BFC3240

International Finance Notes

What is International Finance?

Most currencies quoted against the dollar

- 'so many units per dollar'

Fisher Equation

- $(1 + i) = (1 + r)(1 + \pi) = 1 + r + \pi + r\pi$
  - i: nominal interest rate | r: real interest rate | π: expected inflation rate

Deflation

Bad for 2 reasons:

- Consumers postpone consumption → economic repercussions
- Real value of debt rises

Interventions

- Quantitative easing (buying long-term government bonds)
- Set negative nominal interest rates
- Helicopter drop

Foreign Exchange Rates and Quotations

- Foreign exchange rate: price of one currency expressed in terms of another
- Foreign exchange quote: statement of willingness to buy/sell at an announced rate

Exchange involves 2 currencies:

- Base (unit) currency
- Price (quote) currency
  - Base/Price
    - Number of 'price' required for 1 'base'
      - 1 base gives you x price

This unit tends to be reversed:
CUR1/CUR2 =
Number of CUR1 per unit of CUR2

E.g.
£5,500 : $\$x$ £1 : $1.62
$\frac{5500}{1} = \frac{x}{1.62}$ $x = 8{,}910$

- Direct quote: home currency is price currency (home per unit of foreign)
- Indirect quote: home currency is base currency (foreign per unit of home)

Cross Rates: some pairs inactively traded, use third currency to determine exchange rate

- Multiply: if finding A/C from A/B and B/C: A/B*B/C = A/C. Cancel out middle

Forward Quotations

- Cash rates: maturity <1 year
- Swap rates: maturity >1 year

Appreciation/Depreciation

- Rule of thumb: increase/decrease of a rate always corresponds to appreciation/depreciation of base currency
  - If value of currency rises relative to base, it has depreciated

The Balance of Payments and Exchange Rates

The Balance of Payments
Measures international transactions between residents of a country and foreign residents
BOP statement is a statement of CFs over a period of time

- Debit: spending foreign exchange (importing goods/services)
- Credit: earning foreign exchange (exporting goods/services)

Accounts

- Current Account: economic transactions relating to trade
  - Goods trade: export/import of goods
  - Services trade: export/import of services
  - Income: current income from investments
  - Current transfers: one-sided transactions (e.g. charity)
- Capital Account: capital transfers and nonfinancial asset related transactions
- Financial Account: change of ownership of assets or liabilities
  - Direct investment: purchase of assets for ownership purposes
  - Portfolio investment: purchase of debt/equity for investing purposes (<10%)
  - Net financial derivatives: purchase/sale of derivatives
  - Other asset investment
- Net Errors and Omissions Account – ensures BOP balances
- Official Reserves Account – total reserves held by monetary authority

Current Account surplus & Capital Account surplus puts upward pressure on a currency (China twin surplus example)

BOP Impacts on Key Macroeconomic Rates
BOP and Exchange Rates

$(X-M)$	$+$	$(CI-CO)$	$+$	$(FI-FO)$	$+$	FXB	$=$	BOP
Current Account Balance		Capital Account Balance		Financial Account Balance		Reserve Balance		Balance of Payments

- Fixed exchange rate countries: government ensures BOP near zero
- Floating exchange rate countries: government has no responsibility
- Managed floats: government has no responsibility, but often chooses to take action

BOP and Interest Rates

- Low real interest rates → outflow of capital (seeking higher rates elsewhere)

BOP and Inflation

- Imports can lower a country's inflation rate
- Foreign competition replaces domestic competition, to maintain lower inflation rate

Capital Mobility
The degree to which capital moves freely across borders

Capital Controls
Any restriction that limits/alters the rate/direction of capital movement in/out of a country

Capital Flights
The rapid outflow of capital in opposition to / fear of domestic political and economic conditions – capital flows into other countries

Foreign Exchange Rate Determination and Intervention

Exchange Rate Determination

3 major approaches

Parity Conditions Approach	Balance of Payments Approach	Monetary Approach and Asset Market Approach
1. Law of one price 2. Absolute Purchasing Power Parity 3. Relative Purchasing Power Parity 4. Interest Rate Parity	1. Current account balances 2. Portfolio investment 3. Foreign direct investment 4. Exchange rate regimes 5. Official monetary reserves	1. Monetary approach: supply and demand for national monetary stocks (only) 2. Asset market approach: supply and demand for financial assets of a wide variety including bonds

Financial markets: is there a well-developed and liquid money and capital market in that currency?
Banking system: is there a sound and secure banking system in place to support currency trading?

Parity Conditions Approach

- Oldest and most widely accepted theory
- Most theories have elements of PPP in them
- PPP calculations/forecasts plagued with structural differences across countries and significant data challenges in estimation

Balance of Payments Approach

- Second most utilised approach
- Proposes that equilibrium exchange rate is found when currency flows in current and financial accounts match up (inflow in CA is outflow in FA, vice versa)
- Appealing as data readily available
- Critique is that theory does not consider stocks of money or financial assets

Monetary Approach and Asset Market Approach

- Monetary approach: exchange rates determined by national monetary stocks (supply/demand, expected future levels and rates of growth) [bonds not considered]
- Asset market approach: exchange rates determined by wide variety of financial assets (supply/demand)
  - Changes in monetary/fiscal policy alter expected returns and perceived relative risks of financial assets, which in turn alters exchange rates
  - Assumes that whether foreigners are willing to hold claims in monetary forms depends on investment considerations (drivers):
    - Developed countries: Relative real interest rates | Prospects for economic growth
    - Emerging countries: Capital market liquidity | A country's economic and social infrastructure | Political stability | Corporate governance las and practices | Contagion (spread of a crisis within a region) | Speculation

Intervention Methods

Direct Intervention

- Active buying/selling of domestic currency against foreign (by central bank)
  - To ↑ value – buy own currency | To ↓ value – sell own currency
- If bank intervention unsuccessful, other central banks may assist

Indirect Intervention

- Alteration of economic/financial fundamentals (drivers of capital flow in and out of specific currencies)
  - ↑ real rates to strengthen currency | ↓ real rates to weaken currency

Capital Controls

- Restriction of access to foreign currency by limiting exchange of domestic for foreign