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Development of Financial Markets and Institutions

V. Globalization and the Gold Standard

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V. GLOBALIZATION AND THE GOLD STANDARD

1. THE EMERGENCE OF THE CLASSICAL GOLD STANDARD

THE CLASSICAL GOLD STANDARD 1880-1914

Emergence in 1870s

- All countries for the first time on a unified monetary standard
- Only a few exceptions: China, India

Globalization

- A time of increasing international capital mobility
- Vast increase in trade – liberalization across Europe
  - ➢ anti-corn law league in UK 1844, Anglo-French Treaty 1860, Zollverein from 1837 on
- European investors financing development of American, Asian, and African countries
- Merchants, capitalists and bankers wanted to facilitate international exchange
  - ➢ A common standard wanted – but which?

THE INTERNATIONAL MONETARY ORDER UNTIL 1873

The Three Blocs 1820-1873

- Gold standard countries: UK, Portugal, Brazil, Turkey
- Silver standard countries: German states, Austria, Netherlands, Scandinavia, Mexico, Asian countries
- Double standard or bimetallic countries: France, US, Switzerland, Italy, Belgium

An Integrated System

- The silver:gold exchange rate remarkably stable around 15.5:1
- The system hinged on France: huge internal circulation of specie stabilized the exchange rate

THE WORKINGS OF BIMETALLISM

Central Role of France

- The “arbitrageur of last resort” (Flandreau 1996, 866)
- Legal ratio of 15.5:1 – but no free coinage of gold or silver
- The costs of minting (brassage) provided narrow bands within which the market rate could fluctuate around the legal rate

The “Taming” of Gresham’s Law in France

- A fall in the value of silver led to increased demand in France, increased minting – market value rose again (similar for gold)
- Depreciation of gold due to inflow from 1848 and 1850s gold rushes neutralized
- Similarly, large increase in silver production from late 1860s also neutralized

SUPPORTERS AND OPPONENTS OF BIMETALLISM

Industrial Expansion and Demand for Money

- Industrial revolution in gold-standard country increased demand for gold
- Industrial revolution in silver-standard country increased demand for silver

Supporters and Opponents of Bimetallism

- International bankers supported it – bimetallism provided constant arbitrage opportunities, reduced lending risks
- Merchants favoured a monometallic standard – that of their main trading partner
- Northern France preferred gold (UK); eastern France, silver (Germany)

THE BREAKDOWN OF BIMETALLISM

Five Possible Explanations

1. Rising silver production led to silver depreciation, nations forced to abandon silver to avoid inflation
2. Germany's adoption of the gold standard in the 1870s triggered flight away from silver
3. Gold technologically superior: silver bulkier and therefore costlier to use in international trade
4. Spontaneous order explanation: creditor class favoured stable value, this led to convergence on gold (Gallarotti 1995)
5. Simply an accident – French authorities miscalculated in the 1870s, triggering abandonment of silver (Flandreau 1996)

THE BREAKDOWN OF BIMETALLISM

Explanation 1-3 Are Wrong

- Ad 1: the increased silver production in 1860s proportionately smaller than the increase in gold production in the 1850s – so a pure silver standard should have emerged earlier
- Ad 2: the exchange of German silver for gold was not more than the system could absorb: it was only after the restriction of silver coinage in France in September 1873 that silver began to fall
- Ad 3: Specie shipments were charged by nominal value, not weight – the greater bulkiness of silver appears not to have influenced costs, so gold and silver were almost perfect substitutes in international trade

THE BREAKDOWN OF BIMETALLISM

The Right Explanations

- A combination of explanations 4 and 5
  - a general tendency toward unified standard, final push from French monetary policy

Conference 1867 to Agree on Voluntary Standard

- Based on French 25 Franc gold coin
- Stalled due to costs, technical difficulties

French Silver Restriction 1873

- To punish Germans – but created uncertainty, would the French abandon silver?
- Silver flowed into Bank of France, to externalize risk unto the bank
- Bank of France lobbied for suspension of silver coinage 1876

COULD BIMETALLISM HAVE CONTINUED?

