Lecture 6-7

- The money market and the exchange rate
- The aggregate price level and the exchange rate
- Purchasing power parity
- Empirical issues on the effect of Δe on X - M

Interest Rate and Exchange Rate

- Money supply:
  - Domestic credit expansion (reserve ratio, interbank loan rate & discount rate, printing notes and coins)
  - ΔR = net $\uparrow$ in US foreign reserves - net $\uparrow$ in foreign reserves in US = - Category IV = BOP_2
- Money demand:
  - Financing transactions, liquidity, speculation
- Interest rate and exchange rate:
  - Depreciation $\rightarrow$ a lower return at any given r $\rightarrow$ attracts less foreign funds $\rightarrow$ interest rate increases
  - Interest rate increases $\rightarrow$ attracts more foreign funds $\rightarrow$ appreciation (or R and hence M^s $\uparrow$)

Inflation Rate and Exchange Rate

- The consumer price index (CPI):
  - CPI is measured by pricing the items in a typical household's consumption basket
- Inflation rate and exchange rate:
  - Inflation: a rise in CPI (P)
  - Inflation (P ↑) → exports ↓ and imports ↑ → depreciation
  - Depreciation → P/e ↓ at any given P → exports ↑ and imports ↓ → AE ↑ → P ↑ (inflation)
  - Self correction mechanism doesn't work for inflation

Purchasing Power Parity (PPP)

- The law of one price:
  - A good should have the same price worldwide when measured in the same currency
- Absolute PPP:
  - $PPP_{absolute} = P_{US} / P_{UK} \sim e_{\$/£}$ (equal $\rightarrow$ PPP holds)
  - Fails (transportation costs, trade barriers, etc.)
- Relative PPP:
  - Δ exchange rate $\sim \Delta$ CPI (depreciates if P$\uparrow$ faster)
  - Assumption: the base year e is the equilibrium rate
  - $PPP_{\$/£relative1995} = e_{\$/£1990} (P_{US1995} / P_{UK1995}) \sim e_{\$/£1995}$
- Real exchange rate: (deflate the currencies)
  - $RER_{\$/£1995} = (\$_{1995} / P_{US1995}) / (£_{1995} / P_{UK1995})$
    $= e_{\$/£1995} (P_{UK1995} / P_{US1995})$

Empirical Issues on e and X - M

- J-Curve:
  - As e depreciates, pre-arranged payments increase right away while X - M increases only over time so that C/A worsens in the SR before it ultimately improves in the LR
- Exchange rate passthrough:
  - Exporters do not adjust their sales prices to offset fully changes in the exchange rate to maintain a given sales quantity so that exchange rate change has an effect on foreign consumers' prices
- Exchange rate overshooting:
  - Price adjustments are slower than adjustments in the financial market