International Monetary System

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Lecture 2 Outline

A. International Monetary System (IMS)

B. Exchange Rate System

C. Central Bank Intervention
   I. Unsterilized Intervention
   II. Sterilized Intervention

D. European Monetary Union (EMU), European Union.
140 Years of Monetary History

- Classical Gold Standard
- Gold Exchange System
- Bretton Woods System (Fixed rate system)
- Post-Bretton Woods System (Floating rate system)

- 1914
- 1944
- 1971

- 30-40 years
- 30 years
- 28 years
- 43+ years
International Monetary System

- **Bimetallism**: a “double standard”, both gold and silver were used as money and in international means of payment.

- **Gold Standard** – participating countries fixed the prices of their currencies in terms of a specified amount of gold.
  - Because the value of gold is fairly stable over time, the gold standard ensured long-run price stability for both individual countries and groups of countries.

Example:

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\begin{align*}
\text{Bimetallism} & : \text{£4/ounce of gold} \\
\text{Gold Standard} & : \text{$20/ounce of gold} \\
\end{align*}
\]

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\begin{align*}
\text{Classical Gold Standard} & : \text{$20/ounce of gold} \\
\text{Classical Gold Standard} & : \text{£4/ounce of gold} \\
\end{align*}
\]

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\text{Classical Gold Standard} = \frac{\text{$20/ounce of gold}}{\text{£4/ounce of gold}} = \frac{\text{£5/ £1}}{}
\]
Gold Exchange Standard (1914-1944)

- The U.S. and England could hold only gold reserves but other nations could hold both gold and dollars/pounds as reserves.
- In 1931, England departed from gold given massive gold and capital flows stemming from an unrealistic exchange rate, ending the Gold Exchange Standard.
- This interwar period was characterized by economic nationalism, political instabilities, bank failures, and flights of capital across borders.
Bretton Woods Conference (July 1944)
- Purpose: To design a new postwar international monetary system
  - Allied nations pledged to maintain a fixed (pegged) exchange rate in terms of the dollar (or gold, in the case of U.S.) : 1 ounce of gold = $35
  - Fixed rates were maintained by central bank intervention in foreign exchange markets.
The U.S. dollar was pegged to gold at $35/ounce and other currencies were pegged to the U.S. dollar.
Bretton Woods System (1946-1971)

- Fixed rate system in *name only*.
  - Of 21 major industrial countries, only the U.S. and Japan maintained their par values; 12 countries devalued their currencies >30% against the dollar; 4 countries revalued their currencies; and 4 countries allowed their currencies to float.

- Collapse of Bretton Woods system
  - By the early 1960s, the U.S. dollar's fixed value against gold, under the Bretton Woods system of fixed exchange rates, was seen as overvalued.
  - Inflation in the U.S. stemming from the Johnson Administration printing money instead of raising taxes to finance Vietnam conflict.
  - In **Aug 1971**, U.S. President Richard Nixon announced the "temporary" suspension of the dollar's convertibility into gold.
Two new institutions created by Bretton Woods Conference

- **International Monetary Fund (IMF)** – created to promote monetary stability
  - Oversees exchange rate policies in 188 member countries, advises developing countries on economic policy, and play as the lender of last resort.
  - Moral Hazard?

- **International Bank for Reconstruction and Development (World Bank)** – created to lend money to countries to rebuild their war-damaged infrastructures
Post-Bretton Woods System (1971-Present)

- Smithsonian Agreement (1971)
  - Dollar was devalued to 1/38 of an ounce of gold and other currencies revalued by agreed-on amounts in terms of the dollar.
  - International floating exchange rate system instituted in 1973.

- Jamaica Agreement (1976)
  - Flexible exchange rates were declared acceptable to the IMF members; **Gold was officially abandoned**
Exchange Rate System
Exchange Rate Systems

- **Floating**
  
  - **Free ("clean") float**
    
    - Exchange rate is market determined with only exceptional intervention.
    
    - About 31 countries allow market forces to determine their currency’s value (Canada, Japan, EMU, US, UK).
  
  - **Managed ("dirty") float**
    
    - Exchange rate is largely market determined, without an ascertainable or predictable path for the rates.
    
    - About 35 countries combine government intervention with market forces to set exchange rates (Brazil, Korea, India, Mexico, Thailand).
Exchange Rate Systems

- **Soft Pegs**
  - **Conventional Peg**
    - Exchange rate publicly fixed to another currency or basket of currencies.
    - Country buys or sells foreign exchange or uses other means to control the price of the currency (e.g., Denmark, Saudi Arabia, Morocco, etc.).
  - **Crawling Peg**
    - Like the conventional peg, but the crawling peg is adjusted in small amounts at a fixed rate of change or in response to changes in macro indicators (e.g., China, Switzerland, and Nicaragua, etc.).
Exchange Rate Systems

- **Hard Pegs**
  - **Currency Board**
    - A monetary regime based on implicit legislative commitment to exchange domestic currency for a specified foreign currency at a fixed exchange rate.
    - Eliminates central bank functions such as monetary policy and lender of last resort (e.g., Hong Kong).
  - **No national currency**
    - Some countries do not bother printing their own currency. For example, Ecuador, Panama, and El Salvador have dollarized.
CENTRAL BANK INTERVENTION
Central Banks and Currency Values

*Just a little bit about the money history…*

- Before 1971, currencies were linked to a commodity, usually **gold**.

