3. International Monetary System

1. International monetary systems

Macroeconomics claims to study economies as a whole, but actually the economies studied are national economies. These economies are characterized by a territory with a unique government and a single currency.

The global (planetary) economy looks like a very different entity: several sovereign territories (and governments) coexist with several currencies.

The more integrated national economies become, the more they are closer to a 'national economy'. There is no prospect that integration will be political: for generations a global government is something that probably awaits in a distant future. In return, attempts to (de iure or de facto) unify currencies have been welcomed or, at least, not openly opposed.

An international monetary system is simply the basic monetary and financial organization that aims to extend or adapt globally the monetary and financial kind of organization that are customary at the national level. Google's description seems fine:

> "An international monetary system is the framework of rules, institutions, and agreements that govern a country's financial interactions with other nations, facilitating international trade, investment, and the flow of capital by managing exchange rates and balance of payments. This framework ensures that cross-border payments are possible, provides sufficient liquidity for global economic activity, and offers mechanisms to correct global imbalances. Historically, major systems include the Gold Standard, the Bretton Woods system, and the current floating exchange rate system."

Everything taken for granted in a national economy is not guaranteed at the global level. In a domestic economy, seller and buyer share currency and financial regulations. In the global economy, seller and buyer from different national currencies may not agree on which currency to be used in a transaction, nor the rights or obligations involved in the transactions, nor the competent jurisdiction to resolve disagreements. Moreover, at a national level, it almost never is a concern whether some territories run a surplus (get paid more than they pay) against others; at the global level, this is one of the fundamental concerns: it is regarded as problematic that some national economy systematically runs a (current account) deficit against the rest of the world.

Since the global economy lacks a global currency, the basic issue that an international monetary system has to address is how to address that lack. There are two basic strategies: one, to solve the problem 'regionally' by creating a new common currency for a few countries (that is, to establish a monetary union, the eurozone being an example); two, to pick a national currency and give that currency, de facto, a global status (a national currency acting as a global reserve currency). Since after World War II the international monetary system has adopted the second strategy, with the dollar serving as the dominant global currency: for the last 80 years, the dollar has become the 'anchor' of the international monetary system.

For more details, and how the euro fares against the dollar, see

Rakic, Drazen; Leonardo Antonini (2025): "Global currency dominance in the 21st century: where does the euro stand?", EGOV
https://www.europarl.europa.eu/RegData/etudes/IDAN/2025/773690/ECTI_IDA(2025)773690_EN.pdf.

2. The Bretton Woods system

"Bretton Woods (…) had three main formal aims: to promote and fund postwar European reconstruction (…); to secure the political stability of debtor nations (the UK in particular (…)); and to stabilize the international monetary regime, which was (correctly) understood to be crucial to the first two goals. Forty-four nations, including the most powerful states in the world and led by the US (which emerged from the war the clear capitalist hegemon), signed the agreements. According to their architects, the institutions would work as follows: The IMF, using funds contributed by all nations, would provide low-interest loan coverage to debtor states to prevent default during reconstruction and reconversion (…). The World Bank would provide loans or grants for the reconstruction of European (and, eventually, Japanese) economies, a flow of funds greatly enhanced by the US's Marshall Plan, which rebuilt German industry remarkably rapidly in the 1940s and 1950s (…). To make all this possible, the international monetary regime was stabilized via a system of 'fixed' exchange rates between all major currencies, so all capitalist nation-states had the value of their moneys 'pegged' to a specific rate against the US dollar (unsurprisingly, China and the Soviet Union were not signatories). The foundation of the system lay the US dollar's anchor to a gold standard. In other words, its value was pegged to gold, which made the US responsible for the stability of the regime as a whole. Every US dollar was to be backed by—exchangeable for—gold: 1 troy ounce for every 35 US dollars, to be precise."

"The Bretton Woods monetary scheme was a system in which all capitalist moneys could in theory move securely in the international realm because their values, and the stability of the economies in which they were based, were guaranteed by an institutional backstop in the form of the IMF, the World Bank, and the general context of American economic power. No need for frantic currency trading, no fears of massive devaluation or overvaluation, and no way for speculators to manipulate or exacerbate exchange rate fluctuations. This is the political economic regime within which the 'welfare state' emerged."

Mann, Geoff (2013): *Disassembly required. A field guide to actually existing capitalism*, AK Press.

3. The dollar as the core of the International Monetary System

"The US emerged from the two world wars to become the economically and politically dominant core state. The US specialized in the production of the most advanced goods, which involves the use of the most sophisticated technologies and capital-intensive production. The postwar international monetary order, the dual-peg exchange rates or the gold exchange standard, placed the dollar as the single core currency of the international monetary system (…) Nevertheless, after the late 1960s the US no longer held a significant economic advantage over its major allies in the sphere of world production (…) After 1971, the Bretton Woods system was de facto replaced by a regime of freely floating fiat currencies that remains in place to the present day (…) The principal

benefits the US enjoyed from the dollar's status as the dominant international currency were: the ability to run balance-of-payment deficits that others could not, the willingness of foreign official institutions to purchaseand hold US government bonds, and the related and crucial discretion of the Federal Reserve to implement expansionary monetary policy to stimulate a recessionary economy or inflate away debts (…) In this sense, the manufacturing disadvantages and the trade deficits of the US in the global economy were offset by the exorbitant privilege of the dollar in the post-Bretton Woods monetary order, which perpetuated the US's position as the core of the world economy (…) The dollar's core status in the international monetary system is the centerpiece of the US's core status in the international system."

Wang, Zhaohui (2017): "The economic rise of China: Rule-taker, rule-maker, or rule-breaker?", Asian Survey 57(4), 595-617.

4. The 'exorbitant privilege'

Given that a national currency is given global status, the international monetary system so created is asymmetric. The country providing the global reserve currency enjoys a structural foreign demand for its currency[1] from which the members of that country benefit. Wikipedia lists some effects of this 'exorbitant privilege'.

- "Lower Borrowing Costs: The US can borrow at lower interest rates because there is a high demand for dollar-denominated assets.
- Trade Deficits: The US can run larger trade deficits without facing a balance of payments crisis, as its imports are purchased in its own currency.
- Currency Stability: The dollar's status provides domestic stability and liquidity in global markets.
- Economic Influence: The US has greater influence over global economic policies and financial markets.
- Global Financial Stability: Since many countries hold reserves in US dollars, any significant shift in the value of the dollar can affect global financial stability.
- Geopolitical Power: The dominance of the dollar enhances the US's geopolitical influence, as many countries rely on it for international transactions.
- Export Consequences: A stronger dollar can make US exports more expensive and less competitive in global markets.
- Capital Flows: The US experiences significant inflows of foreign investment.

[1] Being a global currency, the domestic currency now fulfils the three quintessential money properties: international unit of account, international means of payment and international store of value. So values are internationally measured in dollars, international markets for products and commodities set prices in dollars and foreign investors looking for safe investment outlets consider first financial assets denominated in the global reserve currency (typically issued by residents in the country that offers its currency as the global currency).

- Monetary Policy Autonomy: The Federal Reserve has greater flexibility in setting monetary policy without worrying as much about the immediate effect on exchange rates or capital flows."

https://en.wikipedia.org/wiki/Exorbitant_privilege

Currency global dominance, and hence the exorbitant privilege, seem to be self-reinforcing: the more the time a currency is dominant, the more everything (norms, institutions, behaviour, policies, expectations…) adapts to this dominance, so that changing the dominant currency could be so costly that it does not pay to replace the current dominant currency (even if a better alternative emerges). That describes the current situation: probably no one likes the dollar dominance, but either there is no obviously better alternative or the cost of the transition to the alternative is too high. Keeping the current arrangement is the lesser evil[2].

What could induce a replacement of global currency? Most likely a global catastrophic event: a global geopolitical conflict, a global economic or financial crisis, a global natural disaster…

5. The gold standard

The gold standard was a gold-based international monetary system, consolidated between 1880 and 1914 (World War I put an end to the system)[3]; see

Wikipedia (2025): "Gold standard", https://en.wikipedia.org/wiki/Gold_standard.

At the beginning of the 19th century, Great Britain launched the gold standard as the international monetary system, to which more countries gradually adhered. The gold standard required each country to fix the value of its currency in relation to gold and to guarantee the conversion of the currency into gold. The gold standard:

- implied fixed exchange rates, which facilitated international exchanges and reduced uncertainty about the value of foreign currencies;
- limited the growth of the quantity of money, since the gold stock would act as a cap on the quantity of money;
- guaranteed the convertibility of the currency into gold;
- guaranteed the free international circulation of gold;
- was associated with an automatic balance of payments adjustment mechanism (a country with a current account deficit[4] would experience an outflow of gold, which would decrease the

[2] Ronald McKinnon expressed thus our submission to the dictatorship of the dollar: "Nobody may love the dollar standard, but it is too valuable to lose and too difficult to replace", Ronald I. McKinnon (2010): "Rehabilitating the unloved dollar standard', Working Paper 419, Stanford Center for International Development.

[3] For more detailed information on the gold standar and subsequent international monetary systems see Ronald I. McKinnon (1996): *The rules of the game: international money and exchange rates*, MIT Press.

[4] The value of the purchases of goods and services abroad is larger than the value of sales of goods and services abroad.

quantity of money, which would cause deflation[5], which would improve competitiveness, which would reduce the deficit) and an expectation (that monetary policy would help in the adjustment process: the country that was losing gold was expected to raise the interest rate to attract the gold that had left in excess).

The period between World War I and World War II is characterized by international monetary disorder and discoordination. The attempt to recover the gold standard was not successful. During the period, hyperinflation, economic depressions, banking crises occurred… Protectionist measures were extended and flexible exchange rate systems were adopted. Economic, financial and geopolitical hegemony passed from Great Britain to the US.

6. The dollar-gold standard

The Bretton Woods Conference in July 1944 attempted to reorganize the international monetary system so that the macroeconomic policy mistakes made after World War I (intransigent creditor countries, currency wars) will not be repeated after World War II.

> "When many of the same experts who observed the 1930s became the architects of a new, unified, post-war system at Bretton Woods, their guiding principles became 'no more beggar thy neighbor' and 'control flows of speculative financial capital'. Preventing a repetition of this process of competitive devaluations was desired, but in a way that would not force debtor countries to contract their industrial bases by keeping interest rates at a level high enough to attract foreign bank deposits."
>
> "The Bretton Woods system was the first example of a fully negotiated monetary order intended to govern monetary relations among independent states. The Bretton Woods system required countries to guarantee convertibility of their currencies into U.S. dollars to within 1% of fixed parity rates, with the dollar convertible to gold bullion for foreign governments and central banks at US$35 per troy ounce of fine gold (or 0.88867 gram fine gold per dollar). It also envisioned greater cooperation among countries in order to prevent future competitive devaluations, and thus established the International Monetary Fund (IMF) to monitor exchange rates and lend reserve currencies to countries with balance of payments deficits."

https://en.wikipedia.org/wiki/Bretton_Woods_system

The Bretton Woods system (1944-1971; fully functional 1958-1971) put the dollar at the centre but, due to gold standard nostalgia, also required the dollar to be tied to gold.

- It was an international monetary system for 44 capitalist economies (China and the Soviet Union were left out) built on the basis of ensuring the stability of exchange rates and avoiding the need to carry out competitive devaluations as in the 1930s (devaluations that ended up being detrimental to everyone).
- The US government was responsible for ensuring the stability of the system through a fixed exchange rate regime: a gold standard based on the dollar.

[5] 'Less money chasing the same goods' raises the value of money in terms of goods, which is equivalent to the goods losing value in terms of money, which means falling prices of goods, which is deflation.

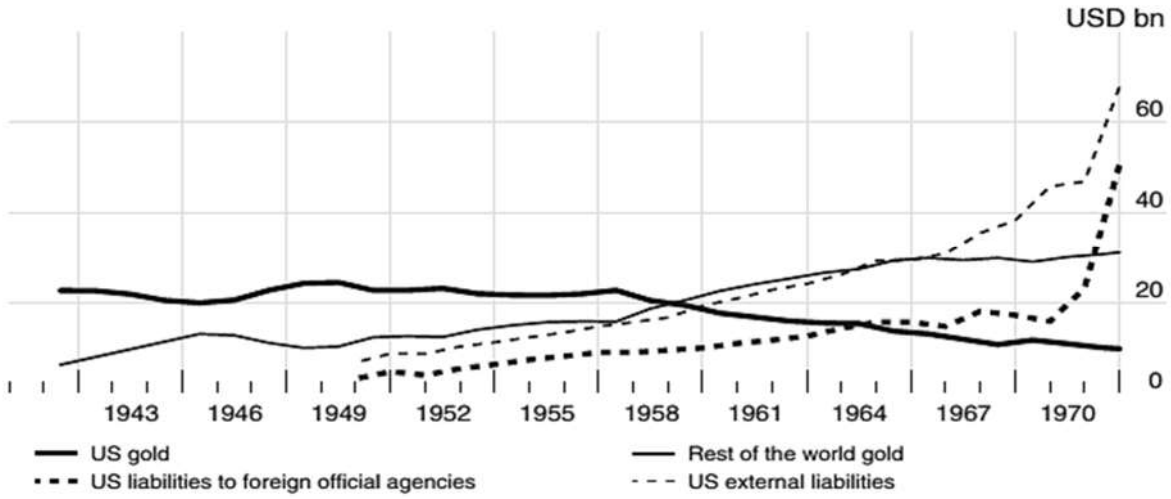
- All participants in the system had to establish a fixed, but adjustable, rate with the dollar.
- The dollar maintained a fixed exchange rate with gold: the US government undertook to exchange dollars for gold at the price of 35 dollars per ounce of gold.
- The other countries were responsible for maintainin , with an appropriate mix of economic policies, parity with the dollar within a permitted fluctuation range (a percentage up or down with respect to the fixed rate with the dollar).

https://www.federalreservehistory.org/essays/bretton-woods-created
https://www.federalreservehistory.org/essays/bretton-woods-launched

7. The dollar standard

The Bretton Woods system apparently died of success: the economic growth of countries under the auspices of US economic and financial leadership created an overabundance of dollars outside the US (due to insufficiently controlled growth in the demand by consumers, businesses and the US government for foreign goods and services) which depreciated its value in terms of gold and thus encouraged the conversion of dollars into gold.

