Week 2

Currency Systems and Crises
Definition

- An *exchange rate* is the amount of currency that one needs in order to buy one unit of another currency, or the amount of currency that one receive when selling one unit of another currency.
Exchange Rates Today

• 1. **Exchange rates are volatile.**
  - If the exchange rate *floats*, the value of the rate fluctuates daily.
  - When the exchange rate is *fixed* or *pegged*, it does not fluctuate daily, but can change dramatically if the peg is broken.

• 2. **Booms and Busts: Exchange rate systems are subject to currency crises.**
  - The Asian currency crisis of October 1997
  - Argentina 2002
Exchange Rates Today

3. Despite much effort, exchange rates have proven to be very difficult to predict or control.
   - Historically, almost all nations have sought to exert control over their exchange rates - but often with limited success.

4. Exchange rate fluctuations can have substantial impact on the real economy.
   - The Asian crisis had a substantial impact on the domestic economies of the countries that were affected. In the case of Indonesia, it also had an impact on the political environment, resulting in the resignation of Indonesia’s President Suharto.
Questions

• Every nation has a choice to choose a specific type of exchange rate system.
• What has been our historical experience with exchange rate systems?
• Why is the choice of an exchange rate system important?
• What are the advantages and disadvantages of each system?
Exchange Rate Systems Over The Times

1. **Gold Standard**
   - Value of currency is fixed in terms of gold. The gold standard was popular before the WW1.
   - Now only of historical interest.

2. **Fixed/Pegged**: against a single currency, or a basket of currencies (Thai baht before 10/97 currency crisis, Chinese renminbi)

3. **Free Floating**: US$, Japanese Yen, Euro, BP

4. **Hybrid Systems**: e.g., **Managed Floating**: floating with interventions (for example, with target zones, or crawling adjustments) Brazil before January, 1999.

5. **Currency Board**: Fixed exchange rate, with foreign reserves sufficient to support 100% of currency (Argentina until 1/2002, HK, Estonia and Lithuania).

• Our focus will be mainly on the Fixed, Floating and Currency Boards.
A Quick Look at History

• 1. US and Europe exchange rate and monetary systems – 1879 to today.
• 2. Recent Currency Crises
The Gold Standard: 1879-1913 (1/11)

• 1. The official gold price was fixed ("mint parity"), with free convertibility between domestic money and gold. US adopted standard in 1879 and defined the US$ as 23.22 fine grains of gold, or US$ 20.67/ounce of gold.

• 2. All national currency is backed by gold, and growth in money supply is linked to gold reserves.

• 3. As each separate currency was convertible into gold at a fixed price, the exchange rate between the two currencies was automatically fixed.

• 4. There is no fluctuation in the exchange rate unless either country changes the local price of gold.
Between WW1 and WW2 and the Great Depression (2/11)

• Countries experimented with floating rates in the 1920’s and ‘30, and this was widely thought to be a failure. Here’s a view from Ragnar Nurske (1944) of the League of Nations:

• “If there is anything that the inter-war experience has clearly demonstrated, it is that currency exchanges cannot be left free to fluctuate from day-to-day under the influence of demand and supply. If currencies are left to fluctuate, “speculation” is likely to play havoc with the exchange rate.”
Bretton Woods Agreement: 1945 (3/12)

• 1. Fix an official par value of the currency in terms of gold, or a currency tied to gold.

• 2. In the short run, the exchange rate should be pegged within 1% of par value, but in the long run leave open the option to adjust the par value unilaterally.

• 3. Permit free convertibility for current account transactions, but use *capital controls* to limit currency speculation.
Fixed-Rate Dollar Standard: 1950-70 (4/11)

1. US maintained a gold standard at US$ 35/ounce.

2. All other countries fixed an official par value in terms of the US$, and tried to keep their currency within 1% of par value.
Breakdown of Bretton Woods (5/11)

- By the late 1960’s, US liabilities abroad exceeded their gold reserves. US had run an expansionary monetary policy during the height of the Vietnam wars, and its current account and trade balance had deteriorated. It wasn’t possible for the US to back its commitment to its currency with gold.

