

International Monetary System

Chapter 18

1. Gold standard 1870-1914
2. Inter-war years 1918-1939
3. Bretton Woods

1 Gold Standard 1870-1914

1.1 Major world currencies pegged to gold

- Countries buy and sell any amount of gold at fixed price
- Money supplies are backed by gold and government securities

1.2 Adjustment under gold standard

- Focus on current account
- Hume - price-specie-flow mechanism
 - flexible price model
 - **prices deviate, specie flows**
 - suppose M falls causing P to fall –**prices deviate**
 - domestic goods are relatively cheap, so NX increase
 - to pay for exports, **specie flows**

- foreigners exchange foreign currency for gold, ship gold to US and sell to Fed in exchange for M
- M^* falls reducing P^* and M rises raising P
- gold flows until prices adjust ending the current account surplus

- Alternative begins with current account imbalance
 - Suppose England has CA surplus with US
 - US residents sell dollars for gold
 - Ship gold to England and buy pounds for gold from UK central bank
 - M falls, requiring P to fall
 - M^* rises, requiring P^* to rise
 - adjustment in relative prices ends the current account imbalance

- Countries could thwart the adjustment mechanism
 - Sterilize the effect of gold flows on the money supply using government bonds - could prevent inflation
 - Augment the effect of gold inflows (CA surplus) on the money supply to stem inflows of non-interest-bearing gold
 - Augment the effect of gold outflows (CA deficit) on the money supply to keep from running out of gold

1.3 Mercantilism

- A country's wealth is measured by its gold
- A mercantilist country wants a perpetual surplus to have perpetual gold inflows
- Hume – a perpetual surplus is impossible due to the price-specie flow mechanism
 - a surplus country accumulates gold
 - when central bank purchases gold, money supply increases
 - money supply increasing raises price level ending surplus

1.4 Economic Performance under the Gold Standard

- Gold determined the money supply
 - gold discoveries created inflation as miners sold gold for currency
 - rapid output growth created deflation as demand for money grew faster than supply
- No monetary policy for stabilization

2 Interwar Years 1918-1939

2.1 Inflationary war finance

- Pay for military purchases with currency only if sever link to gold
- Increased government spending financed with money created inflation
- Hyperinflation in Germany

2.2 Post-War Return to Gold in Britain

- Britain returned to the gold standard at the pre-war parity
- The price level in Britain was high relative to the £ price of gold, so foreign goods were relatively cheap
- British bought gold to buy foreign goods, shrinking the money supply
- Reduction in the money supply created a recession
- The recession would eventually have reduced the price level in Britain, but long and painful

2.3 Great Depression

- US stock market crash undermined confidence raising currency-deposit ratio, reducing money supply
- US recession and fall in price
- US goods were relatively cheap and US current account surplus and gold inflows
- US gold inflows were ROW gold outflows, reducing ROW money supplies creating ROW recessions

- Gold inflows into US tended to restore the money supply, but new US shocks kept US money falling
- US gold inflows and ROW gold outflows continued
- Countries that abandoned gold standard first were the first to recover from the depression

2.4 Beggar-thy-neighbor devaluations

- ROW countries sought to stop gold outflows with currency devaluation (through an increase in the price of gold) and trade barriers
- Other countries retaliated
- Large reduction in world trade and reduction in gains from trade exacerbated the depression

3 Bretton Woods and the IMF

3.1 Objectives

- Avoid beggar-thy-neighbor policies of the inter-war years
- Establish a stable system of fixed exchange rates

3.2 Fixed Exchange Rate System

- Dollar was pegged to gold and the US held gold reserves
- Other currencies were pegged to the dollar and held dollar reserves
- Countries could use reserves to finance a temporary current account deficit

3.3 International Monetary Fund

- Provide loans to countries in temporary "balance of payments" difficulties
 - perhaps for temporary increase in government spending
 - typically for countries with insufficient reserves to finance a temporary deficit
 - loan would allow the country to maintain its fixed exchange rate even though reserves were low
 - conditionality - IMF required that the government receiving the loan make changes to assure that the "balance of payments" difficulties were temporary as a condition for receiving the loan

- Allow changes in parity (usually devaluation) for "fundamental" disequilibrium
 - Consider a switch in world demand away from the country's goods
 - Requires an increase in q to restore long-run equilibrium
 - With flexible exchange rates, the increase in q can come with an increase in E
 - However, with fixed exchange rates, must come with a fall in P
 - The fall in P will require a recession

- Convertible currencies

- Agents should be allowed to freely buy and sell currencies for all current account transactions
- Purchases or sales of currencies for capital account transactions could be restricted

- Capital controls
 - Eliminate interest rate parity
 - Interest rate determined in the money market as in a closed economy
 - No reason for E^e up to cause an exchange rate crisis because not allowed to buy foreign exchange for the purpose of buying foreign assets

– Justifications for capital controls

- * Keep domestic interest rates low to stimulate investment and prevent savers from going abroad for higher rates
- * Limit foreign direct investment to maintain local control and ownership
- * Reduce the frequency of balance of payments crises

3.4 Policy for Internal and External Balance

- Internal balance = full employment

$$Y^f = D = C(Y^f - T) + I + G + CA\left(\frac{EP^*}{P}, Y^f - T\right)$$

- External balance = set current account at a target X

$$CA\left(\frac{EP^*}{P}, Y^f - T\right)$$

- Two policy tools to achieve the two goals
 - Fiscal policy, represented by T and/or G
 - Monetary or exchange rate policy, represented by E
- Internal balance
 - As G up, Y increases
 - As E up, Y increases
 - For internal balance, an increase in G must be accompanied by a fall in E (negative slope)

- External balance

- As G up, Y increases, reducing CA

- As E up, CA increases directly

- For external balance, an increase in G must be accompanied by an increase in E (positive slope)

- Expenditure changing policy (G or T)
 - Let economy be at a point along XX such that it has external balance but in a recession
 - Expansionary fiscal policy raises expenditure moving economy right
 - As Y rises, CA falls
 - Requires E up to restore CA to target (expenditure changing policy)
 - Expenditure changing policy to restore internal balance will destroy external balance
 - Therefore, expenditure changing policy needs to be accompanied by expenditure switching policy

- This is impossible with fixed exchange rates

3.5 Collapse of Bretton Woods

- Triffin and confidence
 - World economy grows and demand for dollar reserves grows
 - US supplies dollar reserves as use dollars to buy goods services and assets
 - However, US gold supply did not grow, reducing ratio of gold to base money
 - IMF created SDR's so countries could have an alternative reserve asset

- Expansionary monetary and fiscal policy in the US
 - Increase in money supply in US tends to depreciate dollar and appreciate foreign currencies
 - Foreign central banks forced to buy dollars in exchange for foreign currencies to keep exchange rate fixed
 - US policy created world money growth and world inflation
 - US gold reserves did not grow
 - Speculators saw that US could not possibly sell all gold demanded as fixed price and rushed to buy gold before US ran out (1971)
 - US responded by closing gold window to all but central banks and other

countries agreed to revalue their currencies, allowing the dollar to be devalued

- However, US inflationary policy did not change
- Countries, led by Japan and Germany, refused to buy dollars and the system ended