The graph below illustrates the end of Bretton Woods: gold moved from the US to other countries until, in August 1971, US President Richard Nixon said enough was enough with depleting US gold reserves and cancelled the US commitment to convert the dollar into gold.



The period of capitalist expansion coinciding with the Bretton Woods period has been called 'The Long Boom' or 'The Golden Age of Capitalism'. It was the most successful period in terms of economic development, extension of the welfare state, wage growth and control of economic inequality (a success that was concentrated in the countries of the global North, which reinforced the North-South economic division of the world).

The period following the collapse of Bretton Woods (1971-1990) has been called 'The Great Contraction': a couple of decades of system absence, exchange rate instability, speculative episodes and currency crises, low economic growth, inflationary tensions, distributional conflicts (internal, with increased unemployment, and external, associated with increased energy prices) and political instability (due to the inability of governments to resolve distributional conflicts). That period was a sort of 'no system' period: old rules were abandoned and the new ones were still being defined.

The International Monetary System since 1971 can be considered, in essence, the same as Bretton Woods: the dollar remains the centre of the system (the global reserve currency) but now gold plays no role and exchange rates can be flexible.

8. Problems of the Bretton Woods system

"It took close to 15 years to get the Bretton Woods system fully operating. As it evolved into a gold dollar standard, the three big problems of the interwar gold exchange standard re-emerged: adjustment, confidence, and liquidity problems."

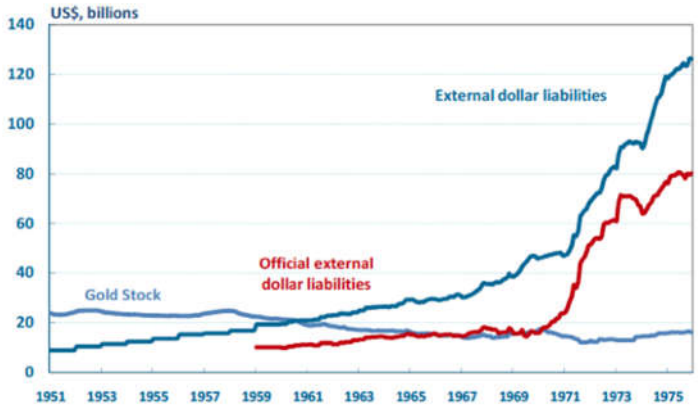
"The *adjustment* problem in Bretton Woods reflected downward rigidity in wages and prices which prevented the normal price adjustment of the gold standard price specie flow mechanism to operate. Consequently, payment deficits would be associated with rising unemployment and recessions. This was the problem faced by the UK, which alternated between expansionary monetary and fiscal policy, and then in the face of a currency crisis, austerity – a policy referred to as 'stop-go'. For countries in surplus, inflationary pressure would ensure, which they would try to block by sterilization and capital controls.

A second aspect of the adjustment problem was asymmetric adjustment between the US and the rest of the world. In the pegged exchange rate system, the US served as central reserve country and did not have to adjust to its balance of payments deficit."

"The US monetary authorities began to worry about the balance of payments deficit because of its effect on *confidence*. As official dollar liabilities held abroad mounted with successive deficits, the likelihood increased that these dollars would be converted into gold and that the US monetary gold stock would eventually reach a point low enough to trigger a run . Indeed by 1959, the US monetary gold stock equaled total external dollar liabilities, and the rest of the world's monetary gold stock exceeded that of the US. By 1964, official dollar liabilities held by foreign monetary authorities exceeded that of the US monetary gold stock."

"A second source of concern was the dollar's role in providing *liquidity* to the rest of the world . Elimination of the US balance of payments deficits (as the French and Germans were urging) could create a global liquidity shortage. There was much concern through the 1960s as to how to provide this liquidity.

Robert Triffin (1960) captured the problems in his famous dilemma. Because the Bretton Woods parities, which were declared in the 1940s, had undervalued the price of gold, gold production would be insufficient to provide the resources to finance the growth of global trade. The shortfall would be met by capital outflows from the US, manifest in its balance of payments deficit. Triffin posited that as outstanding US dollar liabilities mounted, they would increase the likelihood of a classic bank run when the rest of the world's monetary authorities would convert their dollar



holdings into gold (…) Triffin's solution was to create a form of global liquidity like Keynes' (1943) bancor to act as a substitute for US dollars in international reserves." US gold stock and external liabilities, 1951-1975

"The main threat to the system as a whole was the Triffin problem, which was exacerbated after 1965 by expansionary US monetary and fiscal policy which led to rising inflation (…) A key force that led to the breakdown of Bretton Woods was the rise in inflation in the US that began in 1965 (…) Increasing US monetary growth led to rising inflation, which spread to the rest of the world through growing US balance of payments deficits (…) A key reason for Bretton Woods' collapse was the inflationary monetary policy that was inappropriate for the key currency country of the system. The Bretton Woods system was based on rules, the most important of which was to follow monetary and fiscal policies consistent with the official peg. The US violated this rule."

Bordo, Michael D. (2017) "The operation and demise of the Bretton Woods system: 1958 to 1971", NBER, Working Paper No 23189.
https://cepr.org/voxeu/columns/operation-and-demise-bretton-woods-system-1958-1971

9. Bretton Woods II

The period following the Great Contraction (1990 to either the present or the recent past) has been called 'Bretton Woods II'. The most notable event that defines Bretton Woods II is the rise of China, an economic rival of the US with the potential to make the renminbi a global competitor to the dollar (a task in which the euro has failed). Throughout Bretton Woods II, a kind of symbiosis has been established between the US and China: the US has a massive external deficit in relation to China and China uses the dollars from its surplus with the US to purchase US financial assets (mainly public debt).

Both the dollar (as the global reserve currency) and Bretton Woods II (the 'system' the dollar dominates) are in very poor health. The financial crisis of 2008 seemed at the time to end both, but it did not.

The main factor behind the crisis of Bretton Woods I was the loss of credibility in the commitment of US authorities to keep consistent macroeconomic policies, conducive to stability. Even though a trade deficit in the US was an essential component of the system, in order to provide liquidity to satisfy a growing demand of dollar denominated assets when Europe and Japan were growing and catching up with the US, the US authorities failed to realize that excessive expansion of domestic demand was injecting more liquidity in the world economy than what was consistent with stability.

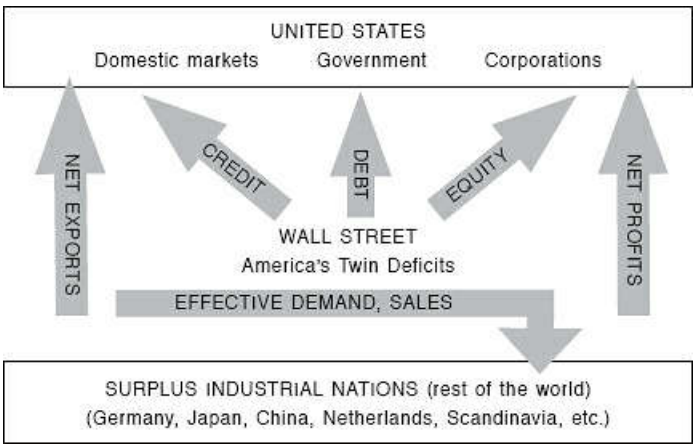
The global financial crisis of 2008 seemed to repeat history with Bretton Woods II: too much debt was fabricated in the US that ended up flooding the world.

10. Global minotaur hypothesis

"I might have called this book The Global Vacuum Cleaner, a term that captures quite well the main feature of the second post-war phase that began in 1971 with an audacious strategic decision by the US authorities: instead of reducing the twin deficits that had been building up in the late 1960s (the

budget deficit of the US government and the trade deficit of the American economy), America's top policy makers decided to increase both deficits liberally and intentionally. And who would pay for the red ink? Simple: the rest of the world! How? By means of a permanent tsunami of capital that rushed ceaselessly across the two great oceans to finance America's twin deficits. The twin deficits of the US economy thus operated for decades like a giant vacuum cleaner, absorbing other people's surplus goods and capital (…) it did give rise to something resembling global balance: an international system of rapidly accelerating asymmetrical financial and trade flows capable of creating a semblance of stability and steady growth. Powered by America's twin deficits, the world's leading surplus economies (e.g. Germany, Japan and, later, China) kept churning out goods that Americans gobbled up. Almost 70 per cent of the profits made globally by these countries were then transferred back to the United States, in the form of capital flows to Wall Street. And what did Wall Street do with them? It instantly turned these capital inflows into direct investments, shares, new financial instruments, new and old forms of loans and, last but not least, a 'nice little earner' for the bankers themselves. Through this prism, everything seems to make more sense: the rise of financialization, the triumph of greed, the retreat of regulators, the domination of the Anglo-Celtic growth model (…) The role of the beast was played by America's twin deficits, and the tribute took the form of incoming goods and capital."

"Central to this global surplus recycling mechanism (GSRM), which I have likened to a Global Minotaur, were the two gargantuan deficits of the United States: the trade deficit and the federal government budget deficit. Without them, the book argues, the global circular flow of goods and capital (see diagram below) would not have 'closed', destabilizing the global economy. This recycling system broke down because Wall Street took advantage of its central position in it to build colossal pyramids of private money on the back of the net profits flowing into the United States from the rest of the world. The process of private money minting by Wall Street's banks, also known as financialisation, added much energy to the recycling scheme, as it oozed oodles of new financial vitality, thus fuelling an ever-accelerating level of demand within the United States, in Europe (whose banks soon jumped onto the private money-minting bandwagon) and Asia. Alas, it also brought about its demise."



"… the Crisis did not alter the deficit position of the United States. The federal budget deficit more or less doubled while America's trade deficit, after an initial fall, stabilised at the same level. However, the US deficits are no longer capable of maintaining the mechanism that keeps the global flows of goods and profits balanced at a planetary level. Whereas until 2008 America was able to draw into the country mountains of net imports of goods, and a similar volume of capital flows (so that the two balanced out), this is no longer happening post-2008. American markets are sucking 24 per cent fewer net imports (thus generating only 66 per cent of the demand that the rest of the world was used to before the Crash) and are attracting into the American private sector 57% less capital than they would have had Wall Street not collapsed in 2008.

In short, of the mighty Global Minotaur, the only reminder that remains is the still accelerating flow of foreign capital into America's public debt (…), evidence that the world is in disarray and money is desperately seeking safe haven in the bosom of the reserve currency in this age of tumult. But as long as the Rest of the World is reducing its injection of capital into America's corporate sector and real estate, while America is reducing its imports of their net exports, we can be certain that the beast is dead and nothing has taken its place."

"Europe is disintegrating because its architecture was simply not sound enough to sustain the shockwaves caused by our Minotaur's death throes (…) For two years now, the German public has become convinced that Germany has escaped the worst of the Crisis because of the German people's virtuous embracing of thriftiness and hard work; in contrast to the spendthrift Southerners (…) This mindset goes hand in hand with a moral righteousness which implants into good people's hearts and minds a penchant for exacting punishment on the grasshoppers – even if punishing them also punishes themselves (to some extent). It also goes hand in hand with a radical misunderstanding of what kept the eurozone healthy and Germany in surplus prior to 2008: that is, the Global Minotaur whose demand-generation antics were for decades allowing countries like Germany and the Netherlands to remain net exporters of capital and consumer goods within and without the eurozone (while importing US-sourced demand for their goods from the eurozone's periphery). Interestingly, one of the great secrets of the post-2008 period is that the Minotaur's death adversely affected aggregate demand in the eurozone's surplus countries (Germany, the Netherlands, Austria and Finland) more than it did the deficit member states (like Italy, Spain, Ireland, Portugal and Greece)."

"To recap, the Minotaur's surplus recycling was essential to the maintenance of the eurozone's faulty edifice. Once it vanished from the scene, the European common currency area would either be redesigned or it would enter a long, painful period of disintegration. An unwillingness by the surplus countries to accept that, in the post-Minotaur world, some other form of surplus recycling is necessary (and that some of their own surpluses must also be subject to such recycling) is the reason why Europe is looking like a case of alchemy-in-reverse: for whereas the alchemist strove to turn lead into gold, Europe's reverse alchemists began with gold (an integration project that was the pride of its elites) but will soon end up with the institutional equivalent of lead."