- On August 15, 1971, Nixon officially took the US off the gold standard.
Floating Exchange Rates (6/11)

• By March 1973, all major currencies were allowed to float against each other.

• Rules of the Game:

• 1. Nations tried to smoothen short term variability without committing to an official par value.

• 2. Permit free convertibility for current account transactions, while trying to eliminate restrictions on flow of capital.
Floating Rates in the 70’s and 80’s (7/11)

• Within a few years, the major nations had eliminated restrictions on flow of capital, and, over time, the flow of capital became more important as a major determinant of short-term currency movements, than trade imbalances.

• Although, in principle, the exchange rate was to be determined by the market, policy-makers soon came to the conclusion that the “price” reflected by the exchange rate was either not warranted, or should be manipulated to better suit domestic economic policies. (Aside: This notion is quite contrary to our usual thinking of other “prices”, as, for example, stock prices.)
Interventions in the Currency Market (8/11)

• For the first decade, the US was passive towards the US$ exchange rate. But between 1980-85, the US$ had appreciated by almost 50% in real terms.

• Plaza Accord of 1985: To counter the US$ appreciation, the G5 countries met at the Plaza hotel in NY and agree to intervene in a coordinated fashion to depreciate the US$. This agreement came to be known as the Plaza Accord.

• The accord worked and the US$ depreciated sharply through 1986 and 1987.

• This was the first major coordinated intervention.
Interventions in the Currency Market (9/11)

• By 1987, it was clear that the Plaza accord had worked well, and the currencies now needed to be stabilized around their current levels.

• Louvre Accord (Feb 22, 1987): At a meeting in Louvre, the G5 countries decided to set “target zones”, or exchange rate ranges, and the central banks agreed to defend their currency by active intervention in the currency markets.
European Monetary Union (10/11)

• **European Monetary System: ECU, ERM and the Euro**

• In December 1978, the European countries voted to establish a European Monetary System, with the ECU and ERM as some of its building blocks.

• 1. ECU: The European Currency Unit (ECU) was defined as a fixed amount of the national currencies of the member countries.
European Monetary Union (11/11)

• 2. ERM: The Exchange Rate Mechanism was the plan to limit exchange rate fluctuations. Each country that participated within the ERM agreed to limit the fluctuations to within 2.25 or 6% (for UK, Italy, Spain and Portugal) of the rate defined in terms of the ECU. This narrow range proved hard to defend and it was widened to 15% after the ERM currency crisis of 1992-93.

• 3. Euro: Common currency for the countries of the European Union introduced 1/1/1999. The ECU became the “Euro”.
  – Something to think about: Will UK join the Euro someday in the future? Will Switzerland?
Currency Crises

• Example 1: Asian Currency Crisis (Thailand, Indonesia, Malaysia, Korea, and others)
• Example 2: Brazil in 1998-99.
• Example 3: Argentina 2001-2002
Example 1: Asian Currency Crisis (October 1997)

- To date, the biggest post-war crisis in terms of its geographic reach and magnitude.
- All countries in the region experienced severe economic downturns.
Thai Baht vs US$
(Pegged before 10/97, and float afterwards)
Indonesian Rupiah vs US$
(Pegged before 10/97, float afterwards)

Source: DATASEAM
Example 2:
Brazil’s Currency Crisis in 1998-99

- Brazil (August 1998-January 1999): In defending its currency, Brazil lost more than $45 billion, and had to raise interest rates to over 40%. However, it could not stop the fall of the real, and ultimately decided to float the currency.
Brazil Real vs. US$
(Managed Float: before 1999 crisis)
Brazil Real vs. US$
(Free Float: after the 1999 monetary crisis)
Example 3: Argentina 2002

