

# Exchange Rates

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# Types of exchange rates

- Exchange rate is the price of one currency in terms of another currency
- \$/Peso or Peso/\$ example Peso/\$, so a higher quotations means depreciation
- Yet for the euro, it is common to note \$/€~~€~~, so an increase of this value  $\varepsilon$  says that the euro is appreciating
- Exchange rates also exist between goods and their prices

# Exchange rate as a price relation

- $X$  beer/1 pack of cigarettes
- Price relations are the inverse of the exchange relation
- 3 beer/1 pack of cigarettes means that cigarettes cost three times more than one beer
- One can also say: 3 beer exchange for 1 pack of cigarettes in a barter
- Thus exchange rates are prices and are linked to the exchange ratios of goods

# Fixed and floating exchange rates

- Fixed exchange rate needs a “fixer”, usually the country’s central bank or ministry of finance
- When you fix price, you cannot control the quantity
- In order to fix the price (exchange rate) monetary authorities must intervene in the free market by buying and selling thus they change money stock as well

# Price Fixing

- When currency tends to depreciate, country must buy own currency with foreign exchange
- The intervention is limited by the foreign exchange reserves stock
- If the currency tends to appreciate, authorities must buy foreign currency which they can do without limit

# Limits to Price Fixing

- When authorities buy foreign exchange, they increase domestic money supply, they “import inflation”
- The available stock of reserves limits intervention when currency tends to depreciate
- Most currencies nowadays are “flexible” or rather they are under “managed floating”

# Currency Arrangements

- Fixing one monetary unit to another or a basket of other monies under some rule
- Gold standard: unit of domestic currency defined in gold
- Dollar standard: unit of domestic currency defined in dollar
- Basket: unit of local currency defined in a basket of other currency, e.g. x dollars + x euros

# Two basic types of currency arrangements

- Symmetric and asymmetric
- Symmetrical arrangements: authorities of both countries have to intervene
- Asymmetrical: one country fixes and must solely intervene
- Bretton Woods system was asymmetrical
- European Monetary System was symmetrical



# Determinants of exchange rates

- Supply and demand
- Supply and demand depend on current transaction needs, yields, and profit expectations
- Current needs: import and export of goods and services, interest payments
- Yield: currency investment
- Profit expectations: anticipation of changes

# Purchasing Power Parity (PPP)

- One basket of goods in one country must cost the same in the other country, the exchange rate equalizes the prices
- Problems: tradable and non-tradable, international capital movements, interest payments, expectations, political risk, intervention, restrictions
- Big Mac Indicator (The Economist)

# Efficiency and Inefficiencies of International Currency Markets

- Any buyer needs a seller
- Perfect or imperfect information
- Prices are always past prices
- Random walk (similar to stock market prices)
- Money, trade, politics, intervention, expectations etc. make it impossible to prognosticate exactly – like with any other market: trend-following, herding, speculative excesses

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