Varoufakis, Yanis (2015): *The global minotaur: America, Europe and the future of the global economy*, Zed Books.

"Varoufakis' Global Minotaur hypothesis uses the Greek myth of the Minotaur to describe the post-1971 global economy, where the United States acted as a 'minotaur' that fueled global demand by running large deficits, while absorbing surpluses from countries like Germany, Japan, and China. This system created an unstable cycle of capital flows and deficits that was essential for global capitalism until the 2008 financial crisis, which Varoufakis argues was the collapse of this 'Global Minotaur'."

Google IA

11. Bretton Woods III? BRICS I?

The 2008 global financial crisis was originated in the US. This raised doubts as to whether the dollar could still be trusted as a global currency, just like after the 1971 decision of the US government to reject the gold convertibility compromise. The imposition of sanctions by the US government against geopolitical rivals or enemies (notably Russia after the 2022 invasion of Ukraine) and, under the Trump administrations, the breaking of international rules by unilaterally setting or increasing tariffs (and initiating trade wars), made clear to rising powers (the BRICS, originally Brazil, Russia, India, China and South Africa[6]) that the US no longer was behaving as a benevolent dictator or, at least, as a reliable hegemon. All these events suggested that submission to the dollar dominance was increasingly costly: the dollar dominance does not guarantee financial stability, nor fairness, nor respect for globally accepted rules.

In this regard, Zoltan Pozsar (2022) declared that we are entering Bretton Woods III:

> "We are witnessing the birth of Bretton Woods III – a new world (monetary) order centered around commodity-based currencies in the East that will likely weaken the Eurodollar system and also contribute to inflationary forces in the West.
>
> A crisis is unfolding. A crisis of commodities. Commodities are collateral, and collateral is money, and this crisis is about the rising allure of outside money over inside money. Bretton Woods II was built on inside money, and its foundations crumbled a week ago when the G7 seized Russia's FX reserves…"
>
> "This crisis is not like anything we have seen since President Nixon took the U.S. dollar off gold in 1971 – the end of the era of commodity-based money. When this crisis (and war) is over, the U.S. dollar should be much weaker and, on the flipside, the renminbi much stronger, backed by a basket of commodities. From the Bretton Woods era backed by gold bullion, to Bretton Woods II backed by inside money (Treasuries with un-hedgeable confiscation risks), to Bretton Woods III backed by outside money (gold bullion and other commodities).
>
> After this war is over, 'money' will never be the same again…
>
> …and Bitcoin (if it still exists then) will probably benefit from all this."

Zoltan Pozsar (2022): "Bretton Woods III", Credit Suisse Economics
https://static.bullionstar.com/blogs/uploads/2022/03/Bretton-Woods-III-Zoltan-Pozsar.pdf

12. Why the dollar still rules

"The principle [*sic*] reason why the dollar remains the dominant international currency is that the United States has so far fulfilled three functions in the global monetary system:

> (1) having open and highly developed financial markets that generate an adequate supply of liquid assets;

[6] BRICS has recently expanded to BRICS+ by including Egypt, Ethiopia, Indonesia, Iran and United Arab Emirates. The share of BRICS+ in the world economy rivals G7's (G7: Canada, France, Germany, Italy, Japan, UK and US). https://en.wikipedia.org/wiki/BRICS

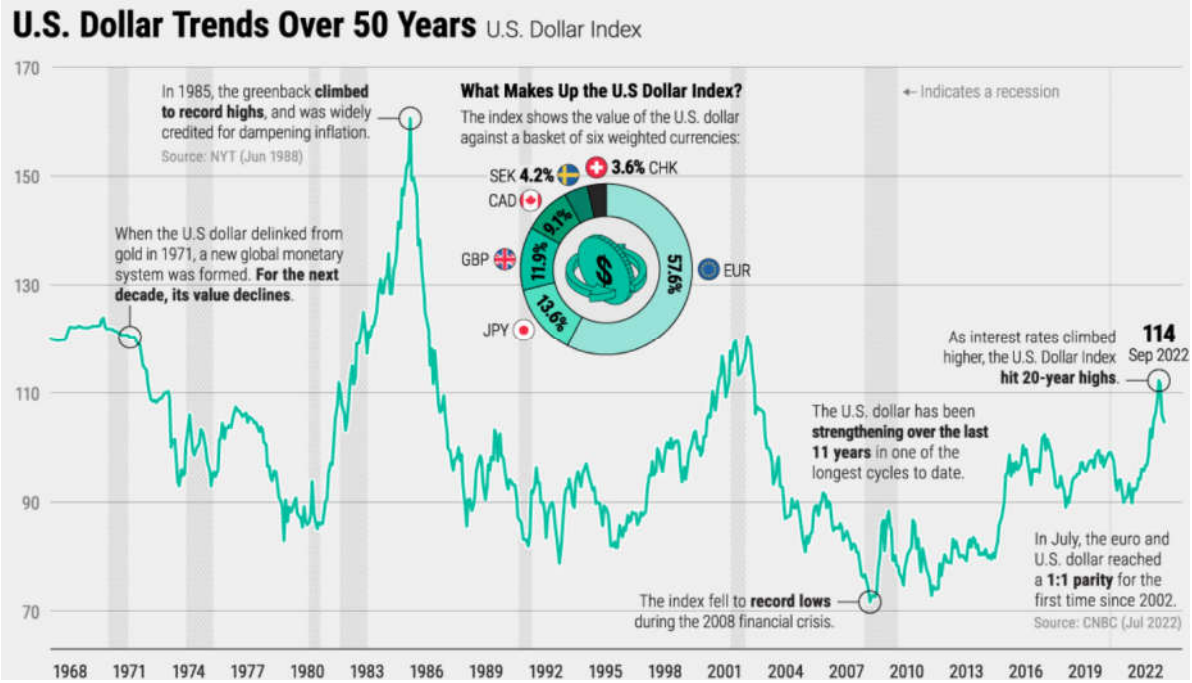
(2) having a central bank that more or less maintains the value of these assets;

(3) running current account deficits that allow it to play the role of global consumer-of-last-resort."

"There are two reasons to doubt that the ECB's relatively conservative monetary policy increased the attractiveness of the euro over the dollar. First (...) the ECB's refusal to buy more sovereign debt securities impaired the liquidity of European financial markets and the ability of the Eurozone to supply safe assets to the global monetary system. If there is one lesson to be drawn from the GFC [Global Financial Crisis] and the Eurozone crisis for the link between monetary policy and international currency status, it is that sovereign debt can lose its quality as a safe asset when it is not backstopped by the central bank (…). Second, the ECB's relative conservative monetary policy stance has prevented the Eurozone from playing a greater role in the generation of global demand."

Vermeiren, Mattias (2014): *Power and imbalances in the Global Monetary System: A comparative capitalism perspective*, Palgrave Macmillan.

https://advisor.visualcapitalist.com/visualized-what-factors-drive-the-u-s-dollar/



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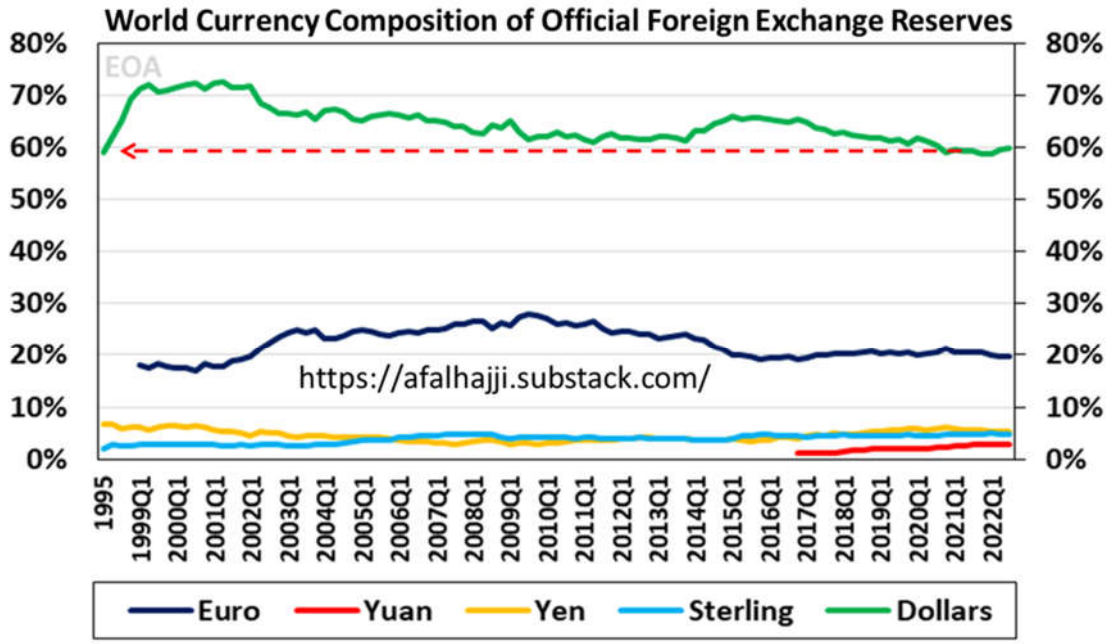


Source: IMF, 2023 and EOA, 2023

https://afalhajji.substack.com/p/daily-energy-report-098?r=1vkr3y&utm_campaign=post&utm_medium=web

13. Chimerica (/kaɪˈmɛrɪkə/)

Before the 2008 global financial crisis, 'Chimerica' designated the symbiotic relationship between China and the US: the Chinese produced and the Americans consumed.

"In the 1990s, despite concerns over China's human rights violations and American domestic manufacturing jobs, the U.S. renewed China's 'most-favored-nation' trade status year after year after intensive lobbying by big business and the Chinese government.

This marked the beginning of what analysts call 'Chimerica' — a symbiotic relationship where China produced and Americans consumed. For over two decades, both countries prioritized economic growth and cheap consumption while disregarding labor and human rights violations, environmental damage, and the integrity of quality and design.

U.S. politicians were happy to make moral compromises to fuel the economy — until the very relationship that served these interests began to threaten them. By the 2010s, China's economy had grown powerful enough to challenge American global dominance. Its clothing manufacturing industry became the largest in the world, and its tech industry became increasingly competitive."

Stella Cammack (2025): "Can Ordinary People Rewrite the U.S.-China Relationship?", FPIF
https://fpif.org/can-ordinary-people-rewrite-the-u-s-china-relationship/

"The US emerged from the two world wars to become the economically and politically dominant core state. The US specialized in the production of the most advanced goods, which involves the use of the most sophisticated technologies and capital-intensive production. The postwar international monetary order, the dual-peg exchange rates or the gold exchange standard, placed the dollar as the single core currency of the international monetary system (...) Nevertheless, after the late 1960s the US no longer held a significant economic advantage over its major allies in the

sphere of world production (…) After 1971, the Bretton Woods system was de facto replaced by a regime of freely floating fiat currencies that remains in place to the present day (…) The principal benefits the US enjoyed from the dollar's status as the dominant international currency were: the ability to run balance-of-payment deficits that others could not, the willingness of foreign official institutions to purchase and hold US government bonds, and the related and crucial discretion of the Federal Reserve to implement expansionary monetary policy to stimulate a recessionary economy or inflate away debts (…) In this sense, the manufacturing disadvantages and the trade deficits of the US in the global economy were offset by the exorbitant privilege of the dollar in the post-Bretton Woods monetary order, which perpetuated the US's position as the core of the world economy (…) The dollar's core status in the international monetary system is the centerpiece of the US's core status in the international system."

"…the US and China have formed a symbiotic relationship because of the dollar's core status in the international monetary system and China's excessive manufacturing capacity and dependence on foreign markets (...) China in the twenty-first century has been committed to export-oriented growth based on maintaining a low exchange rate (...) The result was the continuous expansion of China's foreign exchange reserves. China used part of these foreign reserves to purchase US Treasury bonds in order to finance American balance-of-payment deficits. On the one hand, China repressed its own domestic consumption and exported large quantities of inexpensive goods, which helped reduce US inflation and stimulate US consumption. On the other hand, China's massive purchase of US Treasury bonds helped lower their yields and bring down US interest rates, as another effort to secure the continuous increase of US demand for China's exports (…) It is estimated that about two-thirds of China's reserves are held in the form of dollar debt (…) The US and China have formed a symbiotic relationship in the capitalist world economy since the 1990s: the US consumes China's cheap exports, paying China in dollars, and China holds US dollars and bonds, in fact lending money to the US."

"China, as a semi-periphery, is more vulnerable in the symbiotic relationship of its own making (...) Were China to dump its dollar reserves and destabilize the world economy, it would definitely hurt itself as well as the US. China would not only lose much of the value of its reserves with the falling dollar, but would also jeopardize Americans' ability and willingness to continue to import Chinese goods, which would probably give rise to job loss and social instability in China. On the other hand, China's vulnerability can be seen in the enormous difficulties faced by its manufacturing exports after the global financial crisis (…) Therefore, it is more appropriate to describe the US–China economic relationship as symbiotic but asymmetric."

