

Return from holding money is $-\pi$

Costs of inflation

Uncertainty/Planning (real returns?)

Menu Costs

Shoeleather costs

Helicopter drop

Short-run money nonneutrality

$$MV = PY$$

Explanation

Monetary Policy attempts to increase M and raise Y . But can't do this indefinitely.

Example with Trade

No free lunch

Current account deficits mean the country's *net foreign asset* position falls

Current account/capital account

Current account records trade in *Goods*

Capital account records money flows to purchase *Financial Assets*

For this analysis, ignore issues relating to exchange rates and simply assume all trade is in same currency.

E.g., home country gives 40 to foreigners for goods. Foreigners use that money to buy financial assets in domestic country. For domestic country, we then have Current Account of -40 and Capital Account of 40.

Balance of Payments:

Current Account plus Capital Account = Change in Foreign Reserves

In normal circumstances, change in reserves = 0 so:

Current Account + Capital Account = 0

Example of intervention:

U.S. gives China 50 when in runs Current Account Deficit. Chinese private investors use 40 to purchase U.S. financial assets. But Chinese central bank takes 10 and *they* invest it in U.S. (typically in risk-free Treasury bonds.)

Now the *balance of payments* in China is

Current Account =50

Capital Account=-40

Change in Foreign Reserves=10

Nominal Exchange Rates/Forex Market

e.g., 1 euro equals 2 dollars

$$e = 2$$

A low e means weak currency, and vice versa

Bilateral exchange rate: in what follows, assume just two countries in world.

Hardest macroeconomic variable to predict

Determined by supply and demand in foreign exchange (forex) market

Demand for domestic currency comes from foreigners: export demand and capital inflows (to purchase domestic financial assets like bonds)

Supply of domestic currency comes from domestic residents: import demand and capital outflows (to purchase foreign financial assets; e.g., Microsoft stock). Central bank can also raise supply by printing money.

Key point: a weak exchange rate makes domestic goods cheap

A weak exchange rate is good for exports

And it reduces import demand

So a low e improves the current account balance

As exchange rate weakens (i.e., e falls), foreign demand for domestic goods and assets rises.

Depreciation (fall in e)/Appreciation (rise in e)

Opposite for other country

This raises *demand* for domestic currency

As exchange rate strengthens (i.e., e rises), foreign goods seem cheap; domestic residents buy more imports and foreign assets. This raises supply of domestic currency in forex market.

What changes demand for a *given* value of e ?

Preferences/Better quality goods at home (rise in import demand, so demand curve shifts outwards)

Flight to Quality, as domestic residents invest their money in U.S. (causes capital outflows, which raises supply of domestic currency. Supply curve shifts outwards.)

Flexible Exchange Rates: determined by market forces, no intervention by monetary authority.

Fixed Exchange Rates:

Bank must keep e fixed or “pegged”

Why?

Stability

Discipline Device

Central Bank can always weaken exchange rate by printing money and selling it in forex market.