Date: 03.18.02

Fixed vs. Floating Exchange Rates

I. Both systems are used

See handout "Exchange Rate Arrangements"

There is clearly not a consensus as to what one regime is the best. 40 countries have floating rates, 44 have pegged (most are pegged to a single currency, some to a basket of currencies). Some are pegged to SDRs (=special drawing rights, officially defined basket of major currencies).

Managed Floating: rate is floating, but the central bank does intervene at times.

Currency Board: pegged exchange rate that is more "fixed", more likely to last, than just a regular pegged rate. Local currency 100% backed by foreign currency (often US dollars). This is forced non-sterilization: currency board is not permitted to sterilize, country therefore does not have control over domestic money supply. This system, if it follows these rules, provides for automatic adjustment, where dollars play a role much like the role of gold when there is a gold standard.

Crawling Peg or Crawling Band: systematically let peg change in a predictable and very slow way.

No Separate Legal Tender: A nation not using their own national currency.

II. What the Experts Recommend

-Milton Friedman: favors floating exchange rates, "let the market work."
-Robert Mundell: favors the gold standard

Brad Delong: points out important differences in Friedman's and Mundell's interpretation of what an exchange rate is.

Friedman: says "exchange rate is a price," and prices should be determined in the market.

Mundell: says "exchange rate is a promise," gov't promises a certain amount of value.

This distinction between prices and promises leads to different interpretations of what the optimal exchange rate regime should be.

III. Pros & Cons of Floating

A. Disruption When Rates Move (rates are very volatile)

Micro: price that is used by international traders is highly volatile. Uncertainty increases with volatility and this can reduce the amount of international trade.

Macro: movements in the exchange rate can imply massive movements (shifts) in the AD (aggregate demand) curve that create recessions and expansions.

E.g.: 1980s, the dollar appreciated by roughly 50% (1980-1985). This made US exports more expensive and contributed to the U.S. recession,

especially in the Midwest "rustbelt" where industries like cars and steel compete directly with imports.
Also, think about Debts vs. Assets from 03.13.2002 lecture.

B. Automatic Adjustment is Facilitated by Floating Exchange Rate
E.g.: Suppose a nation has more inflation than the rest of the world. Domestic prices increase, goods are pushed out of some markets because they are too expensive. To solve the problem without changing the exchange rate, need a recession severe enough to bring down inflation. Easier if there is a floating exchange rate. Changes in R are a much easier way to adjust all prices at once relative to the world (this avoids contractionary domestic policies).

-Floating rates permit independent monetary policies (not tied to keeping an exchange rate).

IV. Pros & Cons of Pegging

Fixed rates, if they succeed in remaining fixed, solve the problems of floating currencies. But Fixed Rates are NOT an option. All that can be done is to peg (but the peg can not be certain to last forever). Pegged rates may (and most often eventually will) fail.

Why do they fail?
See Figure 1. In the solid line situation of supply and demand, we see that the central bank is losing reserves when it pegs the exchange rate at R. But markets do move around, so they could just as easily be in the situation represented by the dashed lines, in which the central bank gains reserves. If a nation encounters a string of bad luck, they could run low on reserves (perpetually being in the solid line situation will continually drain foreign exchange from the bank's reserves).

See Figure 2. Here we see a situation in which the central bank is losing 10 billion Euros per period (year). If the nation has only 100 billion Euros in reserve, it will run out of reserves in the 10^{th} year. After the 10^{th} year, the country will be forced to devalue the currency. If people see this coming, they will sell the dollar short and make money. Since people are betting against the dollar and selling it for Euros, the bank will run out of reserves earlier. Speculators are selling dollars and buying euros.
Again, if the public can see that in the future the nation will run out of reserves, currency will be speculated against NOW and reserves will run out even sooner than if people had no idea about the status of reserves and running out was a complete surprise.

Date 03.20.02: Continuation of lecture from 03.18.02
Anatomy of an Exchange Rate Crisis: There is a pegged exchange rate and something goes horribly wrong.

Example: suppose $ is pegged to the Euro. See Figure 3.
What determines or underlies the supply and demand curves for Euros in this situation:
Supply:
-Exporting goods, people exchange euros for dollars, thus increasing the supply of euros.
-Capital inflows, foreigners want to buy assets in the US, sell their own currency to get $, so the supply of Euros increases.
Demand:
-Imports: people want to import foreign goods, they want to exchange $ for euros, this increases the demand for euros.
-Capital Outflows: people want to buy assets in the EU, sell $ to get euros, demand for Euros increases.

Notice the overvalued dollar in our picture since R is below where the supply and demand curves intersect. The vertical axis represents the price of the euro in terms of dollars, so the euro is undervalued, dollar overvalued. In this situation, need to sell foreign exchange out of reserves to satisfy the excess demand in the market at R. The limit on doing this is the stock of reserves, and eventually this stock will run out if it keeps being drained.

Imagine the central bank is about to run out (but that this is a complete surprise to everyone). When the central bank runs out of Euros, it cannot supply anymore to the market. So the exchange rate goes shooting up to the market equilibrium. In other words, there is a sudden depreciation of the dollar.

In practice, it is usually known in advance that a nation will run out of foreign exchange. So, as mentioned earlier, people will expect the nation to run out of reserves at some time in the future. They don't want to hold the dollar after it has depreciated, so they try to sell the dollar now (while it is still overvalued) and they demand more Euros. So, as we approach the demise of the stock of reserves, there is a speculative attack on the dollar.

People who have dollars sell them and buy euros. The central bank has to supply even more foreign exchange to the market to satisfy this increased demand (shown by the dashed line in Figure 3). In addition, purchases of euros in the forward market shift the demand for euros even further to the right.

See Figure 4. Even if you start in a situation where your currency is undervalued and you are gaining reserves, trouble can arise. Some outside event unrelated to a nation could cause people to doubt their ability to maintain the peg. Thus, people will expect a future devaluation, this will lead to speculation, people buying dollars and selling euros and reserves are lost.

False Choice of Fixed vs. Floating. See Figure 5.
Remember, a pegged rate is not fixed, so the picture labeled A in figure 5 – which shows a floating exchange rate moving up and down over time and a pegged exchange rate that remains constant over time – is a false choice. The real policy choice looks more like the