"Here arises the question of why the dollar remains the preeminent currency in the international monetary system despite the relative American economic decline and the obvious flaw of dollar hegemony. Eichengreen provides a simple but compelling answer: 'The dollar's dominance was supported by a lack of alternatives.'"

"Despite the rapid development of RMB [renminbi, the Chinese currency] internationalization, it is also worth noting that for the time being the inconvertibility of the RMB, as well as China's capital account control, both impose severe restrictions on the RMB's role as an international reserve currency. Therefore, the internationalization of the RMB is not expected to dethrone the dollar as

the key international reserve currency in the foreseeable future (…) The growing roles of the euro and the RMB in the global economy indicate that the unipolar, dollar-based monetary system is evolving into a multipolar currency system that will exercise better discipline over the fiat currencies in the international monetary order."

"It is not in China's interest to take extreme measures to destabilize or overthrow the existing world order (…) it is still more appropriate to describe China as a 'dissatisfied responsible great power.' China's incremental reforms in both domestic and international domains after the global crisis reveal that China as a rising power is no longer a rule-taker, accepting the status quo with regard to the current arrangement of international monetary order. Rather, China is better viewed as some combination of a rule-maker (promoting global reforms of existing arrangements) and a rule-breaker (in that it is creating its own arrangements)."

Wang, Zhaohui (2017): "The economic rise of China: Rule-taker, rule-maker, or rule-breaker?", Asian Survey 57(4), 595-617.

14. Attributes of an international reserve currency

According to Barry Eichengreen, a currency must possess three attributes to be internationally adopted in commercial and financial international transactions and held as a reserve by central banks and governments.

- Scale: the country that issues the currency must conduct a sufficiently large amount of transactions with the rest of the world.
- Stability: the currency's users must believe that the value of the currency is sufficiently stable for the currency to perform well the functions of medium of exchange and deposit of value.
- Liquidity: financial assets denominated in the currency are available in sufficient quantities to be sold and bought, without the currency's value being significantly affected.

The country whose currency becomes internationalized must develop an economy which is significantly open and integrated with the rest of the world (open capital account), a reputation for financial (economic, political) stability and liquid markets in assets denominated in the currency.

Eichengreen, Barry (2011): *Exorbitant privilege: The rise and fall of the dollar and the future of the International Monetary System*, Oxford University Press.

15. De-dollarization

"The U.S. dollar is the world's primary reserve currency, and it is also the most widely used currency for trade and other international transactions. However, its hegemony has come into question in recent times due to geopolitical and geostrategic shifts (…) In short, de-dollarization entails a significant reduction in the use of dollars in world trade and financial transactions, decreasing national, institutional and corporate demand for the greenback."

"There are two main factors that could erode the dollar's status. The first includes adverse events that undermine the perceived safety and stability of the greenback — and the U.S.'s overall standing

as the world's leading economic, political and military power. For instance, increased polarization in the U.S. could jeopardize its governance, which underpins its role as a global safe haven. Ongoing U.S. tariff policy could also cause investors to lose confidence in American assets.

The second factor involves positive developments outside the U.S. that boost the credibility of alternative currencies — economic and political reforms in China, for example. 'A candidate reserve currency must be perceived as safe and stable and must provide a source of liquidity that is sufficient to meet growing global demand,' said Alexander Wise, who covers Long-Term Strategy at J.P. Morgan.

Fundamentally, de-dollarization could shift the balance of power among countries, and this could, in turn, reshape the global economy and markets."

JP Morgan (2025): "De-dollarization: Is the US dollar losing its dominance?"
https://www.jpmorgan.com/insights/global-research/currencies/de-dollarization

16. International Monetary System: present and future

• Does reform cause instability?

"The monetary system was reshaped in the mid-1940s in the aftermath of the Second World War and again in the early 1970s after the first oil price shock. In both cases, global disruption shook the monetary system and caused prolonged instability. The question now is whether the current system of floating currency blocs with dollar-based trade and reserves can withstand the strains of the global adjustment ahead. It is time to consider alternatives for the IMS and to address the issue of its governance within the context of the postcrisis world economy. The IMS is where tensions from globalization—and the conflict between domestic policy goals and international obligations—tend to coalesce."

• Towards a multi-currency system?

"In the US, domestic priorities for growth and employment may lead to an attitude of 'benign neglect' vis-à-vis the dollar, which generally results in a weaker dollar. The current strength of the US currency, which reflects global risk aversion, with investors attracted to the dollar because of its role as key reserve currency, undermines this stance. Meanwhile, China—now the world's largest exporter as well as the largest holder of dollar assets—faces inflationary pressures as a result of keeping its currency anchored to the dollar, yet fears the instability and losses in reserve values that a loosening of the link would entail. China is also creating tensions by keeping its currency undervalued while preparing for its internationalization (…) At the same time, it has clearly shown the euro area's unwillingness to take the burden—and responsibility—that goes with issuing the world's second reserve currency. In this context, dialogue and policy cooperation play an important role in helping these countries to coordinate their efforts and rebalance the world economy. Policy cooperation should aim to avoid any protectionist reaction to exchange rate movements. It should also help prepare the ground for a smooth transition to a multi-currency system by fostering the exchange of information among the world's main trading areas. That the system—or non-system—

was no longer adequate, given the complexity of a burgeoning world economy, has been clear for some time."

"… in today's larger and more integrated world economy the dependence on the dollar as the basis of both trade flows and financial reserves has clearly become excessive, creating a system that is fundamentally unbalanced (…) The existing IMS needs to evolve into a multicurrency system in which a number of international currencies, ideally representing the main trading areas, have the functions of storing value and providing the unit of measure. A multicurrency system would respond more flexibly to the demand for liquidity and would provide a way to diversify the accumulation of reserve assets. Such a system would be better suited to a multipolar world economy."

Subacchi, Paola (2010): "Who is in control of the international monetary system?", International Affairs 86(3), 665-680.

• Power redistribution

"Major developments have dramatically shifted the distribution of power in the system. Many have noted that power is now more widely diffused, both among states and between states and societal actors. Finance is no longer dominated by a few national governments at the apex of the global order. Less frequently remarked is the fact that the diffusion of power has been mainly in the dimension of autonomy, rather than influence (…) While more actors have gained a degree of insulation from outside pressures, few as yet are able to exercise greater authority to shape events or outcomes.

Leadership in the system thus has been dispersed rather than relocated—a pattern of change in the geopolitics of finance that might be called *leaderless* diffusion. A pattern of leaderless diffusion generates greater ambiguity in prevailing governance structures. Rule-setting in monetary relations increasingly relies not on negotiations among a few powerful states but rather on the evolution of custom and usage among growing numbers of autonomous agents—regular patterns of behaviour that develop from longstanding practice."

"The diffusion of power, however, has been mainly in the dimension of autonomy, rather than influence—a pattern of leaderless diffusion in financial geopolitics. The days of concentrated power in a largely state-centric system are now over. Three major developments share principal responsibility for this change: (1) the creation of the euro; (2) the widening of global payments imbalances; and (3) the globalization of financial markets."

"The dynamics of power and governance in global finance today are indeed changing. A leaderless diffusion of power is generating greater uncertainty about the underlying rules of the game. At the state level, governments increasingly question the need for a strictly national currency. At the systemic level, governance now relies more on custom and usage, rather than intergovernmental negotiation, to define standards of behaviour."

Cohen, Benjamin J. (2008): "The international monetary system: diffusion and ambiguity", International Affairs 84(3), 455-470.

17. Shortcomings and characteristics of the present International Monetary System

Shortcomings

"These are

(1) the large volatility of exchange rates,

(2) the wide and persistent misalignments of exchange rates and huge trade imbalances,

(3) the failure to promote greater coordination of economic policies among the leading economic areas, and

(4) the inability to prevent international financial crises or to adequately deal with them when they do arise."

Characteristics

"The present international monetary system has four main characteristics:

(1) There is a wide variety of exchange rate arrangements (…)

(2) Countries have almost complete freedom of choice of exchange rate regimes. All that is required by the 1978 Jamaica Accords (which formally recognized prevailing exchange rate arrangements) is that nation's exchange rate actions not be disruptive to trade partners and the world economy.

(3) Exchange rate variability has been substantial. This is true for nominal and real, bilateral and effective, short-run and long-run exchange rates. The IMF (2004) estimated that exchange rate variability has been about 5 times larger during the period of flexible (i.e., since 1971) than under the preceding fixed exchange rate or Bretton Woods System. Exchange rate variability of 2–3 percent per day and 20–30 percent per year has been common under the present system (…)

(4) Contrary to earlier expectations, official intervention in foreign exchange markets (and therefore the need for international reserves) has not diminished significantly under the present and more flexible exchange rate system as compared with the previous fixed exchange rate system. Nations have intervened in foreign exchange markets not only to smooth out day-to-day movements, but also to resist trends, especially during the 1970s and since the mid-1980s."

Salvatore, Dominick (2012): "Exchange rate misalignments and the present international monetary system", Journal of Policy Modeling 34(4), 594-604.

Salvatore, Dominick (2011): "The future tri-polar international monetary system", Journal of Policy Modeling 33(5), 776-785.

18. Towards a multi-currency system?

"In the US, domestic priorities for growth and employment may lead to an attitude of 'benign neglect' vis-à-vis the dollar, which generally results in a weaker dollar. The current strength of the US currency, which reflects global risk aversion, with investors attracted to the dollar because of its role as key reserve currency, undermines this stance. Meanwhile, China—now the world's largest exporter as well as the largest holder of dollar assets—faces inflationary pressures as a result of

keeping its currency anchored to the dollar, yet fears the instability and losses in reserve values that a loosening of the link would entail. China is also creating tensions by keeping its currency undervalued while preparing for its internationalization (…) At the same time, it has clearly shown the euro area's unwillingness to take the burden—and responsibility—that goes with issuing the world's second reserve currency. In this context, dialogue and policy cooperation play an important role in helping these countries to coordinate their efforts and rebalance the world economy. Policy cooperation should aim to avoid any protectionist reaction to exchange rate movements. It should also help prepare the ground for a smooth transition to a multi-currency system by fostering the exchange of information among the world's main trading areas. That the system—or non-system—was no longer adequate, given the complexity of a burgeoning world economy, has been clear for some time."

"… in today's larger and more integrated world economy the dependence on the dollar as the basis of both trade flows and financial reserves has clearly become excessive, creating a system that is fundamentally unbalanced (…) The existing IMS needs to evolve into a multicurrency system in which a number of international currencies, ideally representing the main trading areas, have the functions of storing value and providing the unit of measure. A multicurrency system would respond more flexibly to the demand for liquidity and would provide a way to diversify the accumulation of reserve assets. Such a system would be better suited to a multipolar world economy."

Subacchi, Paola (2010): "Who is in control of the international monetary system?", International Affairs 86(3), 665-680.

19. What a viable International Monetary System demands

The international monetary system is currently characterized by a centre (developed countries) and a periphery that uses as reserve assets from the centre. The viability of this system depends on its participants to obtain from it what they want or need. Jeanne (2012) identifies three necessary conditions for the viability:

- the centre must provide liquid and safe assets;
- in a sufficient amount to meet the international demand; and
- providing a satisfactory return (global stable store of value).

The US has been playing a central role in the international monetary system. Will it continue to do so and for long? The 2008 financial crisis questioned the safety and liquidity of US assets. It is not clear whether the US economy will be strong enough to meet a rising demand for international liquidity. And the decisions by the US authorities on the return on the dollar (the US interest rate) are solely based on domestic considerations and do not take into account whether the decisions ensure that the dollar remains an international stable store of value. Despite all this, it does not appear likely that, in the near future, the international monetary system will become more multipolar (with the central role of the dollar shared with other currencies, like the euro or the renminbi, or replaced by the IMF's Special Drawing Rights).

Jeanne, Olivier (2012): "The dollar and its discontents", Journal of International Money and Finance 31, 1976-1989.

20. A general global/national trilemma

There are many instances of a trilemma involving

- the achievement of global goals,
- the achievement of national goals,
- the use of national tools (policies, institutions) to achieve all the goals.

The explanation is that, as a rule, national goals tend to be in conflict with global goals and if both are entrusted to national governments (or are implemented through national policies) then the most likely outcome is that governments will give priority to the achievement of national goals.

For instance, the 1997 Kyoto Protocol was an international treaty under which industrialized countries accepted to reduce their greenhouse gas emissions. It was replaced by the 2015 Paris Agreement on climate change. Yet, one world's largest emitters, the US, refused to ratify the Protocol and ceased participation in the Agreement (on 1 June 2017). In both cases the reasons adduced were damage to the national economy: 'America first'.

