

FUTURE-PROOFING THE INTERNATIONAL MONETARY SYSTEM

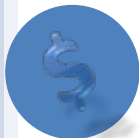
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G20 Global Financial Stability Conference

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Seoul, Korea

September 21, 2022



*The views expressed in this presentation are those of the author and should not be attributed to the IMF, its Executive Board, or its management.

MOTIVATION

- Global economy undergoing massive changes...
 - Scars from the **global financial crisis** and Covid-19 **pandemic**
 - **Supply-chain disruptions**; resurgence of **inflation**
 - Block-chain, **digital monies** and **technologies**
 - Political and geopolitical **fragmentation**
 - **Climate change**
 - These will have implications for the loci of production and consumption and therefore countries' BOP (capital flows, exchange rates)
- What does history teach us about the resilience of the international monetary system (IMS) in the face of such changes?
- What can we do to make the system more resilient?

CENTRAL THESIS OF THE TALK

○ Fragility of the International Monetary System 1/

- The IMS—by design or evolution—fits a particular global economic configuration. It becomes brittle and cannot easily accommodate major shifts in the global economy:
 - Collapse of interwar gold-exchange standard (1931)
 - Breakdown of Bretton Woods (1971)
 - Global financial crisis (2008)
- Despite the long passage of time (75 years) separating these episodes, each represents a failure of the IMS to meet one or more of its core challenges...

1/ The IMS is the set of arrangements, rules, practices, and institutions under which payments are made for cross-border transactions, including exchange rate regimes and official arrangements through which countries have access to liquidity through purchases from the IMF or under official currency swap arrangements

CENTRAL THESIS OF THE TALK (CONT.)

- Challenges of International Monetary System:
 - Preventing crises and facilitating adjustment for countries facing balance of payments problems (“without measures destructive to national or international prosperity”)
 - Ensuring an equitable burden of adjustment between deficit and surplus countries; shared responsibility between (gross) capital-source and capital-recipient countries
 - Regulating the supply of global liquidity
- Shifts of the world economy will happen but are hard to predict...
- **Future-proofing** the IMS should therefore focus on strengthening institutions, mechanisms, instruments to help it meet these **core challenges**

ROADMAP

○ Historical episodes

- Collapse of interwar gold exchange standard
- Breakdown of Bretton Woods
- Global financial Crisis

○ Making the system more resilient

- Current configuration
- What more can (should) we do?

INTERWAR GOLD-EXCHANGE STANDARD

Classical

- Main creditors: Britain, France, Germany; largest debtor: United States
- Creditors (esp. Britain) willing to import from debtors (foodstuffs, raw materials)
- Govts./central banks less concerned about unemployment; wages flexible
- War obligations (Napoleonic, 1793-1815; 1870) paid for by exports—creditors willing to accept imports
- Capital flows—long-term; short-term for seasonal; stabilizing due to credible gold standard

Interwar

- Main creditor: US; main debtors: Germany, Austria, eastern Europe; UK
- Surplus countries (esp. France, US) sterilize reserves inflows
- Govt./central bank more sensitive to unemployment
- Less flexible wages/prices
- Small investors want fixed-income assets—not dividends that vary with profits
- Creditors/recipients of reparations not willing to accept corresponding imports

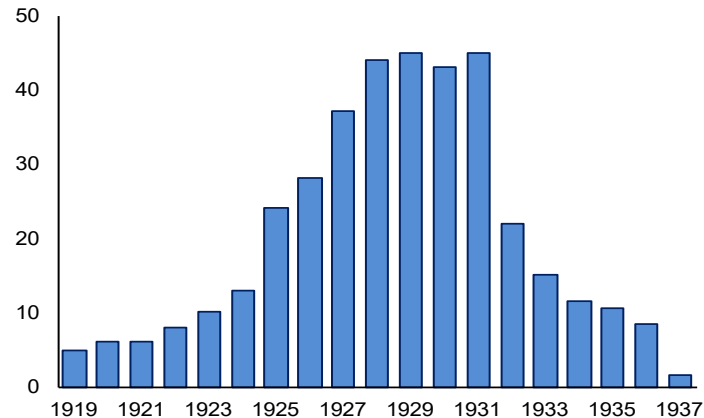
RE-ESTABLISHING THE LIBERAL INTERNATIONAL ORDER

After cessation of WWI hostilities, major powers seek to re-establish the liberal international order



All artificial control of operations in exchange... is futile and mischievous
Genoa (1922) conference

Rise and Fall of the Interwar Gold Standard
(Total number of major countries on gold/gold exchange standard)

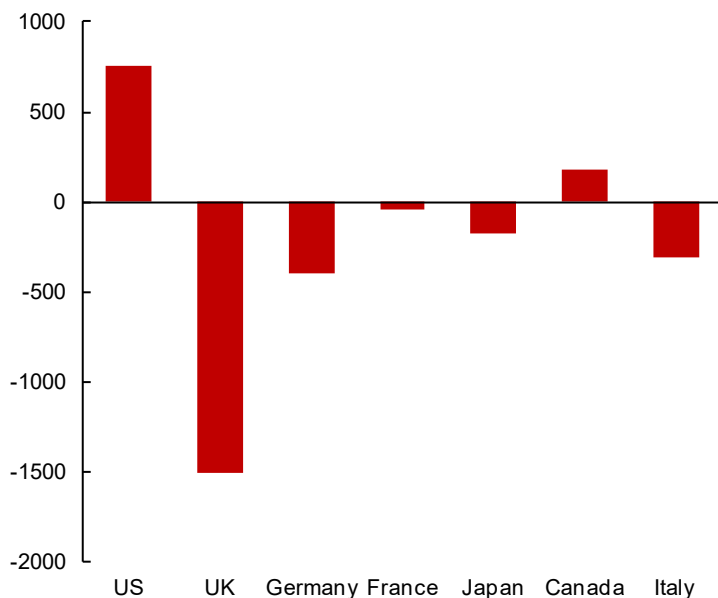


- Gold (exchange) standard re-established
- Germany in 1924, Britain in 1925 (at pre-war parity), France in 1926 (de facto), at much depreciated rate
- By 1928, 45 out of 54 major economies on gold

POST-WAR SURPLUSES AND DEFICITS

But surplus countries do not play by the “rules of the game”...

