not using international reserves
    
    • Many inflation targeters float freely in tranquil times
    
    • Also large economies (US/EMU/Japan)
  
  – ORS = 0 in “clean float”

  – Implicit: Money supply stays otherwise fixed
    
    • Economies that float must have some monetary regime
Static Exchange Rate Expectations

• Continue to assume exchange rate floats freely but is *not* expected to change (!)
  – Reasonable empirically (Meese-Rogoff) and (perhaps) theoretically if most fundamental shocks are noise (news)
  – Similar to other asset markets (expected capital gains imply inflows which change prices)
Tangent

• Can add in expected exchange rate change
• “Uncovered Interest Parity” states
  \[ i = i^* - E(\%\Delta e) \] – a speculative condition
• Empirically, UIP works terribly
  – Usually, high interest rate countries have *appreciating* rather than *depreciating* currencies
  – Hence the “carry trade”: borrow in low-interest country, invest in high-interest country
  – Much risk though
• Tangent\(^2\): “Covered Interest Parity”
  \[ i = i^* - (Fwd Prem) \] – arbitrage condition, works well
Mundell-Fleming Floating

• Looks similar graphically to case of fixed exchange rates:
  – But money (and international reserves) exogenous, not exchange rate
Formally

\[ \frac{M_s}{P} = L(i, Y) \]
\[ M_s = \mu(IR + CBC) \]
- M (and others) exogenous

BoP
\[ \frac{c}{acc} + \frac{k}{acc} + ORS = 0 \]

LM
\[ Y = A(G, i, Y) + NX(\epsilon, Y, Y^*) \]
\[ A = \frac{c_0 + cTr + I_0 - bi + G_0}{1 - c(1-t)} \]
- “domestic absorption”
- \( Y^* \) exogenous
- \( \epsilon \) (and \( \epsilon \)) endogenous

IS
\[ Y_e \]
Real Exchange Rate Flexibility and Real Economy (IS)

• Recall: $NX = NX(\varepsilon,Y^*,Y)$
  
  – *Nominal* depreciation here is assumed to be a *real* depreciation (prices fixed in short run, or at least don’t respond fully to depreciation)

  • Reasonable empirically (Mussa), for low-inflation countries

  – Depreciation raises net exports, shifts IS out/right
Real Exchange Rate Flexibility and Real Economy (IS)

- Depreciation raises net exports, shifts IS out/right
Monetary/Financial Markets (LM)

• Since international reserves are now *exogenous*, central bank regains control of monetary base and money (both now exogenous)
  – Hence monetary policy is potent (though central bank gives up control of exchange rate, satisfying Mundell’s Incompatible Trinity)
  – Output determined at intersection of LM curve with BoP equilibrium $i=i^*$
  – Exchange rate adjusts and shifts IS curve (through current account) endogenously
Monetary Policy (Financial Shocks)

• Highly potent

• Decline in interest rates leads to capital outflows, hence depreciation ($e\downarrow$) which is a real depreciation in short run ($\varepsilon\downarrow$)

• Net exports stimulated ($\text{NX}\uparrow$), IS shifts out
Fiscal Policy (Real Shock)

- Impotent; changes composition of output
- Anything that raises interest rates (e.g., fiscal expansion) attracts capital inflows, appreciates nominal and real exchange rates ($e, \varepsilon \uparrow$), reduces net exports ($NX \downarrow$), reverses shift of IS
  - “Twin” deficits;
  - “Dutch disease” (discover exportable)
Graphically
Key Takeaways

• Floating exchange rates make monetary policy effective in short run
• Real shocks can have surprising/small effects if exchange rate changes