Lecture Eight
International Monetary System

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1. A Brief History of the International Monetary System

2. Classical Gold Standard: 1870–1913

3. The Rise of Dollar during the Interwar Years: 1919–1939


5. Reform of the International Monetary System
Exchange Rate Regime Choice: 1870~2010

**Figure 8-1**

The shaded regions show the fraction of countries on each type of regime by year, and they add up to 100%. From 1870 to 1913, the gold standard became the dominant regime. During World War I (1914–1918), most countries suspended the gold standard, and resumptions in the late 1920s were brief. After further suspensions in World War II (1939–1945), most countries were fixed against the U.S. dollar (the pound, franc, and mark blocs were indirectly pegged to the dollar). Starting in the 1970s, more countries opted to float. In 1999 the euro replaced the franc and the mark as the base currency for many pegs.

An international monetary system is a set of internationally agreed rules, conventions and supporting institutions that facilitate international trade, cross border investment and generally the reallocation of capital between nation states.

<table>
<thead>
<tr>
<th>Date</th>
<th>System</th>
<th>Reserve assets</th>
<th>Leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870–1913</td>
<td>Classical gold standard</td>
<td>Gold, pound</td>
<td>UK</td>
</tr>
<tr>
<td>1914–1919</td>
<td>World War I</td>
<td>Gold, pound</td>
<td>UK</td>
</tr>
<tr>
<td>1920–1938</td>
<td>Gold standard</td>
<td>Gold, dollar, pound</td>
<td>US, UK</td>
</tr>
<tr>
<td>1939–1945</td>
<td>World War II</td>
<td>Gold, dollar</td>
<td>US</td>
</tr>
<tr>
<td>1944–1971</td>
<td>Bretton Woods System</td>
<td>Dollar, gold</td>
<td>US</td>
</tr>
<tr>
<td>1971–1985</td>
<td>Flexible exchange rates</td>
<td>Dollar, mark, pound</td>
<td>US, Germany, Japan</td>
</tr>
<tr>
<td>1985–1999</td>
<td>Managed exchange rates</td>
<td>Dollar, mark, yen</td>
<td>US, G7, IMF</td>
</tr>
<tr>
<td>1999–</td>
<td>Dollar, euro</td>
<td>Dollar, euro, yen</td>
<td>US, Eurozone, IMF</td>
</tr>
</tbody>
</table>
1. A Brief History of the International Monetary System

Exchange Rate Regime Choice: 2014


Legend:
- Green: Floating (floating and free floating)
- Orange: Hard pegs (no separate legal tender, currency board)
- Purple: Residual (other managed arrangement)
- Blue: Soft pegs (conventional peg, stabilized arrangement, crawling peg, crawl-like arrangement, pegged exchange rate within horizontal bands)

1. Fix an official gold price or *mint parity* and convert freely between domestic money and gold at that price.

2. Do not restrict the export or import of gold by private citizens, nor impose any other exchange restrictions on current or capital account transacting.

3. Back national banknotes and coinage with earmarked *gold reserves*, and condition long-run growth in deposit money on availability of general gold reserves.
2. Classical Gold Standard: 1870–1913

2.1 Rules and Adjustment Mechanism of the Gold Standard


4. In short-run liquidity crisis from an international gold drain, have the central bank lend freely to domestic banks at higher interest rates (Bagehot’s Rule).

5. If Rule 1 is temporarily suspended, restore convertibility at traditional mint parity as soon as practicable – if necessary by deflating the domestic economy.

6. Allow the common price level (nominal anchor) to be endogenously determined by the worldwide demand for, and supply of, gold.
2. Classical Gold Standard: 1870–1913

2.1 Rules and Adjustment Mechanism of the Gold Standard

**Mint Parity and Exchange Rate**

- United States fixed the price of gold at $20.67 per ounce from 1834 to 1933, and Britain fixed the price at £3 17s. 10.5p per ounce from 1816 to 1914. Therefore, the exchange rate between dollars and pounds – the “par exchange rate” – necessarily equaled $4.867 per pound.

- Wikiwand: The pound sterling was equal to 4.87 United States dollars, 5.25 Canadian dollars, 12.10 Dutch guilders, 26.28 French francs (or equivalent currencies in the Latin Monetary Union), 20.43 German marks or 24.02 Austro-Hungarian krone.
Adjustment of Trade Balance

The price–specie flow mechanism is a model developed by Scottish economist David Hume (1711–1776) to illustrate how trade imbalances can be self–correct and adjust under the gold standard.