- **Fiat money** – nonconvertible paper money
  - Fiat money is not linked to any commodity and thus has no “anchor”; hence, there is no standard of value for determining a currency’s future value.
  - Central bank determines a currency’s value through its control of the money supply.

- Central banks use monetary policy, including creating money, to **achieve price stability, low interest rates, or a target currency value**. Hence, expectations of central bank behavior affect exchange rate.
  - **HOW?**
Exchange rate 101: Demand and Supply

- **Demand for a currency**
  - A function of the demand for foreign goods, services, and financial assets denominated in that currency.
  - E.g., U.S. demand for Euroland goods increases demand for euros to pay for those goods.

- **Supply of a currency**
  - Supply of euros is a function of Euroland demand for U.S. goods, services, and financial assets.
  - Supply of euros is equivalent to the demand for dollars.
  - Euroland consumers must buy dollars with euros in order to pay for U.S goods.
Exchange rate 101: Demand and Supply

- Exchange rates are market-clearing prices that equilibrate supplies and demands in the foreign exchange market.

If supply of a currency exceeds demand, the value will fall relative to another currency until it reaches a new equilibrium.

If demand for a currency exceeds supply, the value will increase relative to another currency until it reaches a new equilibrium.
Central Bank Intervention

- **Foreign exchange market INTERVENTION**
  - Mechanism: Central bank can intervene the exchange rate by change the demand and the supply of the currency.

- If Fed wants to lower the value of the U.S$ against €, what should Fed do? Increase $ supply? Or increase $ demand?
- How does Fed do it?
- What is the direct consequence of money supply?
Central Bank Intervention-Unsterilized

- If Fed wants to lower the value of the $ against €, Fed needs to increase $ supply by buying € with $.
- How does Fed pay for €?
  - Create more base money.
- Without “sterilization”, the money supply of $ will increase.

- Unsterilized intervention
  - Unsterilized foreign exchange intervention has impact on money supply.
  - Increase in money supply leads to higher inflation rate and further affect interest rate.
  - Foreign exchange object of the central bank conflicts with its domestic goal of price stability.
Sterilized intervention

- If Fed wants to lower the value of the $ against €, Fed needs to increase $ supply by buying € with $.
- How does Fed pay for the €?
  - By selling Treasury bills via open market operation.
- Neutralize the impact on money supply.

- Sterilized foreign exchange intervention should NOT change in domestic money supply but in the country’s foreign exchange reserves.
- The effects of sterilized intervention are temporary, because the Fed signals a change in monetary policy to the market, not a change in market fundamentals.
In order to "sterilize" the foreign exchange intervention (to remove the new $ from the public circulation), FED issues treasury bills and investors pay with $.

In order to lower the value of $, Fed buys € with $ (increase supply in $)

These two transactions cancel each other out. Hence, there is no effect on the U.S money supply.
The Emergence of the EU

- 1958: European Economic Community
- 1979: European Monetary System
  - Target-Zone System: Currencies were allowed to deviate ‘within a band’
- 1991: Masstricht Treaty
  - Established a single central bank and fixed exchange rates by 1999
- 1992: European Union
  - Monetary policy: European Central Bank
- 1999: Euro (€)
  - 11 countries adopted the Euro in 1999.
  - Countries are subject to Masstricht criteria in order to join EU
19 EU Members Use EUD (€)
Belgium, Germany
Estonia, Ireland
Greece, Spain
France, Italy
Cyprus, Luxembourg
Malta, Lithuania,
Netherlands Austria,
Portugal
Slovenia Slovakia
Finland, Latvia
~ Eurozone

9 EU members not use EUD
Bulgaria, Croatia,
Czech Republic,
Denmark, Hungary,
Poland, Romania,
Sweden and
the United Kingdom

Lecture 2
The Long-Term Impact of the monetary union

- Benefits
  - Reduced transaction costs.
  - Eliminate exchange rate uncertainty.
  - Promoting movement of capital and individuals should increase competitiveness and efficiency.
  - Depth and liquidity of financial markets.

- Cost
  - Loss of national monetary and exchange rate policy independence.
  - The more trade-dependent and less diversified a country’s economy is, the more prone to “asymmetric shocks” that country’s economy would be.
BREXIT
European Union and Eurozone

- **European Union**
  - An economic and political union. With 7.3% of the world’s population (more than 500m), it generates around 24% of the global nominal GDP.

- **Eurozone**
  - A monetary union. Members states have adopted the euro (€) as their common currency and sole legal tender.

- **Schengen Area**
  - Countries have abolished passport and any other type of border control at their mutual borders.

- **European Free Trade Association (EFTA)**
  - Operates in parallel with the EU: All members state participate in the EU’s single market

- **European Economic Area (EEA)**
  - Free movement of persons, goods, services and capital within the internal market of the EU.
ECONOMIC IMPACT

– Economic cost
  • UK’s Budget on EU

– Investment

– Immigration

– Trade
  • Within / Outside Europe
IMPACT OF BREXIT ON MNCs

- Foreign direct investment
  - Non-British MNCs headquartered in Britain
  - British MNCs demand less ‘red tape’.

- Withholding taxes
  - British MNCs’ sub in EU would lose exemption from withholding taxes on dividends paid to British parents.

- Uncertainty on currency