"… the Kyoto Protocol failed to equate emissions reductions with economic opportunity and some countries grew to view mitigation as a costly punishment. Following this line of reasoning the US Senate refused to ratify the Kyoto Protocol, citing potential damage to the US economy as their motive, setting a precedent for countries such as Canada and Japan to pull out of the deal without penalty in 2011 and providing a serious setback on the agreements effectiveness."

https://www.climateforesight.eu/articles/success-or-failure-the-kyoto-protocols-troubled-legacy/

"The United States must grow its economy and maintain jobs for its citizens while playing a leadership role in global efforts to protect the environment (…) It is the policy of my Administration to put the interests of the United States and the American people first in the development and negotiation of any international agreements with the potential to damage or stifle the American economy. These agreements must not unduly or unfairly burden the United States (…) The United States Ambassador to the United Nations shall immediately submit formal written notification of the United States' withdrawal from the Paris Agreement under the United Nations Framework Convention on Climate Change."

https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/

21. The Triffin dilemma

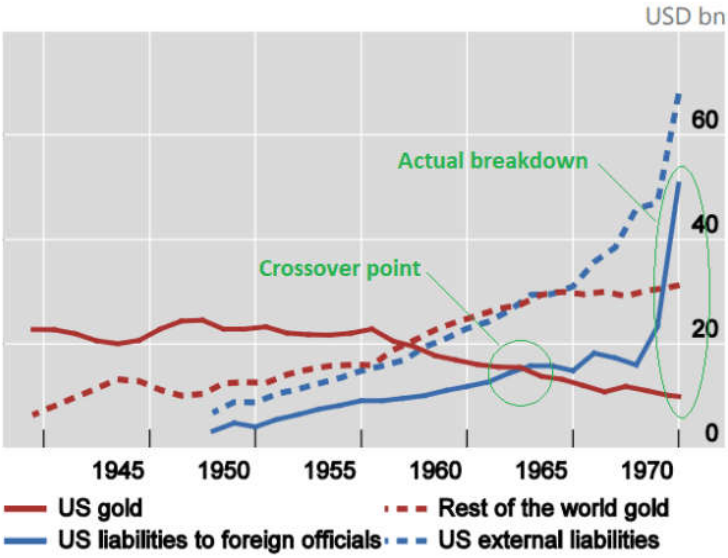
Economist Robert Triffin predicted in 1960 the end of the Bretton Woods system, which relied on the credibility of the commitment of dollar convertibility into gold. Triffin argued that the system faced a dilemma. On the one hand, to meet the international liquidity needs (which were growing with an expansionary world economy), a sufficient amount of dollars should circulate; that is,

foreign dollar balances should increase. But, on the other, a large and growing proportion of foreign dollar balances with respect to US gold reserves threatens the credibility of the convertibility commitment. Hence, if the US international liabilities grew too slowly, global trade would be restrained and deflation may ensue; but, to satisfy the demands of a growing international trade, if the US international liabilities grew too much, the dollar would lose value against gold and a run on the US gold stock will precipitate the downfall of the system. The chart on the right illustrates (again) how the Bretton Woods system broke down: an increasing gap between US liabilities capable of being converted into gold and the US gold reserves.

Specifically, in the context of the Bretton Woods international monetary system the Triffin dilemma asserts that there is a tension between

- satisfying an increasing international demand for dollars (the global goal of sufficient international liquidity) and
- keeping the US commitment of convertibility of dollars into gold at a fixed rate of 35 dollars per ounce of gold (the US domestic goal of preserving the value of dollars in gold).

US liabilities to foreign officials and US monetary gold, 1940-1971

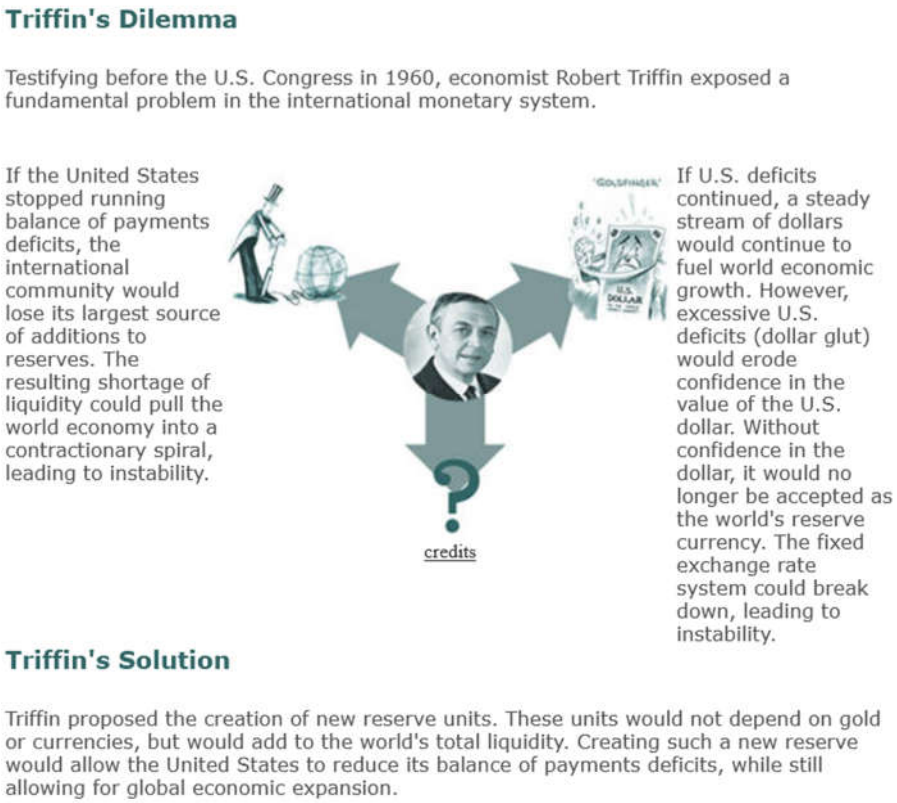


The Triffin dilemma identifies the following structural problem in the Bretton Woods international monetary system. The US trade deficit was the source of global liquidity. If the US stopped running a trade deficit, then the global liquidity shortage would cause a global recession. If the trade deficit continued, global liquidity would become excessive ('a dollar glut'), confidence in the value of the dollar would be eroded and the dollar would cease to be accepted as the global currency.

> "Even the most successful readjustment of our overall balance of payments will leave in its wake two major problems (…) Both have to do with the functioning of international monetary convertibility in an expanding world economy. The satisfactory functioning of such a system necessarily requires an expanding pool of world monetary reserves and international liquidity, to bridge temporary and unavoidable fluctuations in each country's external receipts and payments. Such fluctuations would, otherwise, force widespread and recurrent recourses to deflation, currency devaluation or trade and exchange restrictions.
>
> Gold has long ceased to provide more than a fraction of the minimum requirements for the preservation of adequate reserve and liquidity levels. Most –although not all– countries, however, have shown themselves willing to accumulate a substantial portion of their monetary reserves in the form of foreign exchange –primarily sterling and dollar balances– alongside of gold itself. The trouble with this solution –known as the 'gold exchange standard'– is that it is bound to undermine, more and more dangerously as time goes on, the international liquidity position of the currencies used as reserves by other countries and, by way of consequence, to

impart an increasing vulnerability to the world monetary superstructure built upon these so-called 'key currencies.' Indeed, the additions to international liquidity made possible by the system are entirely dependent upon the willingness of the key currency countries to allow their own net reserve position to deteriorate, by letting their short term liabilities to foreigners grow persistently and indefinitely at a faster pace than their own gold assets." (Triffin, 1960, pp. 8-9)

Triffin, Robert (1960): *Gold and the dollar crisis: The future of convertibility*, Yale University Press.



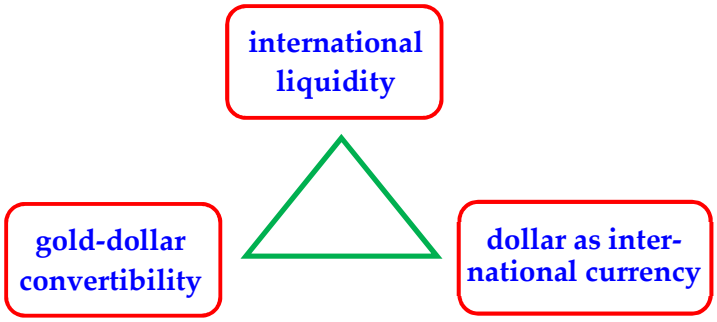
IMF: "Triffin's dilemma", https://www.imf.org/external/np/exr/center/mm/eng/mm_sc_03.htm.

"Many economists and government officials have concluded that the unipolar, dollar-based monetary system is seriously flawed. Belgian-American economist Robert Triffin pointed out in the 1960s that an international monetary system based on the currency of one country cannot sustainably deliver both liquidity and confidence. More specifically, the continuous growth of the world economy demands a steady stream of dollars, which requires the US to run balance-of-payments deficits. However, excessive US deficits erode people's confidence in the dollar's value (convertible into gold at a fixed price). This inherent conflict between the dollar's role as the world's reserve currency and the declining confidence in the dollar in the postwar international monetary system is called the Triffin dilemma. Though the Triffin dilemma was directed against the Bretton Woods monetary system, it remains valid for today's international monetary system. The modern version posits that the massive amount of dollars created by the US authorities to satisfy world demand is inconsistent with people's confidence in the dollar's value (convertible into a fixed basket of US goods and services)."

Wang, Zhaohui (2017): "The economic rise of China: Rule-taker, rule-maker, or rule-breaker?", Asian Survey 57(4), 595-617.

22. The Triffin dilemma as a trilemma

Since the Triffin dilemma presumes that both goals (enough global liquidity and guaranteed convertibility of dollars into gold) are to be achieved with a domestic instrument (the US national currency), it could be formulated as a trilemma (and, actually, as a particular case of the general global/national trilemma).



The Triffin trilemma would claim the existence of a tension between

- the provision of enough global liquidity,
- the convertibility of dollars into gold (at a given fixed rate) and
- the use of the dollar as the global reserve currency.

Thus, one cannot expect from a national currency to simultaneously and sustainably provide global liquidity and preserve the confidence in the currency as a global currency. The first goal (supply abundant liquidity) is associated with running an increasing current account deficit, which threatens the second goal (the achievement of domestic goals may force the adoption of measures to stop the deficit growth).

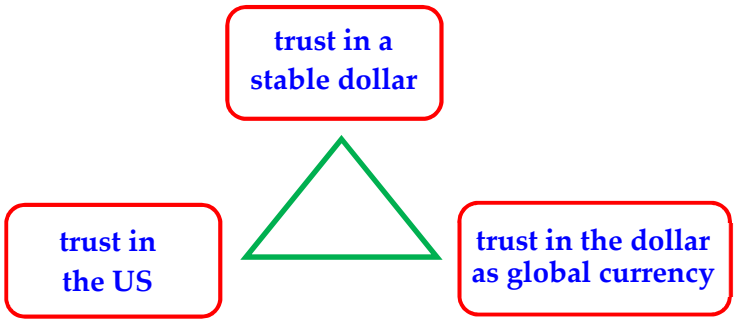
Consequently, given a relatively fixed amount of gold, trying to achieve the first goal with an increasing demand for global liquidity threatens the credibility of the convertibility commitment. As in a bank run, the perception that the amount of dollars in the global economy is excessive in relation to the US gold reserves will cause a massive demand for converting dollars into gold. The implicit prediction in the Triffin dilemma is that convertibility (not the use of the dollar as a global currency) will be sacrificed.

23. A new Triffin dilemma and trilemma

The essential tension expressed by the Triffin dilemma seems to remain still valid. As a result, a new Triffin dilemma has been formulated, which claims that there is a tension between

- satisfying an increasing international demand for dollars and
- preserving the purchasing power of dollars.

It therefore seems difficult to reconcile the provision of massive amounts of dollars to satisfy the global demand for liquidity (which is related to the means of payment function of any form of money) and keeping a stable value of the dollar (associated with the store of value function). As in the original Triffin



dilemma, a national currency cannot provide liquidity and confidence (in the currency's value) for long.

The above dilemma could be formulated as a trilemma opposing

- trust in the dollar as a stable store of value;
- trust in the US (government and/or economy) to guarantee dollar stability;
- trust in the dollar as a global reserve currency (meaning that one believes that everybody else trusts the dollar as a stable store of value).

24. A general Triffin dilemma

Tommaso Padoa-Schioppa (2010) suggested a Triffin general dilemma:

"En l'absence d'une autorité publique qui oeuvre pour 'ce qui est bon pour le monde', la simple moyenne de politiques conduites avec des objectifs nationaux ne peut produire ce bien public mondial que constitue une ancre monétaire stable à l'échelon mondial. En conclusion, il n'existe aucune piste pour contourner la nécessité d'une structure de policy qui ancre le standard global à un objectif de stabilité mondiale."

["In the absence of a public authority that works for 'what is good for the world', the simple average of policies conducted with national objectives cannot produce this global public good that constitutes a stable monetary anchor at the global level. In conclusion, there is no way to circumvent the need for a policy structure that anchors the global standard to an objective of global stability."]

"What we might call Triffin's 'general dilemma' can thus be expressed as follows: the stability requirements of the system as a whole are inconsistent with the pursuit of economic and monetary policy forged solely on the basis of domestic rationales in all monetary regimes devoid of some form of supranationality."

The Triffin general dilemma can be viewed as another instance of the general global/national trilemma because it postulates the tension between

- the stability of an international monetary system (the global goal),
- the lack of supranational tools (so domestic tools are used in a rather uncoordinated manner), and
- the use mainly of domestic policies to achieve all goals.