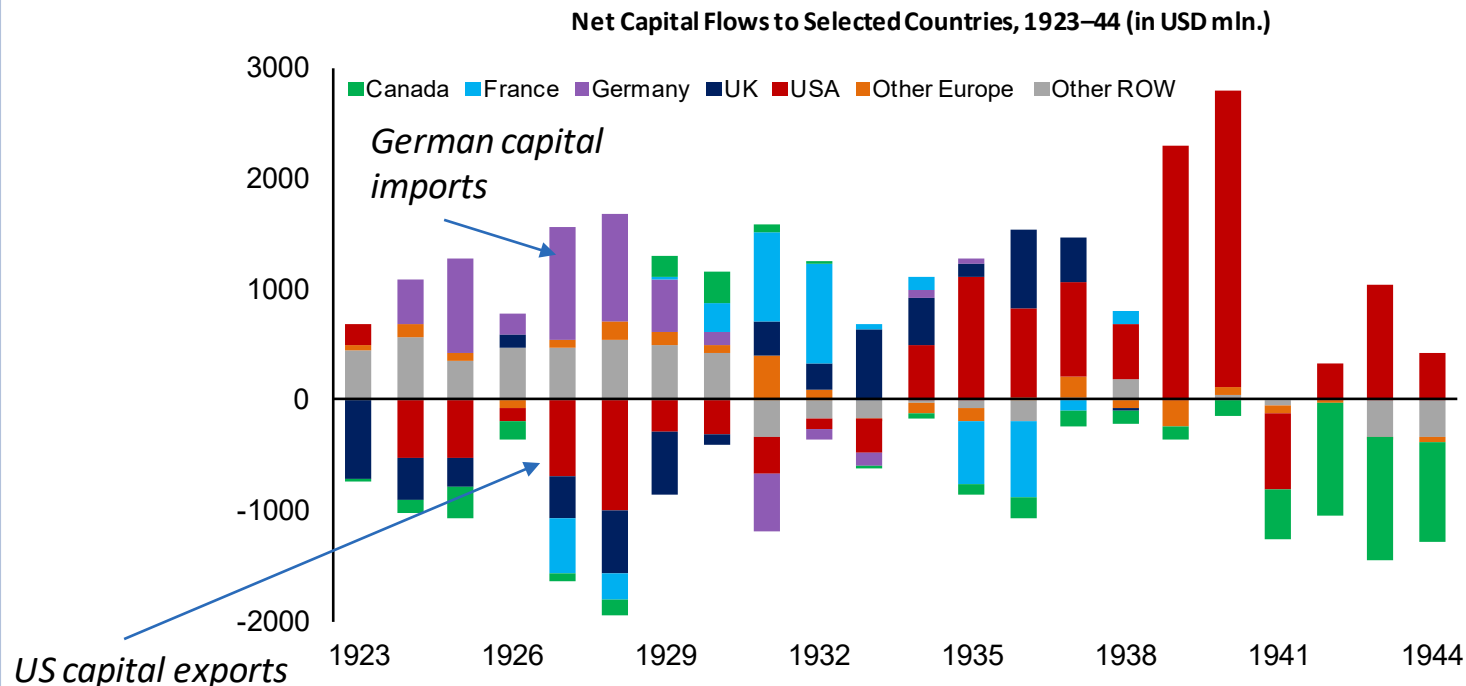
G7: Trade balance, 1921-28 (USDmln.)



Source: Total exports and imports obtained from UNSTATS.

- Post-WWI, US becomes major trade surplus country; France after return to gold at devalued exchange rate
- Both France and the US sterilize their accumulation of gold reserves, vitiating the external adjustment process
- The *burden of adjustment* thus falls on the deficit countries—which have to adopt restrictive macro policies, imparting a deflationary bias to the world economy

CAPITAL FLOW BOOM...AND BUST



Source: League of Nations (1931, 1932, 1939, 1948).

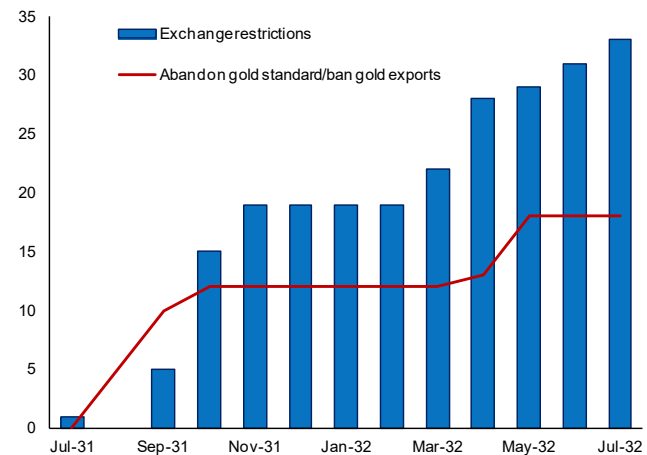
Note: Net capital flows include errors and omissions. Countries are included based on data availability, as follows: Canada (1923-44); France (1927-38); Germany (1924-35); UK (1923-38); USA (1923-44); Other Europe: Czecho-Slovakia (1925-37), Denmark (1923-39), Estonia (1924-38), Greece (1929-38), Hungary (1923-37), Latvia (1923-37), Netherlands (1929-39), Norway (1923-44), and Sweden (1923-44); Other ROW: Argentina (1923-44), Australia (1923-37), Dutch Indies (1925-39), India (1924-38), Japan (1924-36), New Zealand (1927-37), South Africa (1923-37), and Turkey (1926-33).

- Following Dawes Loan and Plan, lending boom from US to Germany and Eastern Europe, intermediated by London banks
- But 1928, NY Stock Exchange boom, draws capital to US, exacerbated by Fed tightening...sudden stop of flows to Europe.

END OF THE LIBERAL INTERNATIONAL ORDER

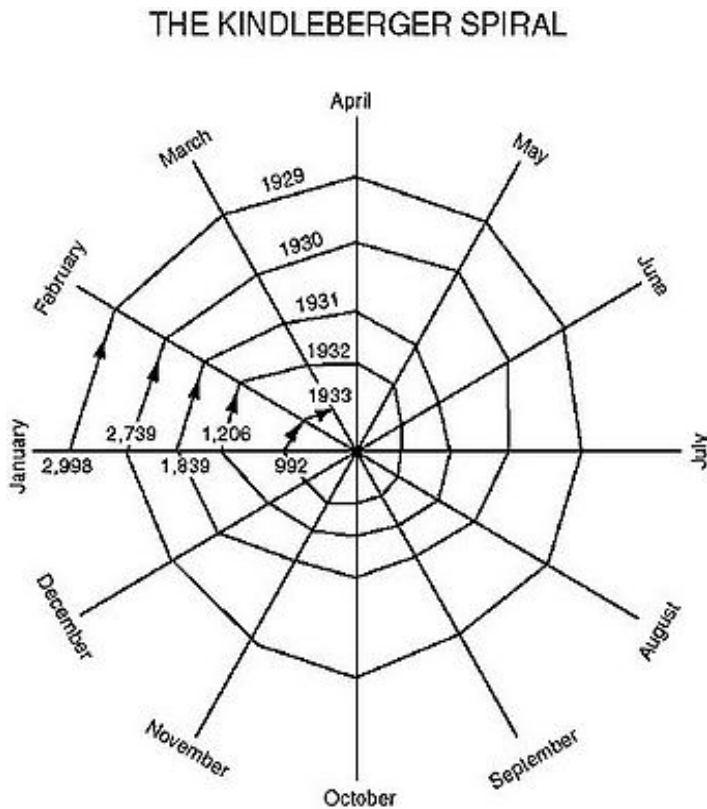
- Lending by US did not solve the adjustment problem (surplus countries not willing to import), it only postponed it
- Adjustment by **deficit** countries made more difficult by:
 - France's insistence on converting accumulated foreign currencies into gold
 - US Federal Reserve raising interest rates in 1928 to prick stock market bubble
- Resulting in a huge **deflationary** shock and **demise** of the liberal international order:
 - Countries leave gold standard
 - Competitive devaluations
 - Exchange and trade restrictions
- **Collapse** of international trade, commodity prices, incomes, employment...