- For a country with a positive balance of trade, gold would flow into the country.
- In a country with a gold standard, gold is money, and the increase of money supply will cause inflation.
- With fixed nominal exchange rate with gold, inflation will cause real appreciation, which will reduce trade balance in the end.

\[ TB > 0 \Rightarrow \text{Gold}(M) \uparrow \Rightarrow P \uparrow \Rightarrow e \downarrow, \quad TB \downarrow \]
Case 1: Gold or Silver? It’s a Question.

Note: 1900 reelection poster celebrates McKinley standing tall on the gold standard with support from soldiers, sailors, businessmen, factory workers and professionals, from Wikiwand.

Note: Bryan’s speech for Presidential campaign in 1896: “You shall not press down upon the brow of labor this crown of thorns, you shall not crucify mankind upon a cross of gold.”
Case 1: Gold or Silver? It’s a Political Question.

Source: 1896 Electoral vote results, Wikiwand
Case 2: Question from the Emperor Guangxu
Divergence after the End of Golden Standard

Policy choice
No monetary policy autonomy
Sacrifice goal 3 to attain 1 and 2

Policy goal 1
Fixed exchange rate

Policy goal 2
Capital mobility

Policy goal 3
Monetary policy autonomy
Sacrifice goal 1 to attain 2 and 3

Policy choice
Capital controls
Sacrifice goal 2 to attain 3 and 1

Floating in 1920s/30s

Capital controls in 1920s/30s
Table 1. Coverage

<table>
<thead>
<tr>
<th>Country</th>
<th>Source</th>
<th>Period</th>
<th>Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gold bloc countries</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>France</td>
<td>Bank of France</td>
<td>1928–39</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Italy</td>
<td>Collana Storica</td>
<td>1920–39</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Swiss National Bank</td>
<td>1920–39</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Bank of the Netherlands</td>
<td>1920–1931</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td><strong>Central Europe</strong></td>
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<tr>
<td>Austria</td>
<td>Bank of Austria</td>
<td>1923–29, 1932–7</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>Bank of Czechoslovakia</td>
<td>1921–38</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Romania</td>
<td>Bank of Romania</td>
<td>1929–34, 1937</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td><strong>Sterling area</strong></td>
<td></td>
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<tr>
<td>Denmark</td>
<td>Bank of Denmark</td>
<td>1919–39</td>
<td>Book exchange rates</td>
</tr>
<tr>
<td>Finland</td>
<td>Bank of Finland</td>
<td>1921–38</td>
<td>Book exchange rates</td>
</tr>
<tr>
<td>Norway</td>
<td>Bank of Norway</td>
<td>1920–39</td>
<td>Book exchange rates</td>
</tr>
<tr>
<td>Portugal</td>
<td>Bank of Portugal</td>
<td>1931–9</td>
<td>Book exchange rates</td>
</tr>
<tr>
<td>Sweden</td>
<td>Riksbank</td>
<td>1926–39</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td><strong>Other Europe</strong></td>
<td></td>
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<tr>
<td>Spain</td>
<td>Bank of Spain</td>
<td>1920–36</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td></td>
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<tr>
<td>Brazil</td>
<td>Reports of the Caixa</td>
<td>1927–9</td>
<td>Book values coincide with fixed exchange rate prevailing during available dates</td>
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<td></td>
<td>de Estabilição</td>
<td></td>
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<tr>
<td>Colombia</td>
<td>Bank of Chile</td>
<td>1926–9, 1932–3, 1936–9</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td>Chile</td>
<td>Bank of the Republic</td>
<td>1923–39</td>
<td>Market exchange rates</td>
</tr>
<tr>
<td><strong>Asia</strong></td>
<td>Bank of Japan</td>
<td>1920–39</td>
<td>Market exchange rates</td>
</tr>
</tbody>
</table>

*Source: See text; Italy counted as member of the Gold Bloc.*
The Rise and Fall of Dollars

Figure 4. G9 reserves (Austria, Czechoslovakia, Denmark, Finland, Italy, Japan, Norway, Spain, Switzerland)
3. The Rise of Dollar during the Interwar Years: 1919–1939

3.1 Reserve Currency: Eichengreen and Flandreau (2009)

Duopoly of Pound and Dollar

Figure 2. Aggregate foreign currency holdings in 1929: a snapshot (16 countries)
Regional Choice of Reserve Currency

Figure 7. Central European countries’ reserves (Austria, Czechoslovakia and Romania)

Figure 8. Non-English-speaking sterling area reserves (4 Scandinavian)

Figure 10. Two Latin American countries (Chile and Colombia)

Figure 11. Japan’s reserves
3. The Rise of Dollar during the Interwar Years: 1919–1939

3.2 Debt Currency: Chitu, Eichengreen and Mehl (2014)

Choice of Debt Currency: 1914–1945

Fig. 2. Global foreign public debt (currency breakdown in USD million; at current exchange rates).