Bimetallism Could Have Survived

- Flandreau (1996) argues that France could have absorbed the German silver outflow
- Friedman (1990) argues that an American bimetallic or silver standard possible in 1873
- Bimetallism would have stabilized the value of silver

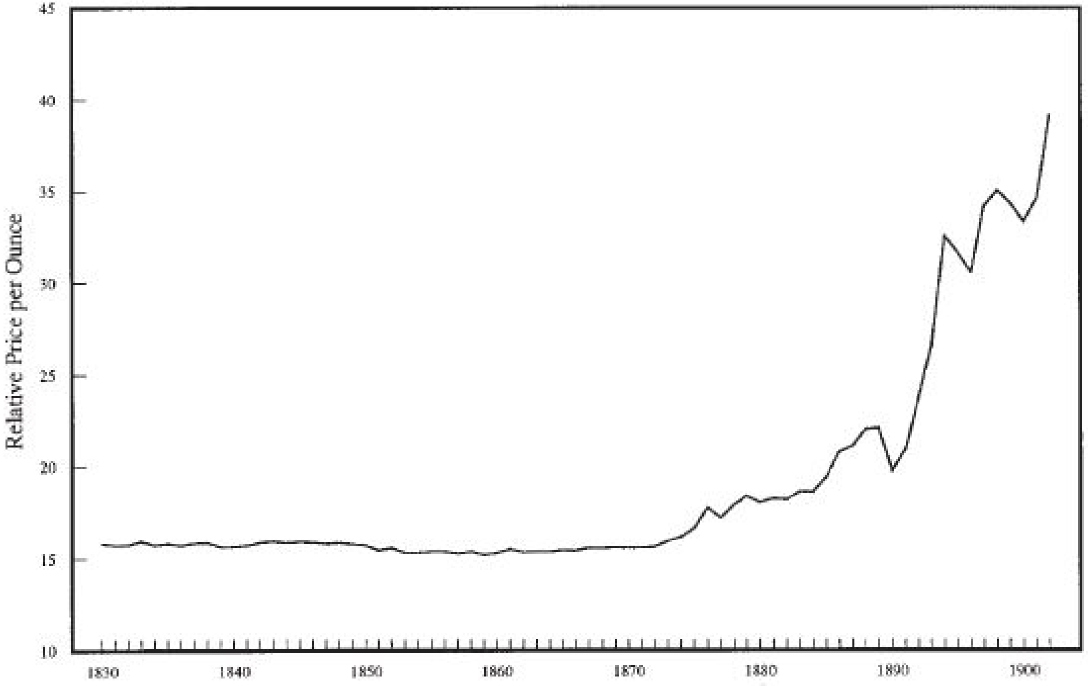
Gold Triumphant 1870s

- Uncertainties from the French-German rivalry had led most countries to adopt gold
- US in 1879 after suspending silver coinage 1873

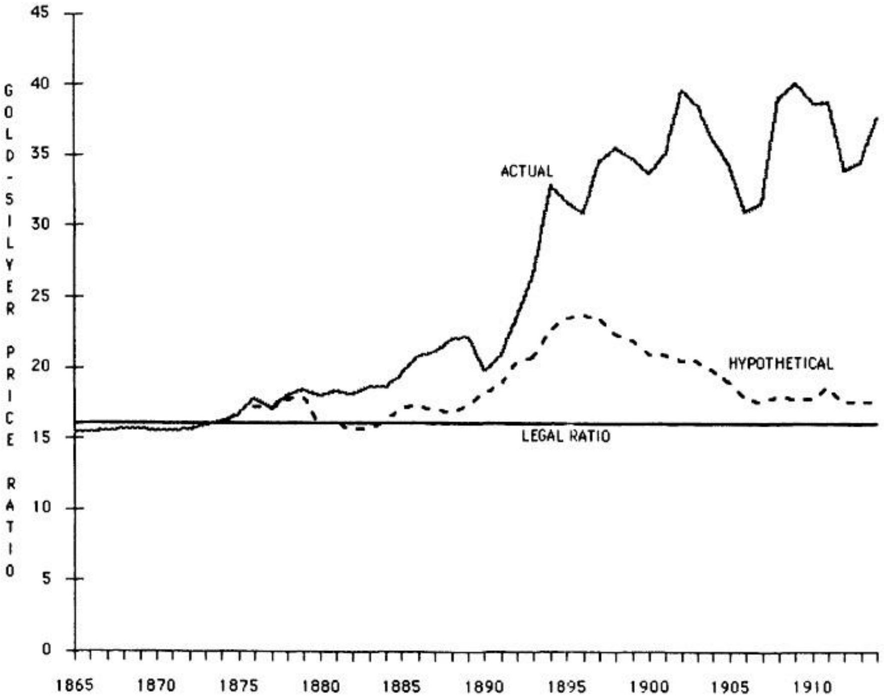
Silver "Inflationism"