Exchange Restrictions and Abandoning of Gold Standard, July 1931-July 1932
(Total number of major advanced and EM countries)



COLLAPSING TRADE AND INCOMES

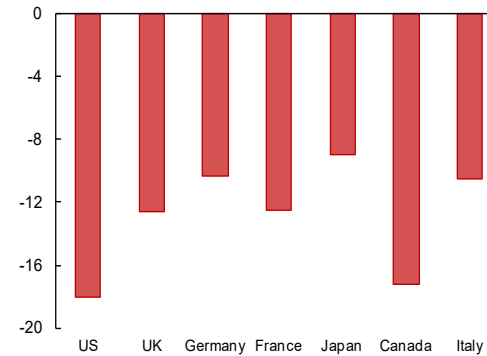
World Trade, Jan 1929-Mar1933 (In USD mln.)



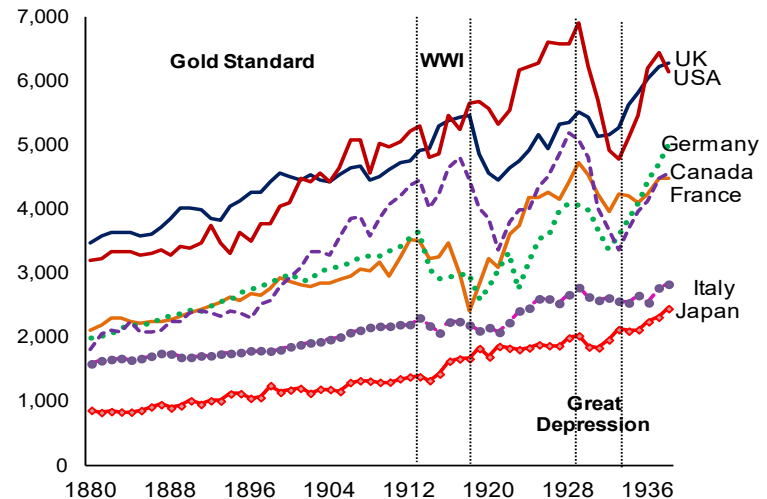
Charles Kindleberger, "The World in Depression."

Note: Total imports of 75 countries (monthly values in terms of old US gold dollars (mln.))

G7: Average Annual Export Decline, 1929-33 (In percent)

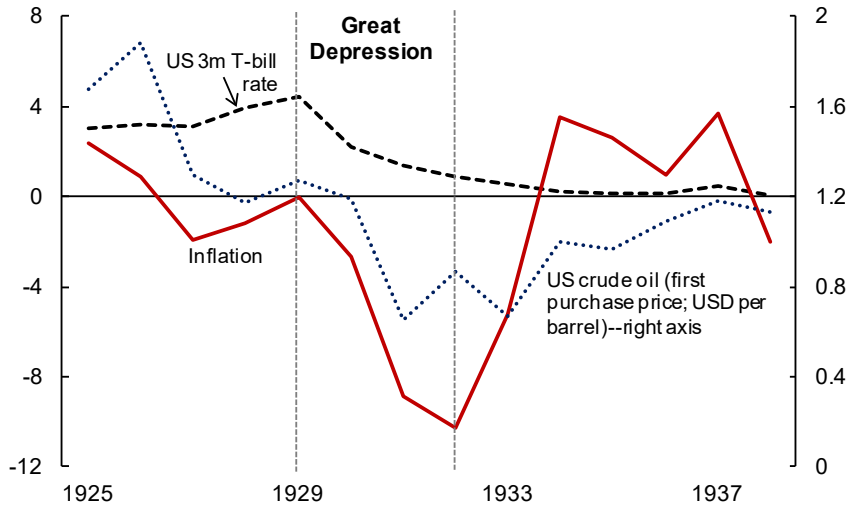


G7: Real GDP per capita, 1880-1938 (1990 Int. GK\$)

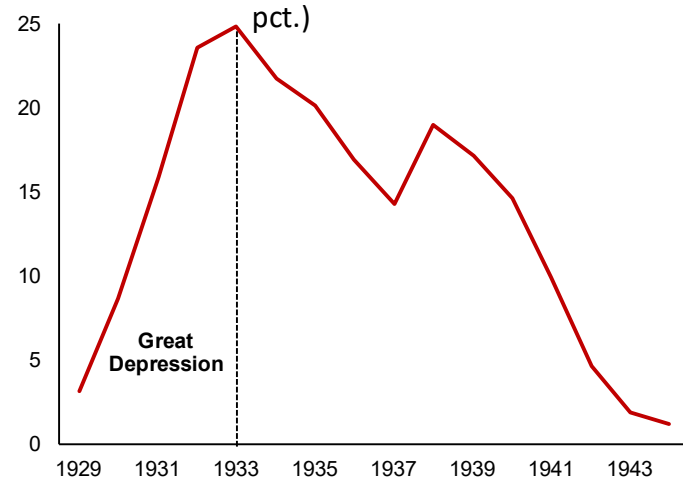


THE GREAT DEPRESSION (1929-33)

US: Interest rates, inflation, and oil prices, 1925-38
(In pct.)

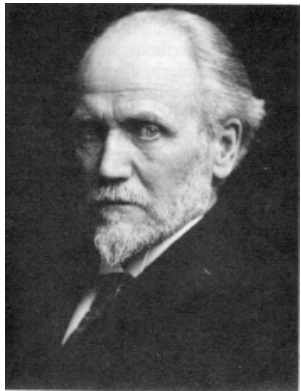


US Unemployment Rate, 1929-44 (In



COULD DEFLATION AND THE DEPRESSION HAVE BEEN AVERTED?

- Lecturing in 1928, before the Great Depression, Gustav Cassel noted:

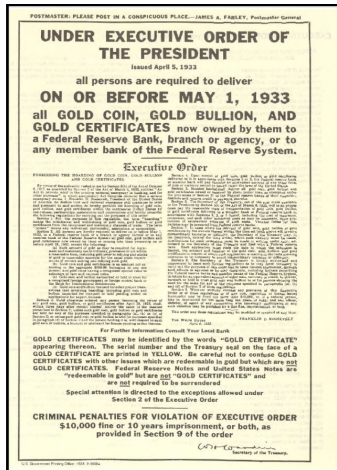


*“The [alternative to international monetary cooperation] would obviously be a general and ruthless competition for gold, a consequent continual rise in the value of gold [**and a decline in the price of all other goods**], and a corresponding, world-wide economic depression for an unlimited future. A very disagreeable consequence...would be a general **aggravation of all debts** contracted in a gold standard, doubtless in many cases followed by an incapacity to pay debts or a refusal to do so.”*

- The deflationary problem could have been solved in several ways (Irwin, 2012):
 - Surplus countries could have played by the rules of the game—allowing their real exchange rates to appreciate by not sterilizing gold inflows as well as engaging in expansionary fiscal policies
 - The global stock of reserves could have been increased by re-valuing gold—a joint and simultaneous devaluation of all currencies would have left bilateral real exchange rates unchanged but given greater scope for monetary easing by deficit countries
 - Deficit countries could have devalued; or surplus countries could have extended credit to deficit countries

BUT INSTEAD...

