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 $\Delta e$ on $X - M$
Interest Rate and Exchange Rate

- **Money supply:**
  - Domestic credit expansion (reserve ratio, interbank loan rate & discount rate, printing notes and coins)
  - $\Delta R = \text{net } \uparrow \text{ in US foreign reserves} - \text{net } \uparrow \text{ in foreign reserves in US} = - \text{Category IV} = \text{BOP}_2$

- **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:
  - $\text{PPP}_{\text{absolute}} = P_{\text{US}}/P_{\text{UK}} \sim e_{\$/£}$ (equal $\rightarrow$ PPP holds)
  - Fails (transportation costs, trade barriers, etc.)

- Relative PPP:
  - $\Delta$ exchange rate $\sim \Delta$ CPI (depreciates if $P$ faster)
  - Assumption: the base year $e$ is the equilibrium rate
  - $\text{PPP}_{\$/£_{\text{relative}1995}} = e_{\$/£1990}(P_{\text{US1995}}/P_{\text{UK1995}}) \sim e_{\$/£1995}$

- Real exchange rate: (deflate the currencies)
  - $e_{\$/£1995}(P_{\text{UK1995}}/P_{\text{US1995}})$
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.