- See attached WSJ articles about events on the crises.
Argentine Peso vs US$
(Currency Board before 2002)
Argentine Peso vs US$ (2002)
Choice of Exchange Rate Systems

• Every country has to make a choice of an exchange rate system. The possible choices are: fixed (or pegged), float, currency board, or some mixture (like “managed” float).
Why is the choice of exchange rate system important

1. Because the exchange rate affects the price of traded goods, and therefore domestic inflation and production (growth rates).
   - The high industrial growth in China can be directly linked to their choice of a fixed and (grossly) undervalued exchange rate.
Why is the choice of exchange rate system important

• 2. Because the exchange rate is tied in with the monetary system, it directly impacts flexibility of domestic policy decisions.
  
  – Currency board: The Central Bank has no discretionary power to change money supply (and, thus, for example, stimulate or slow down the economy)
  
  – Fixed: The Central Bank has some flexibility with monetary policy, but this flexibility is secondary to the task of maintaining the peg.
  
  – Floating: The Central Bank can focus completely on domestic policy, ignoring the exchange rate fluctuations.
Evaluating the Fixed Exchange Rate

1. Can create stability in the short run.

2. Reduces flexibility of both domestic fiscal and monetary policy, as domestic policy has to be geared towards keeping the peg.
   - A country with a history of economic mismanagement can create a short window of credibility to set into place new policies.

3. Our historical experience has been that without restrictions on capital flow, a fixed exchange rate system is difficult to sustain.
   - Both Malaysia and China have restrictions on capital flow.
Evaluating the Floating Exchange Rate System

1. Domestic policy can be conducted independently of the exchange rate. This may be good or bad, depending on quality of domestic institutions.
   - In US, Greenspan/Bernanke worry a lot of inflation and growth, but rarely about the exchange rate.
   - Loss of confidence can create a self-fulfilling crisis with a severely depreciating currency leading to hyperinflation and panic.

2. Exchange rate volatility has to be managed by corporations and investors.
   - Requires a sophisticated derivatives market for hedging risk.
Evaluating the Currency Board

1. Limited discretionary domestic policy – Central Bank cannot change money supply or change exchange rate.

2. It links the domestic economy to the country that the currency is tied to. This is good in the short run, but may have adverse consequences in the long run as domestic producers have to compete on an equal footing with the foreign country’s firms.

   Why did Argentina break its currency board in 2002?
Some Questions to Think About

• 1. The consensus before WWII was that floating exchange rates were dangerous. But today we are more comfortable with floating rates than fixed. Why do you think the shift has occurred?

• 2. China is the most important country that pegs its currency (now it's more of a managed float rather than a peg). Do you think it can successfully manage the strengthening of its currency, the RMB (renminbi or yuan)?
Why Currency Crises?

• First, three common reasons you will hear discussed in the press:

• 1. Speculators
  – The Malaysia PM Mahathir blamed George Soros for the Asian crisis.

• 2. Investor panic: I panic, and, therefore, you panic, and eventually we all panic.

• 3. Contagion: Because markets are inter-linked, a crisis in one market leads to a crisis in another.
Why Currency Crises?

• The above reasons apply to all markets, including equity. In addition, there are reasons that are specific to the currency markets.

• 4. Domestic policy is not in sync with exchange rate policy.
  - Example: Suppose a country has a fixed rate, but its domestic inflation consistently exceeds the foreign country’s inflation. This will lead the currency to be overvalued in “real terms”. eventually leading to lower growth rates, unemployment, loss of confidence and eventual panic.
Why Currency Crises?

• 5. Politics matter: Governments decide to abandon a regime after doing a cost-benefit analysis so their politics or who governs matters.
  - Devaluing or keeping a currency weak helps growth rate, lower unemployment rate.
  - Keeping a currency strong can help control inflation, bring credibility to the government and be a source of national pride.