- Beggar-thy-neighbor policies:
 - Abandoning the gold standard and devaluing the currency (Britain in 1931; US in 1933)
 - Imposing trade barriers to improve the BOP by restricting imports (Britain's Import Duties Act in 1932, US' Smoot-Hawley tariff in 1930)
 - Imposing exchange restrictions to restrict capital outflows and imports, thus reducing BOP pressures both through the current and capital accounts (e.g., Austria, Germany, Hungary, Poland)
- As a result of which trade and incomes fell, prolonging the Depression



BREAKDOWN OF BRETTON WOODS

Bretton Woods Conference

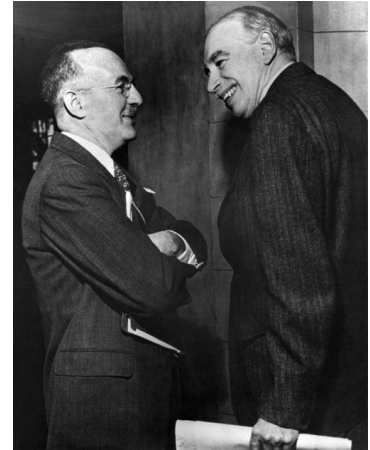
- US economic and financial hegemon—expected to be major surplus country
- US undertakes to make dollar “as good as gold” for official convertibility
- Limited private capital flows; extensive restrictions
- Only member can propose change in parity; IMF will approve if “fundamental disequilibrium”

1960s-1970s

- By early 1960s, US is running balance of payments deficits
- Kennedy (1962) “we are not going to devalue”
- By late-1960s, US also running trade deficits
- Eurodollar market; dismantling of capital controls
- Huge increase in private capital flows—speculative attacks

COMPETING PLANS AT THE BRETTON WOODS...

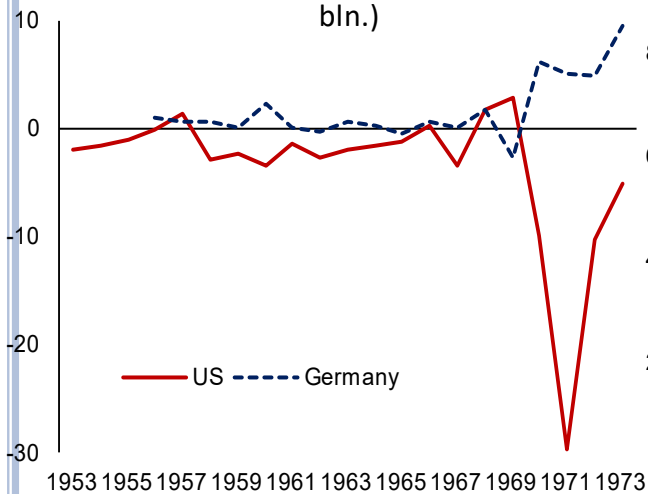
- John Maynard Keynes aimed to address the IMS' three challenges through:
 - The “International Clearing Union” — large quota, allowing significant financing to tide countries over temporary BOP difficulties
 - Symmetric interest charges/penalties for deficit and surplus countries—not all burden of adjustment on deficit countries
 - Settlement in bancor—could be created or revalued by the International Clearing Union, thus regulating global liquidity
- Harry Dexter White's Plan dominates:
 - No International Clearing Union; more a “credit union” with limited quota and hence lending
 - No bancor—dollar to supplement gold; countries de facto peg to dollar
 - No penalty for surplus countries—a weak “scarce currency” clause.
 - Importantly, it is only the member—not the IMF—that can propose a change (revalue or devalue); IMF can only approve or not approve.



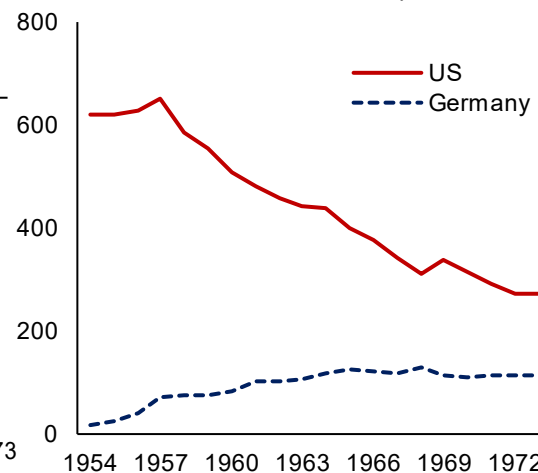
SYSTEM UNDER STRESS

- US begins to run persistent BOP deficits through the late 1950s and early 1960s, as Americans invested abroad—especially, in Europe
- But US could not devalue, being the lynchpin of the system—and surplus countries (notably, Germany and Japan) would not revalue!
- Deficits for Vietnam war/Great Society programs worsened situation further
- US imposes outflow control (IET) in 1966-73, while Germany adopts a capital inflow controls program over 1968-73 as investors speculate against possible dollar devaluation

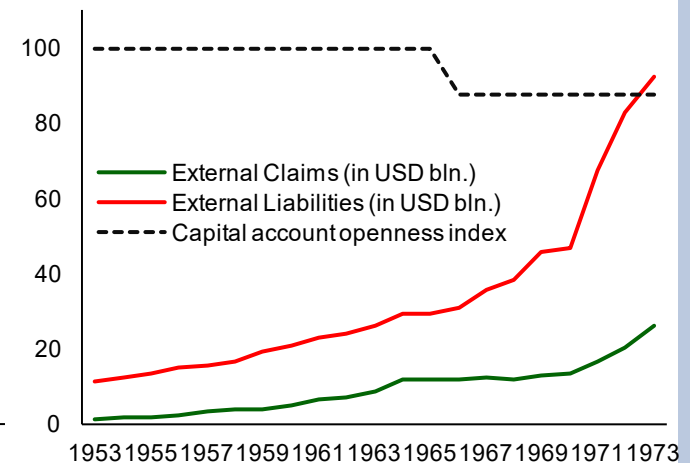
Overall Balance of Payments (In USD bln.)



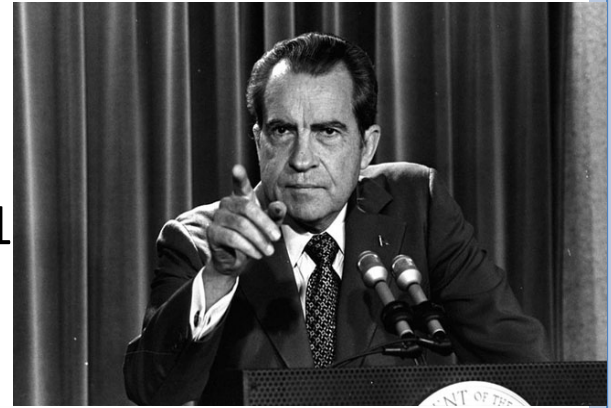
Official gold holdings (In mln. of oz.)



US: Foreign assets vs. liabilities (In USD bln.)



