Macroeconomics Theory of the Open Economy 2

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Outline: Unit IV, Section OE 3

I. Foreign currency exchange market (FX)
II. Three panel diagram
    A. Government budget deficits
    B. Capital flight

V. Foreign-Currency Exchange Market

Assume NCO = NX > 0

[e = 1 € / USD]

<u>Supply</u>

S: NCO

- If a US resident buys a $15K worth of German bonds
  - ⇒Exchange 15K USD for $15K €
  - ⇒Supply 15K USD in FX market

FX Market

<u>Demand</u>

D: NX

- If a German resident buys a $15K US car

  => Exchange 15K€ for 15K USD

  => Demand 15K USD in FX market

- NX = NX(E)
  - If E increases =>
    - US G&S are relatively more expensive =>
    - Foreign G&S are relatively cheaper =>

G7 interventions in the FX market

- March 2011 Fukushima nuclear meltdown
  - Japanese investors need financial capital to rebuild at home
  - For Japan, massive inflows of capital =>
  - NCO shifts in =>
  - e_{yen} or E_{yen} appreciates => NX decreases

- G7 Central banks intervene in FX market
  - Members:France, Germany, Italy, UK, Japan, US, Canada
  - Central banks sell holdings of yen, purchase other currencies
  - First international coordinated FX intervention since 2000
  - "G7 rallies behind Japan in bid to curb soaring yen" Guardian, 03-18-11

USD per 1 JPY

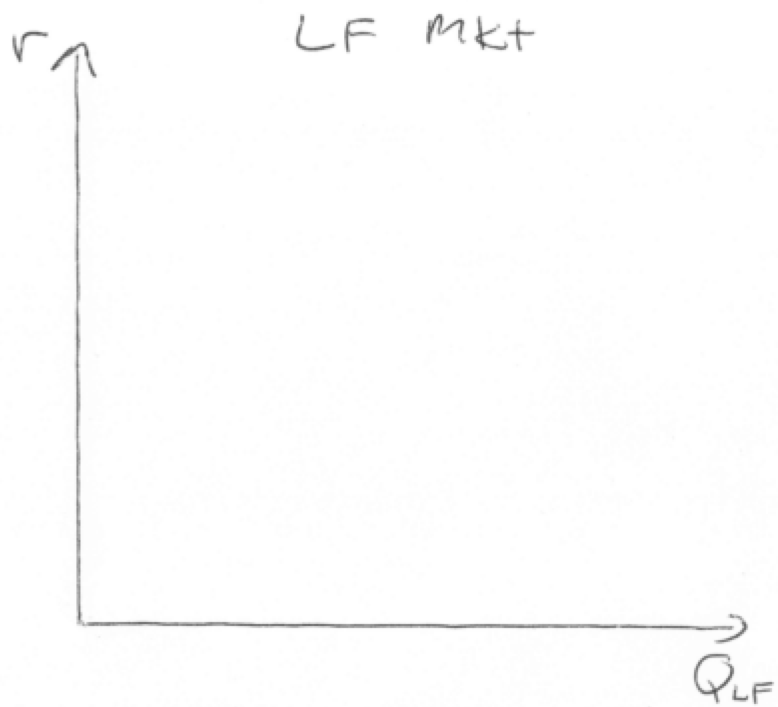
28 Jan 2011 00:00 UTC - 21 Apr 2011 00:00 UTC

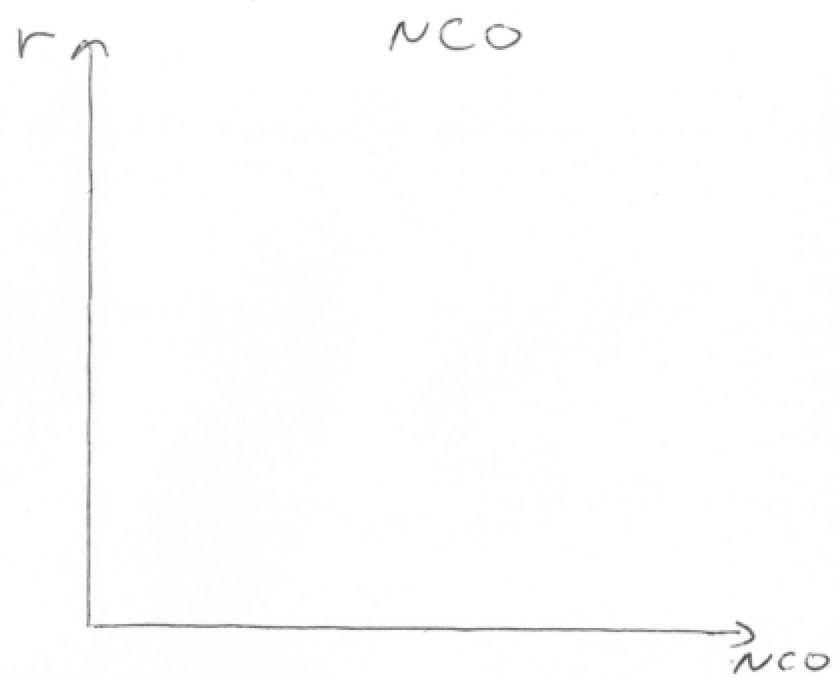
JPY/USD close:**0.01221** low:**0.01172** high:**0.01275**

