

# Discussion Handout 7: Chapter 18 & 19 Open Economies

March 27, 2020

## I. Chapter 18 - Open Economy Macro Basics

Big Questions: What kind of interactions do we have with other countries? What kind of government policies do we use to facilitate/regulate these interactions?

Open Economy - an economy that interacts with other economies

Flow of Goods Key Terms:

- Exports - domestically produced goods that are sold abroad
- Imports - foreign-made goods that are sold domestically
- Net exports = Exports - Imports
- Trade balance - same as net exports
- Trade Surplus/Deficit - when a country is a net exporter/importer
- Balanced Trade - when exports = imports

Flow of Financial Resources Key Terms:

- Net Capital Outflow - Purchase of foreign assets by domestic residents - Purchase of domestic assets by foreign residents
- Foreign Direct Investment - when an American company opens a company in another country
- Foreign Portfolio Investment - when an American buys foreign stock

### Equality of Net Exports and Net Capital Outflows:

In order for accounting identities to hold it must be that

$$\text{Net Capital Outflows} = \text{Net Exports}$$

### **National Savings in an Open Economy:**

In an open economy, national savings must equal domestic investment plus net capital outflow. As proof, recall our definition of GDP:

$$Y = C + I + G + NX$$

And National Savings (S):

$$S = Y - C - G$$

. Then rearranging our equation for GDP we get:

$$Y - C - G = I + NX$$

$$S = I + NX$$

Since Net Exports = Net Capital Outflow (NCO):

$$S = I + NCO$$

Previously, in our closed economy we said that  $S = I$ , since  $NX = NCO = 0$  in that case.

## Real and Nominal Exchange Rates:

- Nominal Exchange Rate - rate at which a person can trade currency of one country for the currency of another
- Appreciation/Depreciation - when a currency increases in value and you can now buy more/less of another currency with it
- Real Exchange Rate - rate at which a person can trade goods and services of one country for those of another. Key determinant of net exports.

$$\text{Real Exchange Rate} = \frac{\text{Nominal Exchange Rate} \times \text{Domestic Price}}{\text{Foreign Price}}$$

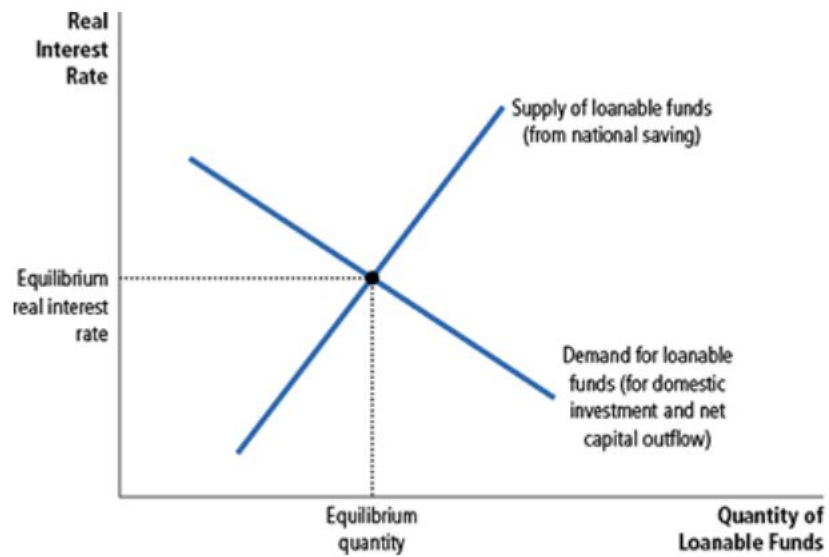
$$\text{Real Exchange Rate} = \frac{\text{Nominal Exchange} \times \text{Price Index Domestic}}{\text{Price Index Foreign}}$$

## Purchasing Power Parity:

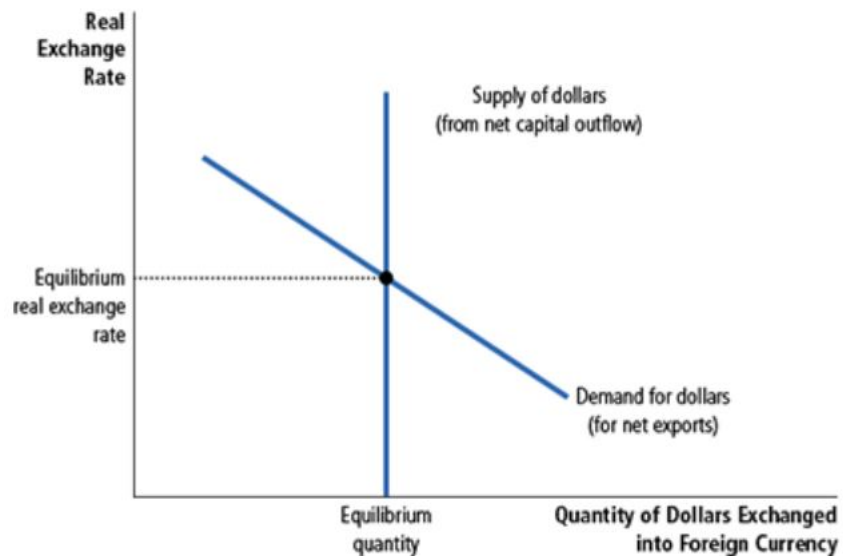
Simplest theory of exchange rates. States that a unit of any given currency should be able to buy the same quantity of goods (have the same real value) in all countries. Based on the law of one price - that assets that a good must sell for the same price in all locations otherwise people could arbitrage (take advantage of differences in price for the same item in different markets). This implies that the nominal exchange rate depends on the price levels in those countries. Does not always hold in practice because 1. not all goods are able to be sold, so arbitrage is limited and 2. even traded goods are not perfect substitutes between countries.

## II. Chapter 19 - A Macroeconomic Theory of the Open Economy

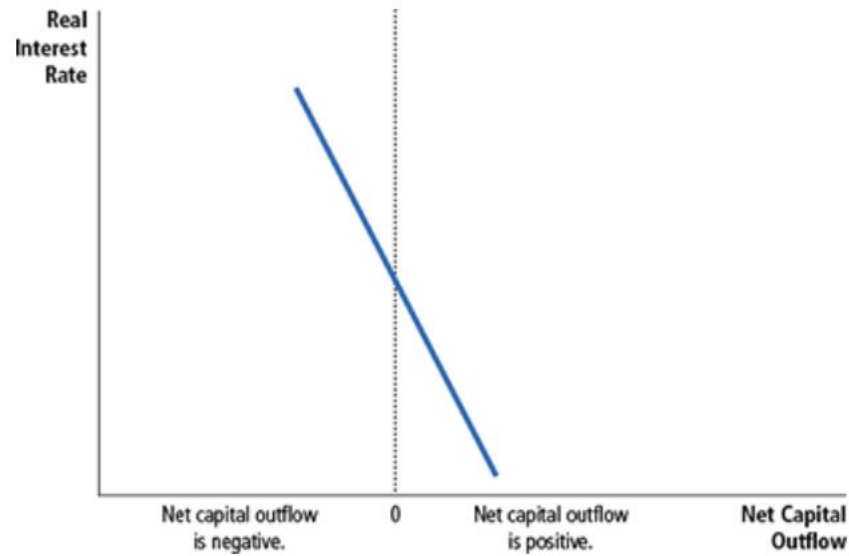
### Market for Loanable Funds:



### Market for Foreign Currency:



Relating the two markets :



**Policy Implications:** Review how budget deficits, trade policy, and capital flight shift these graphs (Section 19-3)