THE “NIXON SHOCK” ...SMITHSONIAN

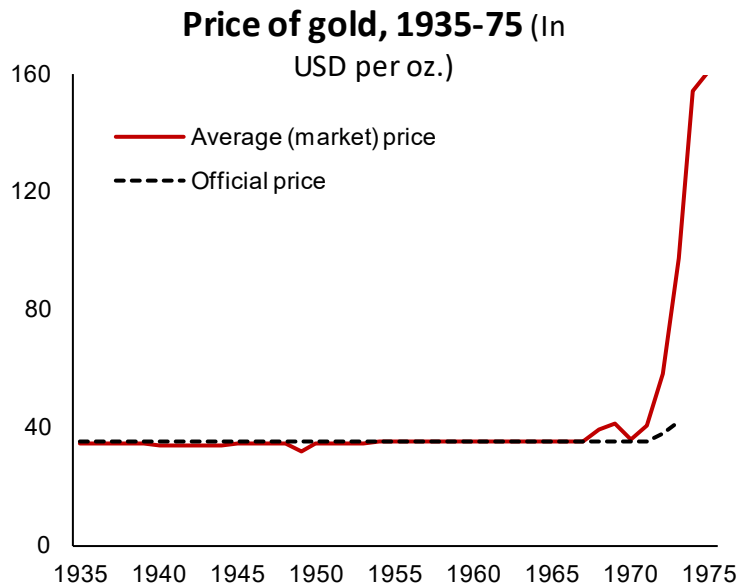


- Series of measures by President Nixon on August 15, 1971 to pressure surplus countries to revalue:
 - Suspension of gold convertibility
 - 10 percent across-the-board tariff
 - Wage and price controls
- The Smithsonian Agreement (December, 1971)
 - US dollar devalued from \$35/oz to \$38/oz
 - European and Japanese currencies revalued (average devaluation of the dollar against other currencies was 10 percent)
 - But the US would no longer convert dollars to gold

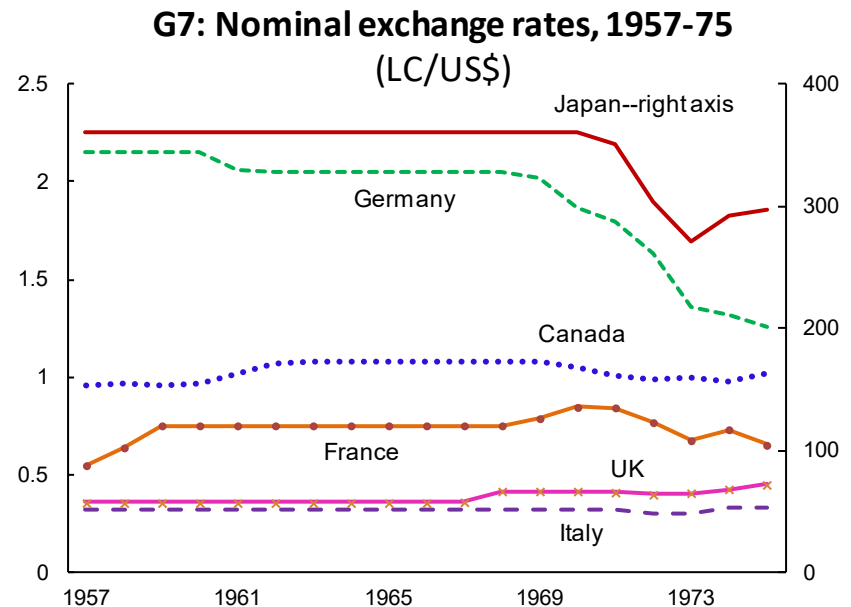


DAWN OF THE FLOATING EXCHANGE RATE SYSTEM

- Smithsonian Agreement could not be sustained for long...
 - The pound sterling started to float against the dollar in June 1972
 - US dollar had to be devalued by 10 percent in February 1973
 - After massive foreign exchange interventions, the fixed exchange rate system collapsed into generalized floating



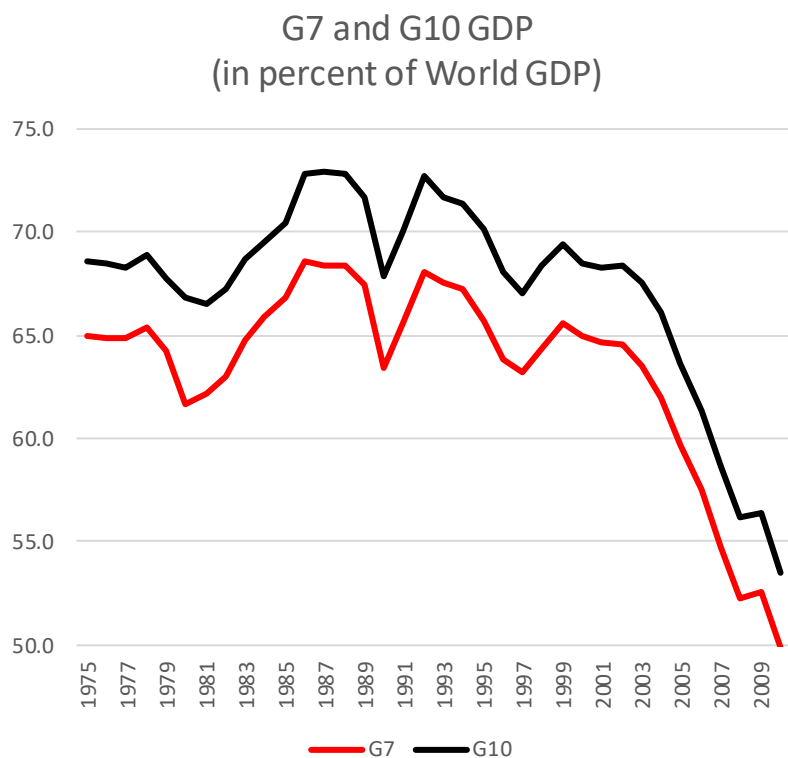
Source: National Mining Association (http://www.nma.org/pdf/gold/his_gold_prices.pdf)



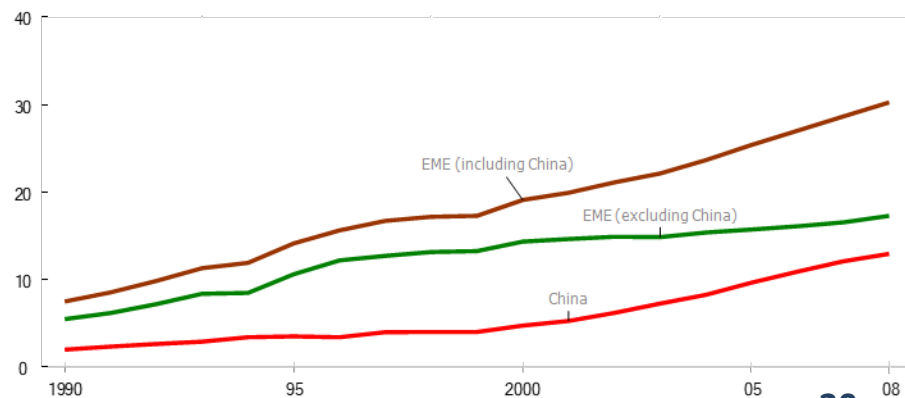
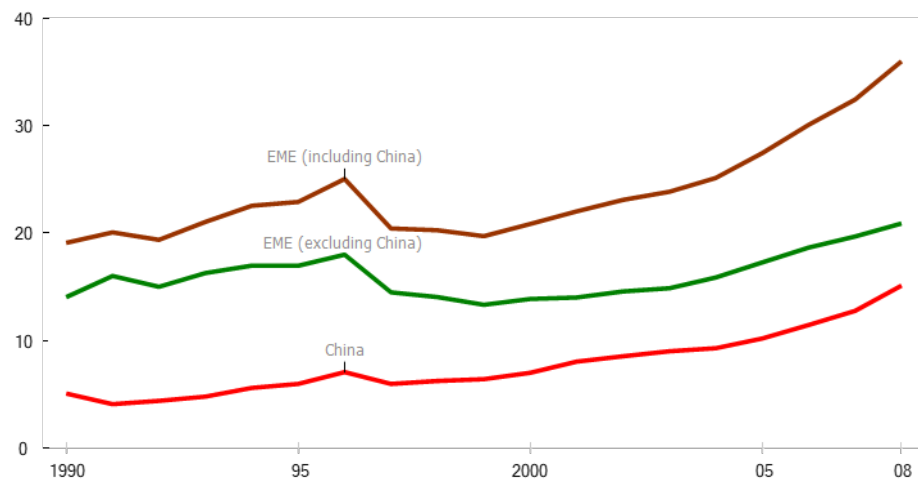
Source: IMF's INS database.