- Silver then became seen as an inflationary standard
- Silver agitation became agitation for inflation – it would expand the money supply

RELATIVE PRICE OF GOLD TO SILVER 1830-1902



FRIEDMAN’S (1990, 1173) HYPOTHETICAL



2. THE CLASSICAL GOLD STANDARD

CONSEQUENCES OF GOLD ADOPTION

Deflation

- Demonetizing silver led to *fiat deflation*: governments reduced the money supply
- At the same time, economic expansion led to falling prices – *growth-induced deflation*
- Gold production eventually expanded in response to rising PPM

Gold Standard, Fiat Deflation, and Banking (Hülsmann 2008, 212)

- Huge expansion of banking, central banking followed
- Central bank notes and token coinage, commercial bank deposits
- Falling prices and subdividing gold coins could have been an alternative
- Technologically difficult, legislation did not allow for smaller coins
- Thus, no alternative to fiduciary media

GERMANY 1875-1913 (HÜLSMANN 2008, 212)

Table 3: Evolution of the Money Supply in the German Reich (in Mill. Mark)

End of Year	Money Stock (Precious Metal)	Cash Bank Reserves (incl. note issuing banks)	Bank Deposits of Non-Banks (Current Accounts, Time and Savings Deposits)
1875	2.634	721	3.975
1880	2.400	738	4.757
1885	2.299	883	6.443
1890	2.476	1.094	8.809
1895	2.870	1.224	11.678
1900	3.244	1.195	16.126
1905	4.100	1.356	23.759
1910	4.734	1.616	33.825
1913	5.200	2.170	38.420

BRITISH WHOLESALE PRICES 1873-1913

STRUCTURE OF GOLD CIRCULATION 1880-1914

Reserves in the Form of:		Domestic Circulation in the Form of:	
		Largely Gold Coin	Gold, Silver, Token Coinage, and Paper
	Gold	England Germany France United States	Belgium Switzerland
	Largely Foreign Exchange	Russia Australia South Africa Egypt	Austria-Hungary Japan Netherlands Scandinavia Other British Dominions
	Entirely Foreign Exchange		Philippines India Latin American Countries

FINANCIAL INTEGRATION AND GOLD

A Global Capital Market

- The integration of the global capital market accelerated under gold
- Gross foreign investment greatly increased (Schularick and Steger 2010)
- 200 percent of GDP in Argentina, South Africa, Chile
- Above 100 percent of GDP in Brazil, Mexico, Egypt, Malaysia
- Foreign investment causally linked with growth: capital-poor countries imported the needed capital to develop economies
- Financial system centred on London, but New York, Paris, and Berlin also grew in prominence

GOLD FLOWS AND FINANCIAL FLOWS

Flows of Gold and the Law of One Price

- Purchasing power of gold tended to equalize across the globe
- Increased demand for gold led to higher PPM → inflow
- Gold production led to lower PPM → outflow

Gold and Capital Markets

- Gold unified global markets (McCloskey and Zecher 1985)
- International capital flows did not require a flow of money
- Capital-importing countries would export financial assets
- English investors in Argentina lent the capital to purchase British goods for Argentina
- The Argentine current account deficit would be matched by a capital account surplus
- The flow of financial assets is sufficient to balance investment flows

GOLD, FINANCE, AND CREDIT EXPANSION

Complications: Banking and Credit Expansion

- National banking system led to a credit superstructure on top of gold (Hayek 1937)
- A change in distribution of global money stock only partly brought about by gold flows