This analysis is connected with Jan Tinbergen's basic rule of economic policy: use at least as many policy tools as policy goals. For the trilemma just above (or the general trilemma at the beginning) to fail a single instrument (domestic tools) must in general be capable of delivering two goals (the domestic and the global ones). Tinbergen's rule says that one should not expect to always kill two birds with one stone.

Padoa-Schioppa, T. (2010): "L'ombre de Bancor: la crise et le désordre monétaire mondial", https://institutdelors.eu/publications/lombre-de-bancor-la-crise-et-le-desordre-monetaire-mondial-discours-de-tommaso-padoa-schioppa/ .

Padoa-Schioppa, T. (2010): "The ghost of Bancor: The economic crisis and global monetary disorder", Louvain–la–Neuve, 25 February 2010.

25. Fundamental problems of the IMS – I New Triffin dilemma

Padoa-Schioppa's general Triffin dilemma ("the stability requirements of the system as a whole are inconsistent with the pursuit of economic and monetary policy forged solely on the basis of domestic rationales in all monetary regimes devoid of some form of supranationality") is one the current fundamental problems of the international monetary system.

The US monetary policy has strongly influenced global monetary conditions; yet, this policy has almost always been conducted without taking into account its international repercussions. In general, the US uses its privileged economic status to its own advantage, letting the rest bear the costs of the collateral effects the US decisions cause abroad (the global financial crisis, started around mid-2007 in the US, could be a case at hand; the collapse of the Bretton Woods system, another).

"In the last few years, the relative decline of the economy of the United States and the presumed decline of the dollar as an international currency have led scholars to formulate new versions of the Triffin dilemma. The fear is that in the face of a growing demand for currency reserves, mainly from emerging countries, the supply of reserve instruments in dollars, in particular, treasury bonds, will not be able to increase at the same pace. Two different explanations have been provided for this process. The first, closer to the original version of the Triffin dilemma, maintains that the creation of international liquidity by the United States is due to its large and persistent current account deficits (…). Over time, the persistence of these deficits and the corresponding rise in US debt will result in mistrust in the solvency of the United States and its dollar. In this view, the shortage of international liquidity goes hand in hand with the decline in the dollar's standing as an international currency. In another recent version of the Triffin dilemma, the prospect of a lack of international liquidity is due to the fact that, even if US foreign accounts were in balance, the importance of the US economy within the world economy is decreasing. Correspondingly, the impact of US government deficits (and of the securities issued to cover them) on the world economy is decreasing. It follows that the supply of US Treasuries will result in being inadequate to meet demand (…). The two recent versions of the Triffin dilemma may take different paths, but they both come to the same conclusion, namely, that in the coming decades, the world economy will be marked by a shortage of international liquidity and high levels of deflation."

Seghezza, Elena (2018): "Can swap line arrangements help solve the Triffin dilemma? How?", World Economics, DOI: 10.1111/twec.12669.

26. The safe assets dilemma

The original Triffin dilemma can be seen as presenting a medium to long-run incompatibility between growth and stability: the unbalanced growth of a monetary magnitude (the amount of dollars outside the US economy) generates systemic monetary instability (collapse of an international monetary system based on the dollar a global currency).

The safe assets dilemma by Bordo and McCauley (2017) is another example of economic instability caused by unsustainable growth. The Triffin dilemma claims that the global demand for a stock (US international official liabilities) would outgrow the US official holdings of another stock (gold).

The safe assets dilemma holds that the global demand for another stock (US Treasury liabilities) would outgrow a flow (the US GDP, a flow that provides the taxes that the conventional approach to macroeconomics sees as necessary to service the Treasury's debt; by contrast, Modern Monetary Theory contends that a government running a debt in its own currency has no financial constraint and that taxes are not a funding device but a tool to regulate aggregate demand and inflation).

In sum, the safe assets dilemma identifies a tension between

- satisfying an increasing international demand for a safe dollar-denominated asset (US public debt) and
- trusting the ability of the US economy to generate funds to repay the US public debt.

Bordo, Michael; Robert McCauley (2017): "A global shortage of safe assets: A new Triffin Dilemma?", Atlantic Economic Journal 45(4), 443-451.

27. Is the open economy trilemma actually a dilemma?

Remind the open economy trilemma by Robert Mundell and Marcus Fleming: it is hard to impossible to reconcile the policy goals of

- financial integration (money is free to leave or enter the economy: currency markets are not controlled);
- monetary independence (the domestic price of money, the interest rate, can be freely chosen); and
- exchange rate stability (the foreign price of money, the exchange rate, is held fixed).

The uncovered interest rate parity condition (UIRPC) justifies the trilemma. According to UIRPC, in the absence of a risk premium, speculation makes the expected rate of appreciation E^e of the domestic currency against a foreign currency approximately equal to the difference between the foreign interest rate i^* and the domestic interest rate i. Speculation requires currencies to be bought and sold without constraints. Hence, by UIRPC , financial integration ensures that $E^e \approx \ i^* - i$. In addition, exchange rate stability implies that no appreciation (nor depreciation) of the domestic currency should be expected; that is, $E^e = 0$. It then follows from financial integration and exchange rate stability that $i^* \approx i$, which means that monetary policy cannot be independent. Summing up, financial integration under fixed exchange rates forces weaker economies to adopt the monetary policy of stronger economies.

Fleming, J. Marcus (1962): "Domestic financial policies under fixed and floating exchange rates", IMF Staff Papers 9, 369-379.

Mundell, Robert A. (1963): "Capital mobility and stabilization policy under fixed and flexible exchange rates", Canadian Journal of Economics and Political Science 29(4), 475-485.

Hélène Rey (2015) finds evidence of the existence of a global financial cycle, characterized by correlated changes in asset prices, money flows and leverage levels. Specifically, "Global financial cycles are associated with surges and retrenchments in capital flows, booms and busts in asset prices and crises."

She also finds that, being the dollar the global reserve currency, the US monetary policy is one determinant of the global financial cycle: global capital flows are fundamentally influenced by US monetary policy. In this context, regardless of the exchange rate regime, financial integration with the US limits severly the freedom of the domestic monetary policy.

She concludes that the global financial cycle reduces the open economy trilemma to a dilemma, that she names 'irreconcilable duo': "Independent monetary policies are possible if and only if the capital account is managed, directly or indirectly."

In other words, Rey's irreconcilable duo holds that one cannot have at the same time

- financial integration with the US and
- a monetary policy independent from the the US monetary policy.

Rey, Hélène (2015): "Dilemma not Trilemma: The global financial cycle and monetary policy independence", NBER Working Paper 21162.
https://cepr.org/voxeu/columns/dilemma-not-trilemma-global-financial-cycle-and-monetary-policy-independence

28. Triffin event

"… the US is risking another 'Triffin' event, in the form of a confidence crisis and a run on the dollar. The current situation echoes that of the UK in the 1920s and the US in the 1960s. The crises that ended both episodes marked dramatic turning points in the history of the international monetary system."

"… the US dollar has so far maintained its hegemonic position at the centre of the international monetary system. This position is out of proportion with the lower and shirking relative economic size of the US. The dollar still accounts for more than 65% of total foreign exchange reserves according to the IMF. More generally, the US is still the single biggest supplier of safe assets to the rest of the world, as much as 50% of world GDP in 2016. Relatedly, the dollar is the principal monetary anchor; for example, more than 50% of countries that peg their exchange rate peg to the dollar (…) The dollar accounts for 43% of global trade invoicing (…) Dollar-denominated bonds account for more than 60% of global cross-border positions. Is the US putting its special position at risk by leveraging itself beyond its means? Will another currency take over if the confidence in the dollar evaporates? These are fundamental questions not only for the US but also for the world."

"In the last decade, the Global Crisis – during which the dollar appreciated strongly against the euro (the only other reserve currency candidate) – has cemented the centrality of the dollar. The Triffin event did not materialise in 2008. However, the current situation may not be as stable as it seems. The US' role as a world banker is now performed on a much grander scale than when it was

originally debated in the 1960s (see Gourinchas and Rey 2007). The 'bank' has got bigger, and so have the associated fragility concerns.

As the US's relative economic size keeps shrinking, new countries, such as China, will emerge and challenge the US hegemony."

"It is impossible to say for how long the US will maintain its position at the centre of the international monetary system, but if history is any guide, it will not be forever. The question is how turbulent the transition will turn out to be."

Maggiori, Matteo; Emmanuel Farhi (2017): "The new Triffin Dilemma: The concerning fiscal and external trajectories of the US"
https://cepr.org/voxeu/columns/new-triffin-dilemma-concerning-fiscal-and-external-trajectories-us

29. Fundamental problems of the IMS – II Bias against deficit countries

The current international monetary system has a bias against countries with current account deficits. Since countries running a current account surplus generally have no incentive to eliminate the surplus, the burden of the adjustment of international trade imbalances falls exclusively on deficit countries (a point already made by JM Keynes). If the deficit countries do not receive the financing needed to handle the adjustment or the surplus countries do not pursue more expansionary policies to neutralize the global contractionary effects of the adjustment by deficit countries, the impact of the adjustment on the world economy will be contractionary.

- In connection with this bias, the absence of a cooperative international system to manage exchange rate fluctuations has increased currency speculation and global imbalances.
- Global (or at least multilateral) exchange rate arrangements appear necessary to maintain global stability, to avoid the risk of collapse of the global trading system and to facilitate adjustment in crisis-stricken countries.

30. Fundamental problems of the IMS – III Rich-country bias

The present international monetary system is not equitable. Developing countries have a need to accumulate international reserves. These reserves are typically issued by developed (rich) economies. Consequently, developing countries are forced to transfer resources to developed countries to obtain international reserves. Financial liberalization and the pro-cyclical nature of the capital flows destined to developing countries (foreign capital quickly flies from a developing country with disappointing growth performance) have magnified the inequity bias. In this context, developing countries have been forced to accumulate international reserves in excess as a precaution against sudden or intense contractions in international financing.

- From the point of view of developing countries, the first role of international financial institutions should be the ability to counteract the pro-cyclical effects of financial markets (that is, these markets magnify economic expansion and economic contraction).

Not paradoxically, the same financial markets that create trouble in developing countries subject those countries to credit ratings reinforcing the rich-country bias.

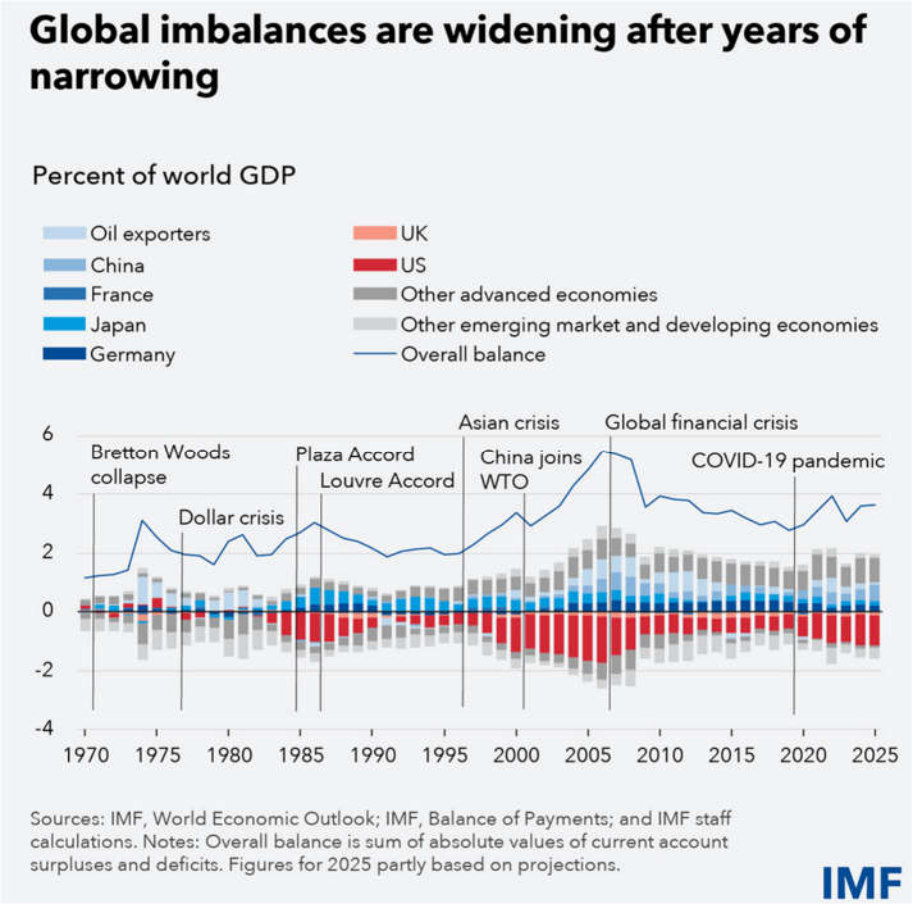
31. Are global imbalances a serious cause for concern?

"Global imbalances—persistent, large-scale current account surpluses in some nations (e.g., China, Germany) and deficits in others (e.g., the US)—are concerning because they threaten global financial stability, foster trade protectionism, and risk disruptive economic adjustments. They signal unsustainable debt accumulation in deficit nations and excessive, under-invested savings in surplus nations, which can trigger sudden capital flow reversals.