GLOBAL FINANCIAL CRISIS

Advanced Economies: Share of GDP: 1975-2008

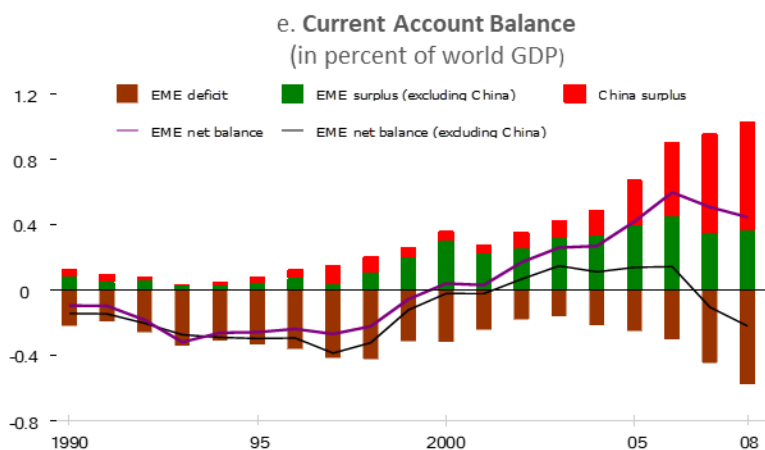


Emerging Markets: Share of Manufacturing Production and Exports: 1990-2008

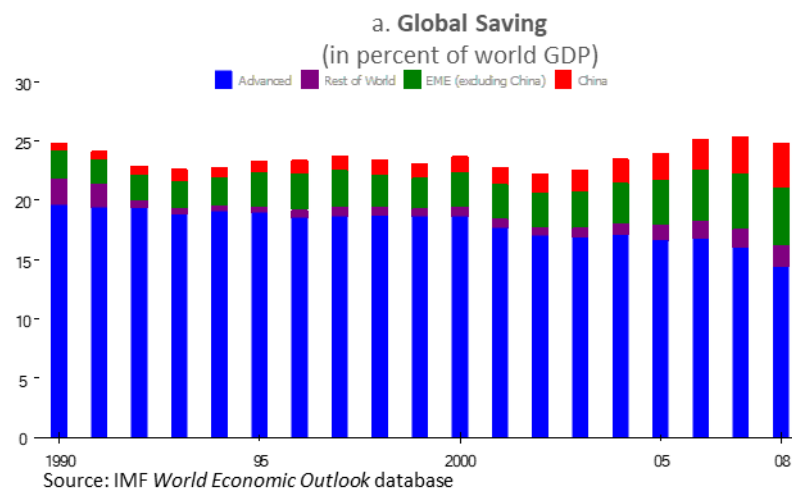


SHIFT IN MANUFACTURING PRODUCTION AND EXPORTS TO EMEs

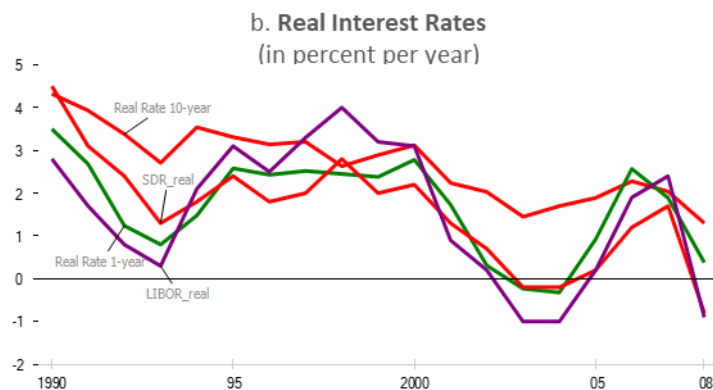
- Asian crisis → export-led growth (avoid overvaluation, reliance on foreign capital)
 - Higher income of EME workers (with high saving propensity), higher global saving and lower global real interest rates
 - Global imbalances (Bretton Woods II)—EME reliance on external demand for growth



Source: IMF World Economic Outlook (WEO) and International Financial Statistics



Source: IMF World Economic Outlook database

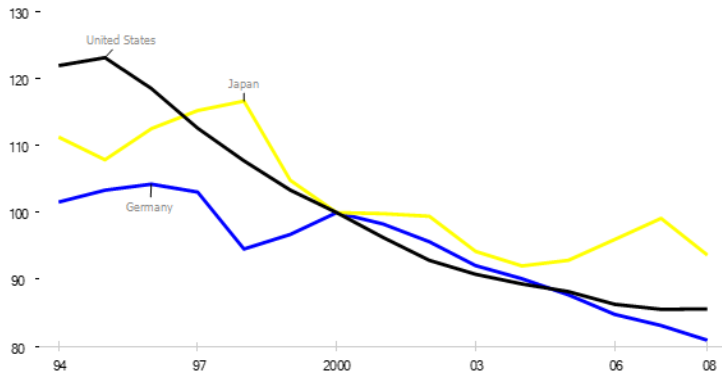


Source: IMF, International Finance Statistics; Federal Reserve Bank of

SHIFT IN MANUFACTURING PRODUCTION AND EXPORTS TO EMEs

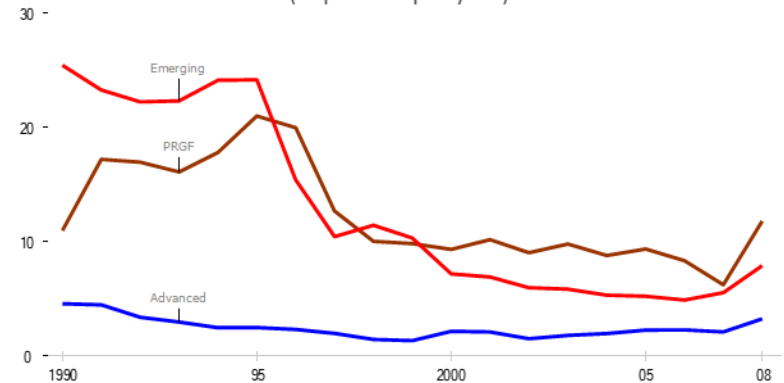
- Asian crisis → export-led growth (avoid overvaluation, reliance on foreign capital)
 - Lower labor costs and increased productivity → lower price of global manufactures → lower inflation in advanced economies
 - Lower real interest rates + lower inflation → lower nominal interest rates across yield curve

a. Price of Imported Manufactures Relative to CPI
(index, 2000=100)