Fig. 5. a: Global foreign public debt?Full sample (selected currency shares as a % of total; at current exchange rates).
Regional Choice of Public Debt Currency

Fig. 4. Global foreign public debt in sterling – Main debtors. (as a % of total, at current exchange rates; in 1929).

Fig. 3. Global foreign public debt in US dollar – Main debtors (as a % of total; at current exchange rates; in 1929).
To rebuild the international monetary system, 44 Allied nations signed The Bretton Woods Agreement in July, 1944. The rules included:

1. Fix a foreign par value for the domestic currency by using gold, or a currency tied to gold, as the numeraire; otherwise demonetize gold in all private transacting.

2. In the short run, keep the exchange rate within 10% of its par value, but leave its long-run par value unilaterally adjustable if the IMF concurs.

3. Free currency convertibility for current account payments; use capital controls to dampen currency speculation.
4.1 Rules of the Bretton Woods System


4. Use national monies symmetrically in foreign transacting, including dealings with the IMF.

5. Buffer short-run payments imbalances by drawing on official exchange reserves and IMF credits; sterilize the domestic monetary impact of exchange-market interventions.

6. National macroeconomic autonomy: each member government to pursue its own price level and employment objectives unconstrained by a common nominal anchor or price rule.
Divergence after the End of Bretton Woods System
BIS(2015): Dollar Zone is Larger than Euro Zone

US dollar weight: >95%  70–95%  30–70%  5–30%  <5%

Source: BIS calculation based on average elasticities of the national currency’s dollar exchange rate with respect to euro/dollar and yen/dollar rates for 2011–14, inclusive.

1 Before 1999, “euro” aggregates available predecessor currencies. 2 The shares sum to 200% because each transaction involves two currencies. 2014 is estimated based on CLS trading data for April. 3 Includes bank deposits of non-banks and debt securities. Bank deposits are proxied by all bank liabilities before 1995. For the euro area, bank deposits exclude deposits vis-à-vis euro area banks. Debt securities are based on BIS international debt securities statistics before 1999 and the ECB’s narrow measure of euro bonds since 1999, which excludes euro area residents’ euro issues. 4 Estimated as each economy’s share of PPP GDP, plus the elasticity-weighted share of all other economies’ PPP GDPs; see Box V.A.

Sources: ECB; IMF; CLS; Datastream; national data; BIS international debt securities statistics; BIS calculations.
### Where Are We Standing?

The international monetary and financial system, then and now

<table>
<thead>
<tr>
<th></th>
<th>Bretton Woods</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary anchor</td>
<td>External: ultimately gold</td>
<td>Internal: domestic mandates (e.g., price stability)</td>
</tr>
<tr>
<td>Exchange rates</td>
<td>Fixed but adjustable</td>
<td>Hybrid (floating at the centre)</td>
</tr>
<tr>
<td>Key currencies</td>
<td>De facto, US dollar</td>
<td>Dollar dominance (less exclusive)</td>
</tr>
<tr>
<td>Capital mobility</td>
<td>Restricted</td>
<td>Hybrid (unrestricted at broad centre)</td>
</tr>
</tbody>
</table>

Source: “Chapter 5 The international monetary and financial system”, in *85th Annual Report*, BIS.
### Wikiwand: Reform of International Monetary Systems

<table>
<thead>
<tr>
<th>System</th>
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<tr>
<td>Flexible exchange rates</td>
<td>Dollar, Euro, Renminbi</td>
<td>US, Eurozone, China</td>
</tr>
<tr>
<td>Special drawing rights standard</td>
<td>SDR</td>
<td>US, G-20, IMF</td>
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<tr>
<td>Gold standard</td>
<td>Gold, Dollar</td>
<td>US</td>
</tr>
<tr>
<td>Delhi Declaration</td>
<td>Currency basket</td>
<td>BRICS</td>
</tr>
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</table>
Discussion

Watch the video of the interview with James Richards and discuss the following questions:

1. Please summarize the possible directions for the reform of the international monetary system mentioned in the video.

2. Do you think the future international monetary system will be the “SDR standard system” dominated by the IMF? If not, what’s your proposal?