Key Reasons for Concern

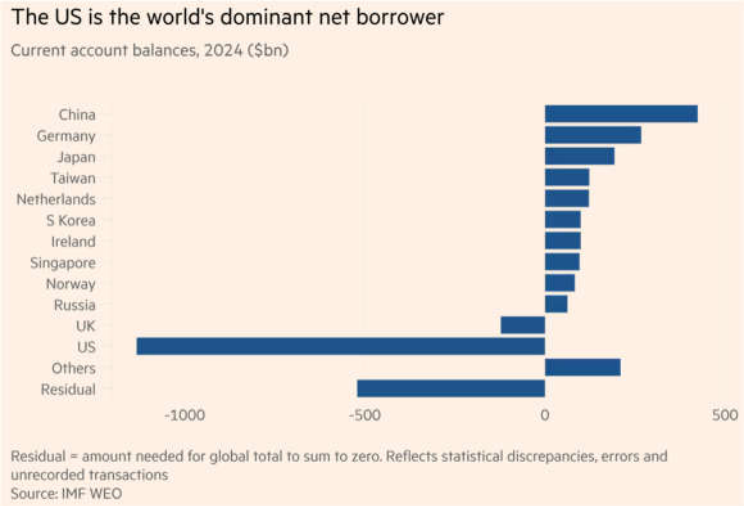
- **Risk of Sudden Reversal:** Large, sustained deficits can become unmanageable if investors lose confidence, leading to sudden, chaotic capital withdrawals and potential financial crises.
- **Trade Tensions and Protectionism:** Persistent imbalances often fuel political pressure for protectionist measures, such as tariffs, which can reduce global trade and growth.
- **Disruptive Currency Fluctuations:** Extreme imbalances can force sharp, disorderly adjustments in exchange rates, causing economic instability.
- **Unbalanced Growth and Over-Indebtedness:** Deficit nations may face over-indebtedness, while surplus nations experience inefficient investment. This creates 'too little savings' in one area and 'too much' in another, misallocating global resources.
- **Geopolitical Fragility:** These imbalances can worsen geopolitical fragmentation, as economic friction leads to defensive industrial policies and loss of international coordination.

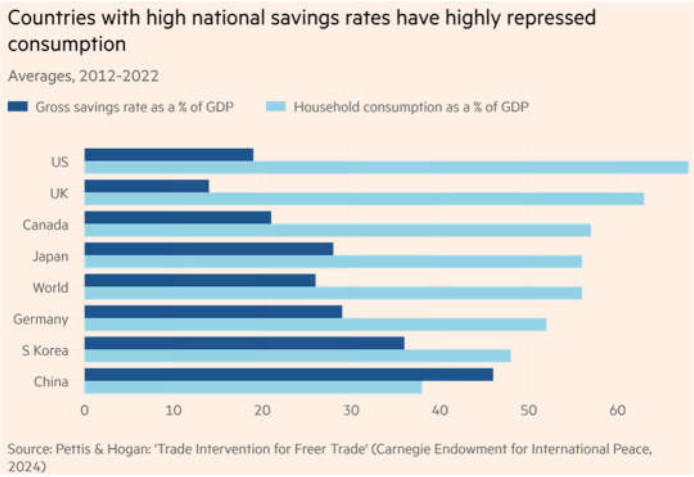
According to the IMF, excessive imbalances, covering roughly 1.5% of world GDP, are increasingly concentrated in advanced economies, necessitating coordinated policy action to shift from reliance on foreign capital toward more balanced growth." Google AI

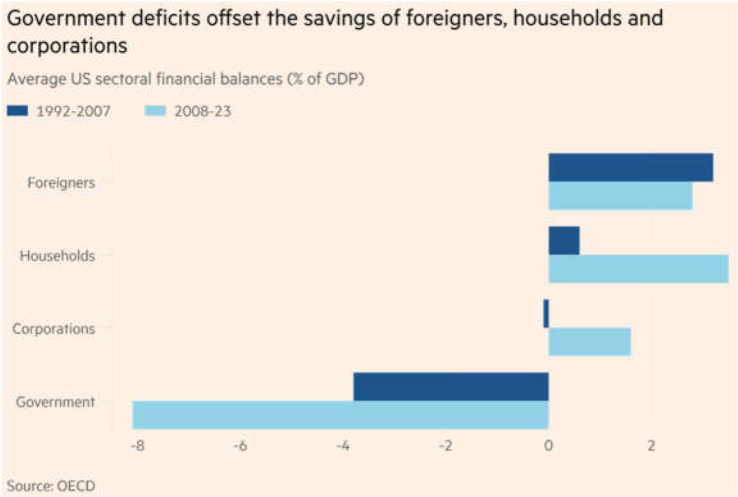


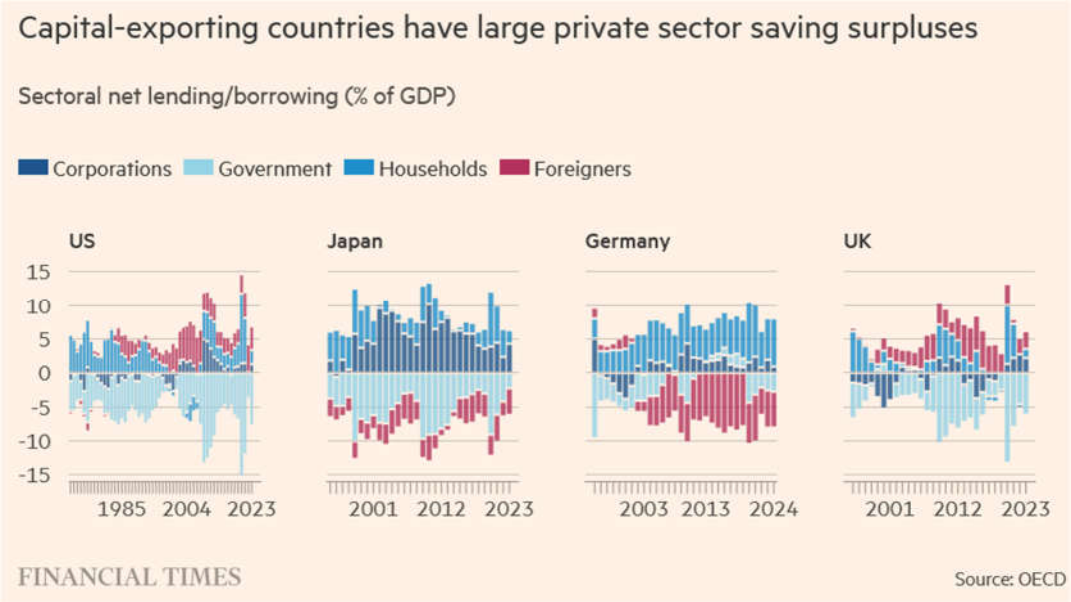
https://www.imf.org/en/blogs/articles/2026/04/06/global-imbalances-old-questions-new-answers

"… the main reason to worry about global trade imbalances is not the impact on manufacturing, which, for a country like the US, is a second order issue, but rather on financial stability. This is also why fiscal adjustment needs to be a co-operative venture when the participants are such big economies."



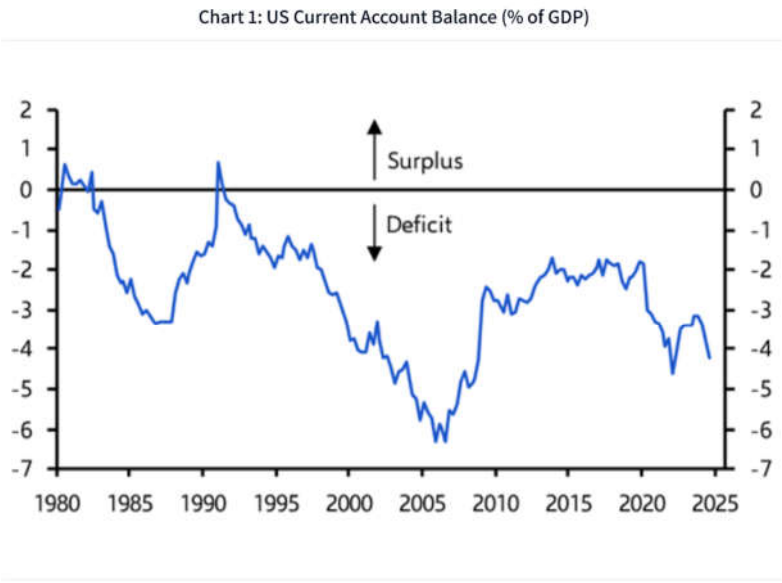






https://www.ft.com/content/e2c8c6c3-0cdc-4aa8-a47d-399407c75ad9?syn-25a6b1a6=1

"Large and sustained current account deficits – and the associated accumulation of external liabilities – have therefore left the US dependent on maintaining the confidence of foreign investors. (This is what Mark Carney, during his time as the Governor of the Bank of England, referred to as the "kindness of strangers".) The US is helped in this regard by the fact that it has the world's reserve currency, which creates ready demand for dollar-denominated assets. But this does not give the US licence to run large external deficits indefinitely."



https://www.capitaleconomics.com/blog/trump-right-fixate-trade-deficit-just-not-reason-he-thinks

"China's widening trade surplus and the growing US trade deficit since the pandemic have renewed concerns about global imbalances and fueled an intense debate on their causes and consequences. There are increasing worries that China's external surpluses result from industrial policy measures designed to stimulate exports and support economic growth amid weak domestic demand. Some worry that the resulting overcapacity could lead to a 'China shock 2.0'—a surge of exports that would displace workers and hurt industrial activity elsewhere.

This trade and industrial policy view of external balances is incomplete at best and should be replaced with a macro view. External balances are ultimately determined by macroeconomic fundamentals, while the link to trade and industrial policy is more tenuous. To understand the pattern of global external imbalances, we need to understand the macroeconomic drivers of desired saving relative to desired investment, not only in China, but also in the rest of the world including, importantly, the United States. While other countries contribute to global imbalances, the United States and China together account about one-third of the global current account balance."

https://www.imf.org/en/blogs/articles/2024/09/12/trade-balances-in-china-and-the-us-are-largely-driven-by-domestic-macro-forces

"Global current account imbalances are widening again, reversing a decade of steady decline following the global financial crisis. History suggests a clear risk: widening imbalances have often been accompanied by concentrated and lower-quality growth, triggered sectoral dislocations across trading partners, and preceded financial crises or abrupt reversals of capital flows. With the global economy already absorbing multiple shocks, such a disorderly adjustment could be exceptionally costly. This renewed widening has revived questions about which policy tools can meaningfully impact external positions. In particular, the recent expansion of industrial policies and the proliferation of trade restrictions have diverse economic and non-economic motives, but are often

justified by the objective of reducing current account imbalances. Yet there is limited analytical and empirical clarity on how these policies affect external balances."

"Micro industrial policies—such as subsidies for a specific industry or targeted tax incentives—generally have ambiguous and limited effects on the current account. When they succeed in raising aggregate productivity, they tend to boost investment and consumption, often lowering the current account balance. When they fail, for example by misallocating resources and depressing productivity, they can increase the current account balance, but at the cost of lost output. Either way, large and systematic effects on external balances are uncommon.

Macro industrial policies, by contrast, can have larger effects. These strategies, often associated with export-led growth models, combine foreign asset accumulation, capital flow restrictions, financial repression, or other mechanisms that boost national saving. These policies work not by improving efficiency but by forcing saving, often at the expense of economic welfare. The current account balance increases, but mainly because domestic demand is restrained and resources are redirected toward external surpluses.

The conclusion is clear: industrial policies and tariffs are not shortcuts to external rebalancing. When they affect the current account, they often do so by suppressing consumption or investment—hardly a recipe for sustainable growth. Durable rebalancing still depends on sound domestic policies, not trade barriers."

"What is clear is that global imbalances will be shaped by domestic macroeconomic trajectories and policies rather than by tariffs or narrowly targeted industrial policies. It's also evident that reducing global imbalances works best when countries move together."

https://www.imf.org/en/blogs/articles/2026/04/06/global-imbalances-old-questions-new-answers

"Global imbalances are back, and the lesson from history is that they often end in financial crises. This column (…) argues that global imbalances today are not just a macroeconomic issue; they are embedded in a broader context of financial fragility and geopolitical competition. Managing them in the current environment is less about achieving first-best adjustment and more about avoiding second-best policy mistakes."

"Global imbalances are back. Since 2018, the sum of current account surpluses and deficits has increased by roughly 25% and 35% respectively, reaching their highest levels since 2012 (…) While still below the peaks of the mid-2000s, this renewed widening has returned the issue to the centre of policy debates."

"The lesson from history is that global imbalances often end in financial crises. That risk cannot be dismissed today. The stock of external liabilities of the central country in the global financial system is already high and projected to rise further."