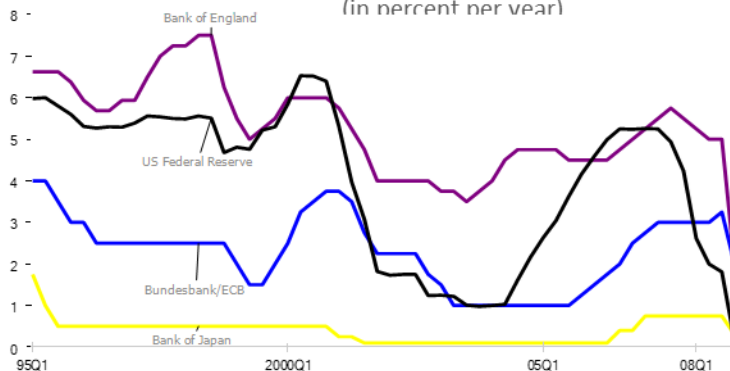
Source: World Trade Organization. *Trade Statistics*

b. Consumer Price Inflation
(in percent per year)

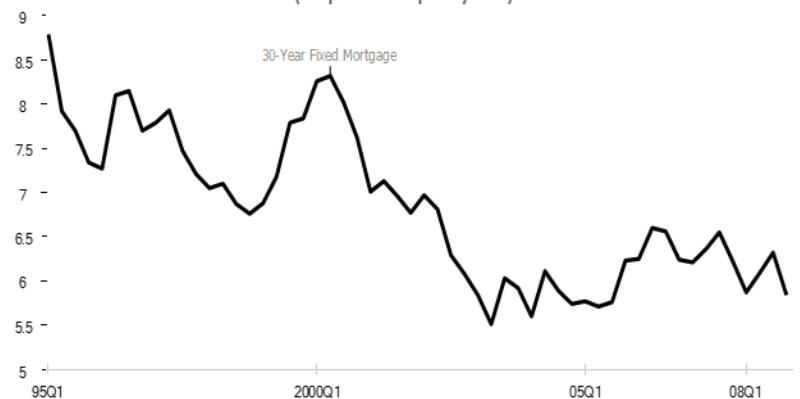


Source: IMF *World Economic Outlook* database

d. Central Bank Policy Interest Rates
(in percent per year)

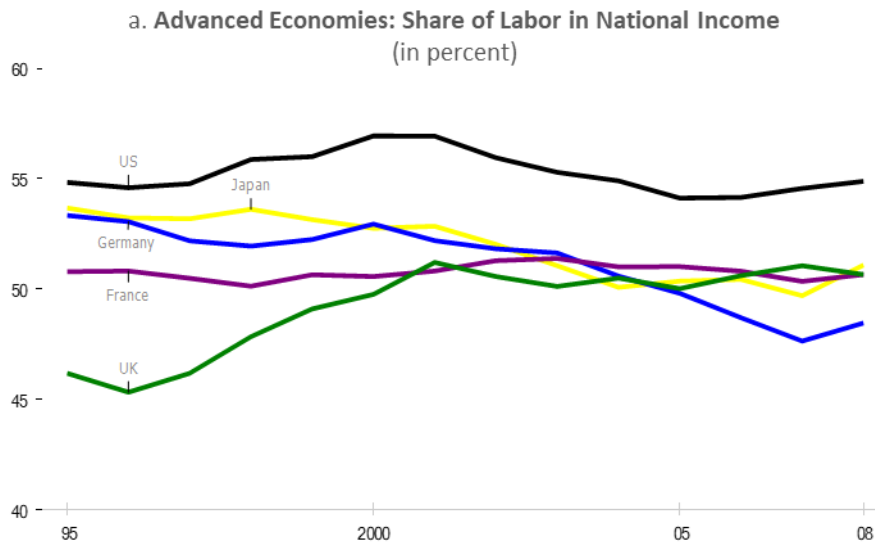


a. United States 30-Year Fixed Mortgage Interest Rate
(in percent per year)

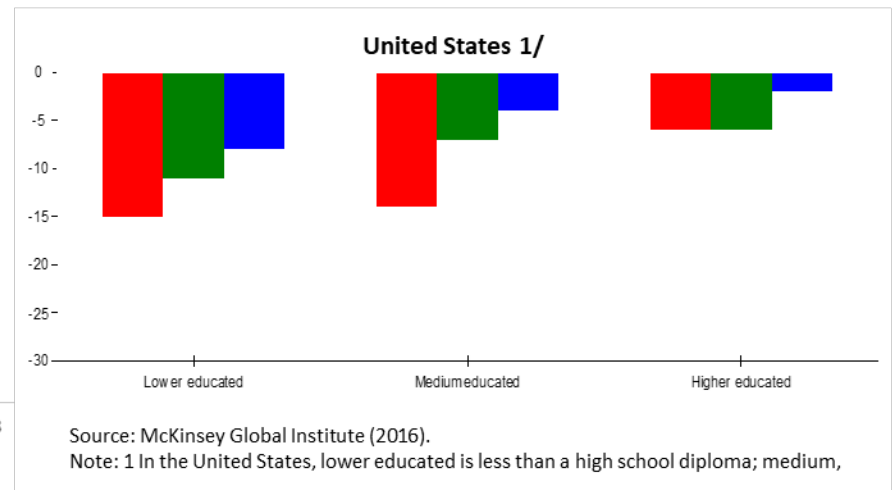


SHIFT IN MANUFACTURING PRODUCTION AND EXPORTS TO EMEs

- Asian crisis → export-led growth (avoid overvaluation, reliance on foreign capital)
 - Stolper-Samuelson → lower real wages in advanced economies (labor-scarce; human and physical capital-abundant), lower share of labor; stagnating wages



c. Change in Real Wage Income by Educational Attainment, 2002-12 (percent change)



THE REAL STORY

- Shift in manufacturing production and exports toward EMEs, starting in 1990s:
 - Lower manufacture prices, lower real interest rates, higher demand for safe assets, inflation-targeting focus of central banks → lower nominal interest rates, across the yield curve
 - Stagnating real wages for advanced-economy workers
 - Lower nominal rates → boost asset valuations, including housing
 - Rising house prices → expanding scope for credit to advanced economy workers, whose real wages are stagnating, but who are necessary to purchase manufactures from EMEs (in one study, 90 percent of defaulters had withdrawn equity from their houses)

FINANCING THE FAIRY TALE

- Real story: lower interest rates and yields → private sector searching for yield and safe assets (EME central banks buying treasuries and agency bonds to accumulate reserves)
- “Originate-and-distribute” model—commercial banks extend mortgages, then sell them, to free-up their balance sheets (regulatory arbitrage: leverage ratio rule on commercial banks forced them to hold more capital than investment banks)
- Boom in securitization (supply of GSE and private MBS/ABS), credit default swaps; SEC allows MBS/ABS in repo transactions; large pool of US corporate investable funds
- Securitization allows commercial banks to free-up balance sheets and lend more, further driving up house prices
- Rise of European universal banks (spurred by Single European Act, EC Directives on capital flow liberalization, EU “passport”)
- Expanded lending
 - to Eurozone periphery (net capital flows)—boom due to lower interest rates from elimination of currency risk
 - US asset-backed securities—but also funding themselves in US wholesale funding market (gross but not net flows)
 - Regulatory arbitrage vis à vis US commercial banks because European banks subject to risk-weighted CARs, not simple leverage ratio

THE TRIPLE BUBBLE WORLD ECONOMY

- US as “consumer of last resort” absorbing the exports (and saving) of emerging markets and advanced surplus economies
- Within the US, reliance on housing-backed credit to sustain “middle class” consumption in the face of declining share of labor and stagnating real wages
- Within the euroarea, reliance on credit/deficits of euroarea periphery to absorb saving and exports of surplus countries (Germany, Netherlands)

THE GREAT RECESSION, 2009

- The main risk of global imbalances was the possibility of a sudden unwinding, which would lead to a sharp depreciation of the dollar. That did not happen....
- **But** the global financial crisis **did happen**— as the US housing bubble burst, and had a domino effect...
 - Some point finger at the pre-crisis “global savings glut” (global imbalances) as stoking lax financial conditions that encouraged subprime lending in the US (Bernanke, 2005)
 - Others argue the “global banking glut” is to blame (Shin, 2011)

Lehman collapse sends shockwave round world
Shares and oil prices plunge: The crash sends shockwaves around the world.