II. Three panel diagram

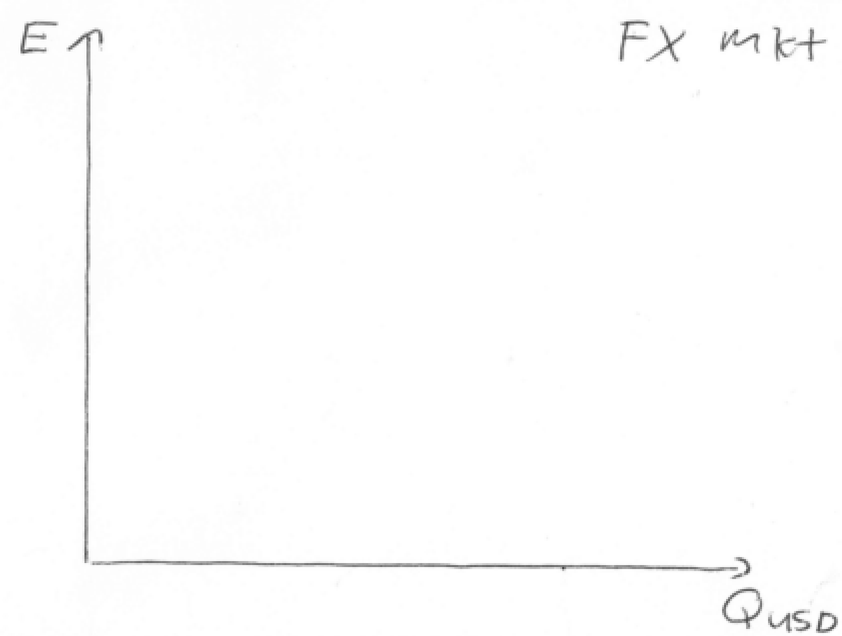
- Trifecta model!
- Two markets are in simultaneous equilibrium
  - LF market: r adjusts to equilibrate S&D
  - FX market: E adjusts to equilibrate S&D
- Net Capital Outflow links both markets

Three panel diagram template posted under PPT Slides -> unit IV





Variable	↑/↓/No Change
r	
S^{PR}	
S^{PUB}	
S^{Nat}	
I	
NCO	
E	
X	
IM	
NX	



II.A. Government Budget Deficits

Summary of Macroeconomics Effects

Determine qualitatively what happens to the following variables:

- LF market diagram
  - $r\uparrow$: Supply of loanable funds shifts in
  - $S^{PR}(r)\uparrow$: Higher return to saving
  - $S^{PUB}\downarrow$: Assumed higher budget deficits
  - $S\downarrow$: Q_{LF} lower, see diagram
  - $I(r)\downarrow$: Cost of borrowing increases
    - "Crowding out": Govt borrowing lowers private investment

Summary of Macroeconomics Effects

Determine qualitatively what happens to the following variables:

- NCO diagram
  - r ↑ => more capital inflow into the US => NCO ↓
  - NCO ↓ => Supply of USD in FX market decreases

Summary of Macroeconomics Effects

Determine qualitatively what happens to the following variables:

- FX market diagram
  - E ↑: S curve shifts inward
  - X ↓: US goods relatively more expensive
  - IM ↑: Foreign goods relatively cheaper
  - NX ↓: X – IM

US Economic History

Overview:

1. Higher budget deficits => r increase => crowds out private investment
2. As r increases => More capital flows into the US
3. In the FX market, Supply of USD decreases
4. E increases => NX decreases

- Twin deficits = Gvt deficits and trade deficits are related
  - 1980-1986 US experienced 2.7% to 5% (of GDP) increase in government deficits
  - 1980-1986 US experienced 0% to 3.5% (of GDP) increase in trade deficits

II.B. Capital Flight

Capital flight = A large and sudden reduction in the demand for assets located in a given country.

- Mexico 1994 Tequila crisis
  - Social unrest, assassination of presidential candidate, financial crisis
  - NCO_{mex} increases
- East Asia Crisis 1997/98
  - Late 80s, early 90s. Influx of foreign capital (FPI) as Asian miracles take off with growth rates of 8-12% => credit bubble
  - US raises interest rates => NCO of Asia increases, starting in Thailand, spreading to other countries
  - Financial crisis=> NCO out of Asia increases further

Capital Flight

Summary of Macroeconomics Effects

Determine qualitatively what happens to the following variables in Mexico:

- $r \uparrow$: Demand of loanable funds shifts out
- $S^{PR}(r) \uparrow$: Higher return to saving
- S^{PUB} No change
- $S \uparrow$: Q_{LF} higher on diagram
- $I(r) \downarrow$: Cost of borrowing increases
- $NCO \uparrow$: Two effects
  - NCO curve shifts out => More capital outflow from Mexico
  - $r \uparrow$ => More capital inflow into Mexico

Summary of Macroeconomics Effects

Determine qualitatively what happens to the following variables in Mexico:

- NCO ↑ => Supply of pesos in FX market increases
- E ↓ : S curve shifts outwards
- X ↑ : Mexican goods relatively cheaper
- IM ↓ : Foreign goods relatively more expensive
- NX ↑ : X – IM

- Note: Higher r reflects additional risk => Price of bonds decrease