Credit Structure and Supply and Demand for Money

- The fiduciary money supply shrank and expanded to adjust to demand
- This adjustment was "automatic" – but changes in the credit structure disruptive
- Central bank and commercial banks, to prevent an outflow of gold, had to shrink the money supply – call in loans, refuse to roll over loans etc.
- A change in national money demand brought about changes in credit and investment
- Purely due to the fiduciary element in the money supply

GOLD, FINANCE, AND CREDIT EXPANSION

Gold Flows and Investment

- An inflow of gold similarly stimulated credit expansion
- As gold flows into the central bank, central bank issues more bank notes, reserves
- An increase of reserves (cash or CB reserves) in banks lead them to extend more credit
  - Always in line with their desired reserve ratio
- Increased investment results – but no extra savings have been made available
  - An unsustainable boom results

Credit Must Adjust to Changes on the Money Side

- The whole adjustment is squeezed through the banking system
- Adjustment of credit is imposed on top of the change in cash balances

GOLD, FINANCE, AND CREDIT EXPANSION

[T]here is indeed a very considerable difference between the case where a country, whose inhabitants are induced to decrease their share in the world's stock of money by ten per cent, does so by actually giving up this ten per cent in gold, and the case where, in order to preserve the accustomed reserve proportions, it pays out only one per cent in gold and contracts the credit super-structure in proportion to the reduction of reserves. It is as if all balances of international payments had to be squeezed through a narrow bottle neck as special pressure has to be brought on people, who would otherwise not have been affected by the change, to give up money which they would have invested productively.

- Hayek, *Monetary Nationalism and International Stability* (1937, 30-31)

3. THE GOLD-EXCHANGE STANDARD

THE BREAKDOWN OF THE CLASSICAL GOLD STANDARD

Causes

- The possibilities of credit expansion limited under the gold standard
- A limit on government borrowing: central banks could not simply print money to finance governments and continue redemption
- World War 1 very costly, to finance it governments simply suspended convertibility
- Possible due to concentration of gold stock, widespread use of banknotes, CB money

Immediate Results

- Central banks and banking system financed the war with new money – disguising its true costs from the citizens
- High inflation the result in all countries

RETURN TO GOLD (?)

Depreciation and Return to Gold

- All countries wanted to return to gold after the War – but currencies much depreciated
- US an exception
- British pound 30 percent below par
- Hyperinflation in Germany and Austria

Return to Gold

- France returned to gold at depreciated rate in 1926/28 – 20 percent below par
- Britain decided to return to the old par in 1926
- This would require sharp contraction in money supply, fall of prices and wages
- British labour unions unwilling to accept this – the result was high unemployment
- BoE also did not stick to the necessary tight policy

THE GENOA CONFERENCE 1922

Crucial Changes From the Classical Gold Standard

- Agreed at an international conference in Genoa 1922
- Countries encouraged to keep reserves in convertible currency – i.e., British pounds
- Citizens could no longer redeem banknotes in gold coin, only in bullion

The Gold-Exchange Standard

- New system allowed for greater expansion
- New central banks set up around the world to manage the system
- It supported Britain and British trade deficits, Britain no longer had to settle accounts in gold – British inflation could continue without gold outflows

THE GOLD-EXCHANGE STANDARD AND CREDIT EXPANSION

Credit Duplication

- An international money flow no longer led to contraction of credit in one country and expansion in another
- Credit *duplication* instead resulted
- English credit expansion led to deficit in balance of payments, sterling outflow
- Sterling claims then used as basis for credit expansion in other countries

The USA in the System

- US still on a gold standard – but helped prop up the British position (Rothbard 1998)
- To stop gold flow from Britain, US credit expansion orchestrated by the Fed
- The result: economic boom in the 1920s – and crash 1929

A "GROTESQUE CARICATURE" OF THE CLASSICAL GOLD STANDARD

The main impact of the gold-exchange standard was, through the aforementioned duplication phenomenon [of money and credit structures], to dissociate the evolution of purchasing power from the requirements of economic expansion and to bring it under the unpredictable influences of international capital shifts.