Meltdown Monday
World stock markets plunge as US banking giants collapse | 4,500 jobs go in analysts warn

THE WALL STREET JOURNAL
Crisis on Wall Street as Lehman Totters, Merrill Is Sold, AIG Seeks to Raise Cash

Synchronized sinking: Stock price change 2008M10-2007M10 (in pct.)

Region	Stock Price Change (in pct.)
S&P 500	-30
Asia-Pacific	-35
Euro zone	-32
Americas	-30

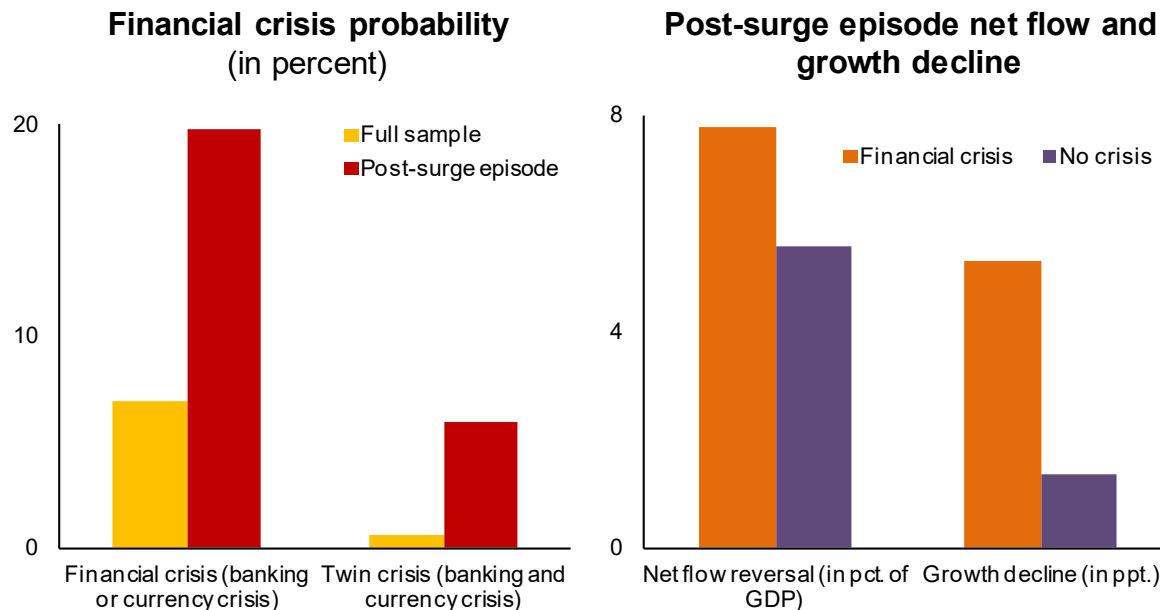
CHALLENGES OF THE INTERNATIONAL MONETARY SYSTEM

- Preventing crises and facilitating adjustment for countries facing balance of payments problems (“without measures destructive to national or international prosperity”)
- Regulating (and ensuring sufficient) supply of global liquidity
- Ensuring an equitable burden of adjustment between deficit and surplus countries; shared responsibility between (gross) capital-source and capital-recipient countries

I. PREVENTING CRISES-HELPING DEFICIT COUNTRIES ADJUST

○ Crisis Prevention

- An EME is 3-5 times more likely to experience a crisis following an inflow surge
 - IMF's Institutional View on Capital Flow Management (2012, 2022)
- Surveillance—Vulnerability Exercises, Early Warning, etc.



I. PREVENTING CRISES-HELPING DEFICIT COUNTRIES ADJUST

- General Resources Lending Toolkit
 - 2009 Reforms
 - Increase access limits
 - Eliminate structural performance criteria
 - 2020 Short-Term Liquidity Line
- Concessional Lending Toolkit
 - 2010 Reforms
- Ensure Fund's own resources keep pace with potential need (16th General Review of Quotas under Board consideration)

II. ENSURING SUFFICIENT GLOBAL LIQUIDITY

- Global liquidity in the IMS context
 - Concerns net capital flows (c.f., global financial system, which is about gross flows)
 - Country can run a CA deficit (when underlying debt dynamics are solvent)
 - In normal times, private capital flows provide liquidity...But the key issue is liquidity in **crunch** times, when private capital rushes for exit
- SDR allocations (mostly for LICs; 2022 Resilience and Sustainability Trust)
- Precautionary and Contingent Financing Arrangements:
 - High Access Precautionary
 - Flexible Credit Line
 - Precautionary and Liquidity Line
- Global Financial Safety Net (working with other multilaterals and RFAs)



III. EQUITABLE BURDEN OF ADJUSTMENT

- Grappled with this issue ever since White rejected Keynes' proposal for surplus country penalties
 - US vs. Germany/Japan/China in 1970-1980s; 2000s
 - 2006 Multilateral Consultation generally viewed as failure
 - Many discussions of objective indicators (current account, reserves)
- At the IMF:
 - The 2007 Surveillance Decision, the 2012 Integrated Surveillance Decision
 - Reserve Adequacy Metric (2010)
 - Exchange Rate Analysis: Coordinating Group on Exchange Rates (CGER), External Balance Assessments (EBA); External Sector Reports
 - Article IV consultations
- Peer Pressure: G10, G7, G20

III. SHARED RESPONSIBILITY FOR CAPITAL FLOW MANAGEMENT—INTERNALIZING SPILLOVERS

- IMF Institutional View on CFM calls for “shared responsibility” —but little of substance on capital-source countries
- Integrated Surveillance Decision—internalizing spillovers of domestic (monetary/fiscal/financial) policies:
 - Principle E (“avoid domestic policies that result in external instability”) dropped from 2007 Surveillance Decision due to EME opposition; dropped from ISD due to ADV opposition
 - Integrated Surveillance Decision—procedural obligation to discuss domestic policies’ spillovers during Article IV consultations; possibility of Pareto-improving policy choices
 - Spillover Reports (subsumed into WEO in 2015)

CONCLUSION

- Change is coming, but we don't know what, or its precise impact...
- Experience suggests that the international monetary system has difficulty adapting to major shifts in the world economy
- Past crises (1931, 1971, 2008) represented failures of the system to meet its three core challenges
- **Future-proofing** the international monetary system should therefore focus on developing and strengthening institutions, mechanisms, and instruments that enable the IMS to meet its core challenges