- Jacques Rueff, *The Monetary Sin of the West* (1972, 53-54).

THE END OF THE GOLD-EXCHANGE STANDARD

- May 1931: Failure of the Creditanstalt in Austria, despite support from financiers and the Austrian central bank
- September 1931: the Bank of England suspends convertibility
- March 1933: Roosevelt becomes American president, devalues the dollar from $20 per ounce of gold to $35. Private ownership of gold outlawed
- Result: huge inflow of gold, since the dollar greatly undervalued at $35. Inflation in the form of gold certificates
- 1935-6: Remaining European gold bloc countries – France, Switzerland – abandon the gold standard
- Inconvertible paper money greatly expanded scope of government intervention – but doubtful whether this cured the economic and social ills of the 1930s

4. THE BRETTON WOODS SYSTEM

BACKGROUND

- Reconstruction of international economic relations after WWII
- Britain financially weak, United States now the central country
- Concentration of gold stock in US in 30s
- US escaped the ravages of the war
- A general desire to return to international order and open trade after the chaos of the interwar years
- Counterpart to GATT/WTO
- More "freedom" and flexibility wanted – i.e., possibility of gold redemption needed to be curbed to allow credit expansion

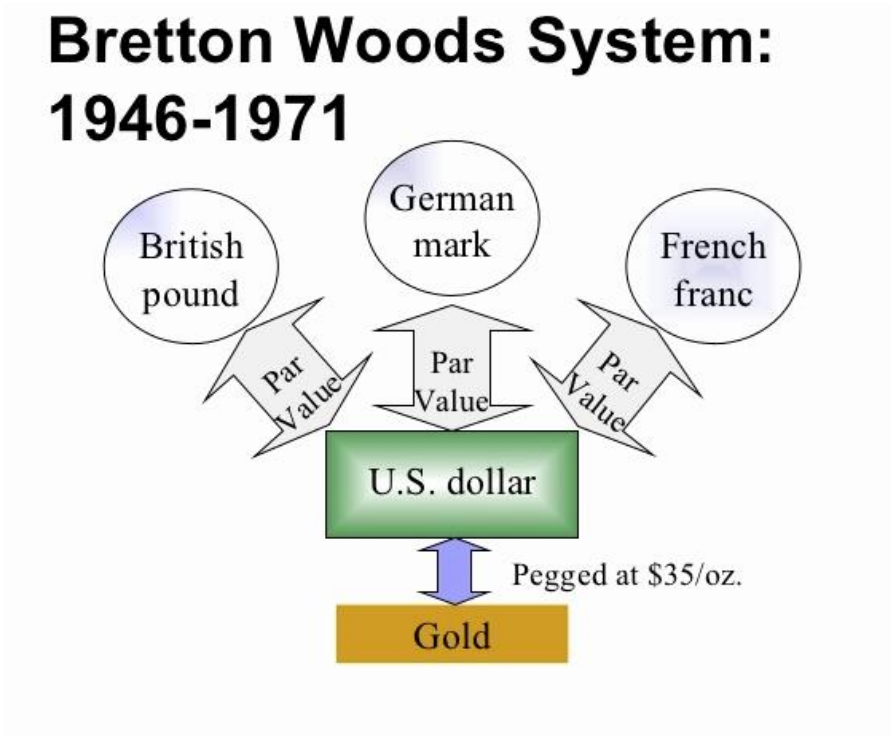
THE BRETTON WOODS CONFERENCE

Reconstruction of International Monetary Order

- Representatives from 44 nations met in July 1944 at Bretton Woods
- US most important, UK next
- Key conflict between American and English goals (Steill 2013)
- UK wanted lenient conditions for debtor nations
- In case of a balance of payments deficit, creditors should bear part of the burden
- UK wanted to externalize costs of their own inflation
- US wanted a reestablished order based on gold – and the dollar
- Dollar replacing sterling as reserve currency
- US position won – loan concessions to England through IMF

THE BRETTON WOODS SYSTEM

- The dollar pegged to gold
- Other currencies pegged to the dollar
- Only dollars redeemable
- And only by governments



EUROPEAN PROBLEMS AND SOLUTIONS

German Currency Reform 1948

- Bank balances converted into D-Mark
- The larger share of balances annulled – fiat deflation
- D-Mark periodically revalued to lessen pressure on the dollar

European Payments Union 1950-58

- Central clearing institution to facilitate trade
- Each country would clear trade with others monthly
- Accounts kept in "European Units of Account" defined as 0.888671 grams of gold – the supposed gold content of $1
- Monthly clearing prevented the EPU from becoming inflationary

PROBLEMS OF BRETTON WOODS

The “Dollar Shortage” -1958

- European currencies overvalued at official rates
- Marshall Plan alleviated this – provided dollars to Europe
- EPU enabled European trade despite the problem
- System fixed 1958 by series of devaluations (France late 1958)

Dollar Inflation 1958-

- Cause: American inflation, to finance welfare state and war
- Europeans increasingly redeemed, put pressure on US reserves
- Two-tier gold market 1968
- End of dollar convertibility August 1971

THE EURODOLLAR MARKET

Nature of Eurodollars

- Eurodollars are dollar demand deposits outside US jurisdiction, in European banks
- The Eurodollar emerged in the 1950s as an (unintended?) consequence of the Bretton Woods System (Machlup 1970)
- USSR also an impetus: kept dollar balances in London to protect them from US

Eurodollars in the Monetary System

- Eurodollars a way around American regulations: interest ceilings and reserve requirements (Friedman 1969)
- Eurodollars ultimately based on reserves in the US
- Eurodollar banks had accounts with American banks
- American banks received reserves from the Fed

CORE PROBLEM OF BRETTON WOODS

Nature of Bretton Woods

- Bretton Woods simply the gold-exchange standard based on the dollar
- Credit expansion and duplication continued
- Elimination of gold redemption for citizens expanded the limits to credit expansion
- The US could pay for its deficit simply by exporting dollars and dollar claims

Core Weakness

- European official institutions eventually unwilling to keep dollars
- Pressure to redeem for gold continued to build
- Upwards pressure on the gold price – two-tier market 1968
- Run on the US led to suspension in August 1971

5. CAPITAL FLOWS UNDER THE THREE STANDARDS

CAPITAL FLOWS AND THE MONETARY SYSTEM

On a "Pure" Gold Standard

- No connection between money and capital flows
- Credit expansion in one country leads to price-specie flow mechanism
- Gold will flow from expanding country, leading to reversal

On the Classical Gold Standard

- Money flows lead to gold flows and contraction/expanding of credit
- Capital movements do not affect money flows – so long as they don't take the form of shipments of money

CAPITAL FLOWS AND THE MONETARY SYSTEM

On the Gold-Exchange Standard

- Credit expansion in core countries (UK, US) did not lead to gold outflow
- Convertible assets used as reserves for further credit expansion – credit duplication

Under the Bretton Woods System

- Similar to the gold-exchange standard – but intensified
- Gold less accessible
- Demand for financial assets from core country (US) stimulated
- International capital flows therefore skewed: inflow into US stimulated

CAPITAL FLOWS UNDER BRETTON WOODS (AND AFTER)

"Natural" Payment Dynamics

- Payment for goods and services from the US should have consequences for the dollar
- Under gold: redemption leading to lower money supply
- After 1971: lower exchange rate

Dollars and Dollar Claims as Reserves

- Instead of redemption/sale of dollars, other countries keep them as reserves
- Dollars used as basis for money supply expansion
- Positive current account can be example of this – of capital export to US
- The monetary system explains the weird pattern of capital flows – from poor to rich countries (Lucas 1990)

A COMPARISON OF THE MONETARY SYSTEMS

Standard	Money Flows	Capital Flows	Impact
Pure Gold Standard	Pure Gold Flows	Flow of Financial Assets	None/None
Classical Gold Standard	Gold Flows, Credit Exp/Con	Flow of Financial Assets	Some/None
Gold-Exchange Standard	Minimal Gold Flows, Credit Dup.	Capital Flows to Core	Some/Some
Bretton Woods System	Dollar Flows, Gold Flows to Europe	Capital Flows to the US	Some/Some

6. LITERATURE

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