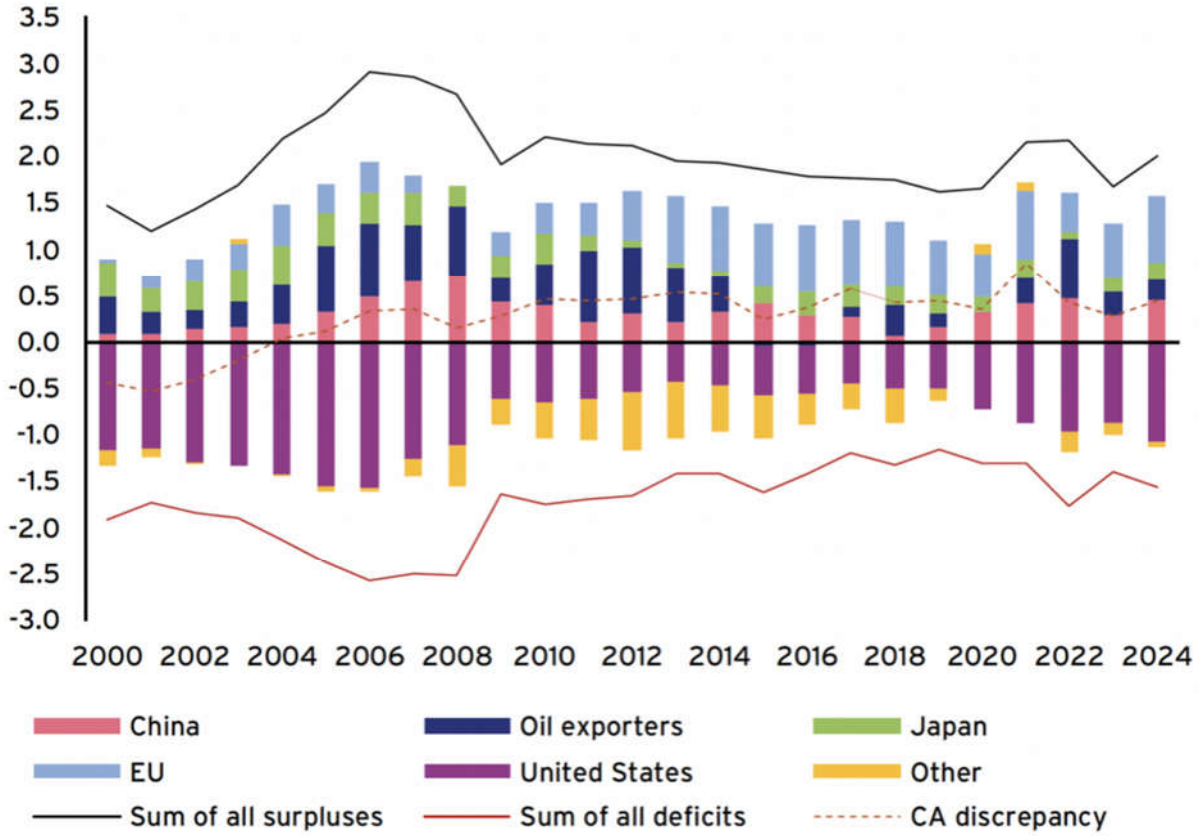
"At a conceptual level, current account imbalances are neither unusual nor inherently harmful. They reflect differences between domestic saving and investment. Countries with deficits import capital to finance investment or consumption; those with surpluses export capital. In fast-growing economies, deficits can be welfare-enhancing, allowing investment to exceed domestic saving.

Problems arise when imbalances become large, persistent, and associated with rising leverage or distorted domestic policies. Deficit countries face the risk of sudden stops, currency depreciation, and debt crises. Surplus countries, while less exposed to financial crises, can contribute to global demand imbalances and political tensions. Crucially, adjustment requires addressing underlying macroeconomic conditions – trade measures alone are insufficient."

"Today's imbalances resemble those of the 2000s in their geography. The US runs the largest deficit, while surpluses are concentrated in China, Europe, Japan, and oil exporters. But the underlying system has changed in ways that increase fragility.

First, financial stability risks have increased. The US, as the issuer of the dominant reserve currency, is running large and persistent deficits financed by increasingly fragile private capital flows. The resulting configuration – high external liabilities, compressed risk premia, and leveraged financial intermediation – raises the risk of abrupt adjustment.

Second, political and trade tensions have intensified. External imbalances are increasingly linked to concerns about competitiveness, industrial policy, and strategic dependence. This raises the risk of protectionism and fragmentation of the global trading system."



"The first-best solution for global imbalances is well known: US fiscal consolidation would reduce its reliance on foreign capital and narrow its current account deficit. China would rebalance away from investment- and export-led growth by strengthening social safety nets and boosting household consumption. Europe would increase investment, particularly in infrastructure, defence, and the green transition, thereby lowering its surplus. Such a combination would not eliminate financial vulnerabilities – given large gross positions, high leverage, and compressed risk premia – but it would reduce the flow imbalances that contribute to them.

However, policy trajectories are moving in the opposite direction. In the US, fiscal deficits remain exceptionally large despite strong growth, and policy is geared toward further demand expansion. In China, weak domestic demand combined with industrial policy has reinforced export growth and external surpluses. And in Europe, structural and political constraints continue to limit the scale and speed of investment increases. In this context, global adjustment is more likely to be asymmetric, delayed, and potentially disorderly.

If the US does not adjust: financial risks for the rest of the world

The most immediate concern for the rest of the world arises from the US external position. A continued combination of large fiscal deficits and strong domestic demand implies sustained current account deficits in the range of 3.5–4% of GDP (IMF 2026b), financed increasingly through private capital flows. This creates vulnerability to shifts in investor sentiment."

"In short, global imbalances today are not just a macroeconomic issue. They are embedded in a broader context of financial fragility and geopolitical competition. This combination makes them more consequential – and more difficult to address—than in the past."

Beatrice Weder di Mauro; Jeromin Zettelmeyer (2026): "Why global imbalances matter again – and what to do about them"
https://cepr.org/voxeu/columns/why-global-imbalances-matter-again-and-what-do-about-them

"Effects of the Trade Deficit

U.S. companies that can't compete with cheaper Chinese goods must find ways to cut costs to stay competitive. As a result, U.S. manufacturing (measured by the number of jobs) declined by 35% between 1998 and 2010, before rebounding by about 7% through the end of 2020. Overall, manufacturing jobs in the United States have declined by about 30% since 1998.

Note. High trade deficits can lead to economic hardship, place jobs and capital outside of a country, and create trade wars as countries work to balance their partnership.

Trade imbalances become an issue when there isn't a relatively equal amount of trade between trading partners. For example, the U.S. feels that China isn't living up to its trade obligations, and thus that actions need to be taken. These usually result in trade embargoes or tariffs that can raise the costs of imports for the offending nation.

The U.S. economy is affected by the trade deficit. Jobs and capital are moved offshore, causing financial difficulties for consumers and smaller businesses. The tariffs imposed by the administration have been paid by U.S. companies, for the most part, further costing them $46 billion after losing over $1.7 trillion in stock values.

China is also one of the leading holders of U.S. Treasuries, which it purchases to reduce the value of its currency, thus allowing it to maintain a low exchange rate with the dollar. U.S. consumers benefit from low prices, and the government and economy benefit from capital being invested into the country."

https://www.thebalancemoney.com/u-s-china-trade-deficit-causes-effects-and-solutions-3306277

32. The Keynes global currency proposal: the Bancor

"Keynes hoped that a new global economy built upon institutions of international cooperation would be constructed after the end of the Second World War. To achieve this, Keynes proposed creating a world central bank, the International Clearing Union (ICU), in which all national central banks would hold an account. The ICU would issue a new global currency – called 'Bancor' – for use by the member central banks. Together the bank and its new currency would mitigate persistent trade imbalances and speculative flows of 'hot money' – financial flows which pursue arbitrage opportunities in periods of rapidly fluctuating interest rates – caused by floating exchange rates, thereby addressing what Keynes believed had been the twin causes of the Great Depression.

Keynes was denied his experiment. The opposition of US (United States) negotiators led by Harry Dexter White (…) took the ICU and Bancor off the Allied Powers' agenda before the Bretton Woods Conference in July 1944."

"Keynes's plans were designed for a fictitious post-war world: one that was rational, cooperative, and trusting. Consequently, his plans were based on unrealistic expectations about bureaucrats and bureaucracy, world leaders and national sovereignty, and central banks and inflation control."

"Under Keynes's scheme, there was to be one world-central bank, the ICU. All member nations would be given an annual quota of Bancor, the bank's currency, proportionate to their share of world trade. The distribution would be managed by the ICU board of trustees. Any country's balance of payments which slipped into deficit or surplus would either be debited or credited in Bancor until balance had been restored. In theory, all countries would be incentivised to keep their trade in goods and services balanced, forgoing 'beggar-thy-neighbour' trade policies, which had led to the tariffs and other obstructions to trade in the 1930s.

To manage 'hot money,' financial stability would be maintained through the member central banks having fixed-but-flexible exchange rates between nations, and all currencies fixed to Bancor, with Bancor fixed to gold. The maintenance of these rates, the issuing of Bancor and the controlling of world gold reserves would each be the responsibility of the Governing Board of the ICU, a technocratic elite which Keynes assumed would be beholden to British and American interests."

"The wide-ranging mandate of the ICU would have necessitated a high level of activity by the board assisted by a large bureaucracy, a fact which Keynes omitted from his proposals but was identified by contemporary observers. Who would fill these positions?

The ICU implied an affront to national sovereignty. Given the wide-ranging powers of the governing board, each decision would have had enormous political consequences for member governments. Entrepreneurship, employment, and industrial investment would each be affected by the ICU's controls over national interest rates and trade policies. In practice, political conflict and organisational inertia would inevitably challenge the rebalancing of world trade that Keynes envisaged.

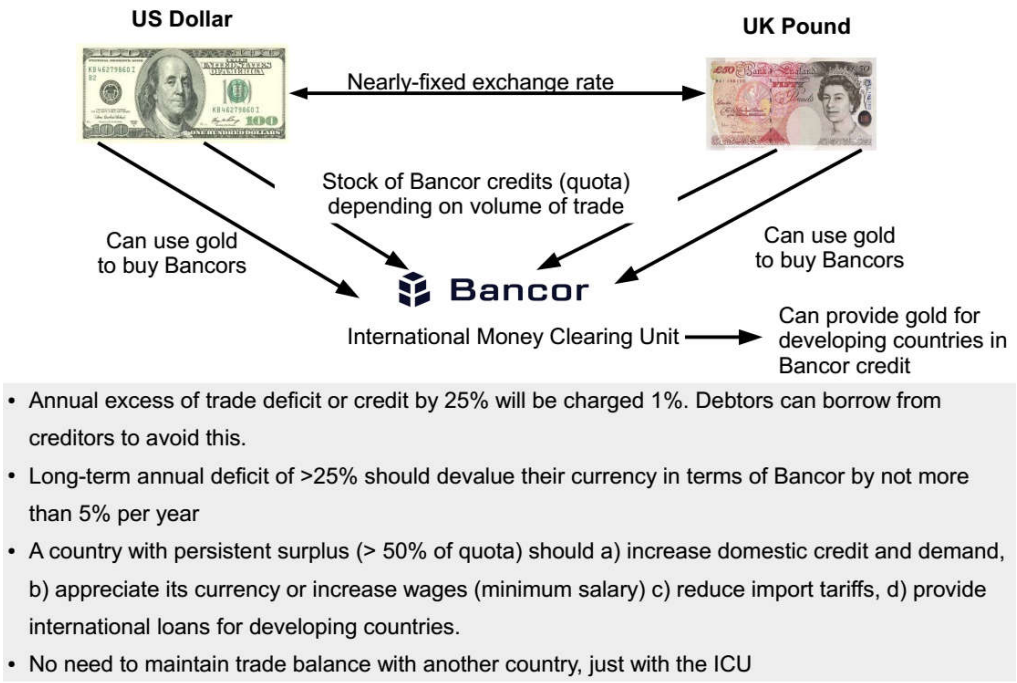
The ICU also required centralizing foreign currency reserves for national central banks and strict capital controls for private actors, a further unacceptable invasion of sovereignty for many nations, particularly the US.

Issues of governance and political economy aside, how would the ICU begin? Keynes' plans for the ICU gave no details on how it would acquire the capital needed to undergird Bancor.

Finally, how would the ICU be constrained? Bancor could be created at will by the Governing Board of the ICU and could fund large balance of payment deficits for member countries. But since all currencies were to be fixed to Bancor, this funding of deficits could spur a general inflation of all world currencies. If a member of the public were to keep raising their overdraft their bank would eventually run out of money – not so with the ICU."

"The recent technology of Central Bank Digital Currencies (CBDCs) has raised the prospect of a 'single hegemonic currency' (SHC) – a digital coin whose value would be linked to a basket of currencies. Once a radical idea, by 2019 it had become so influential that former Governor of the Bank of England Mark Carney gave a speech advocating for its creation. The calls for a new reserve currency have become ever more strident as the monetary tightening of the Federal Reserve has caused financial ripples across the world economy."

Tout, Ed (2023): "Plans for a fictitious world: Keynes's global bank and currency"
https://blogs.lse.ac.uk/economichistory/2023/03/10/keynes-global-bank-and-currency/



http://www.reesonomics.eu/themes/Keynes/Keynes_Bancor_ICU.pdf

33. Global digital currencies

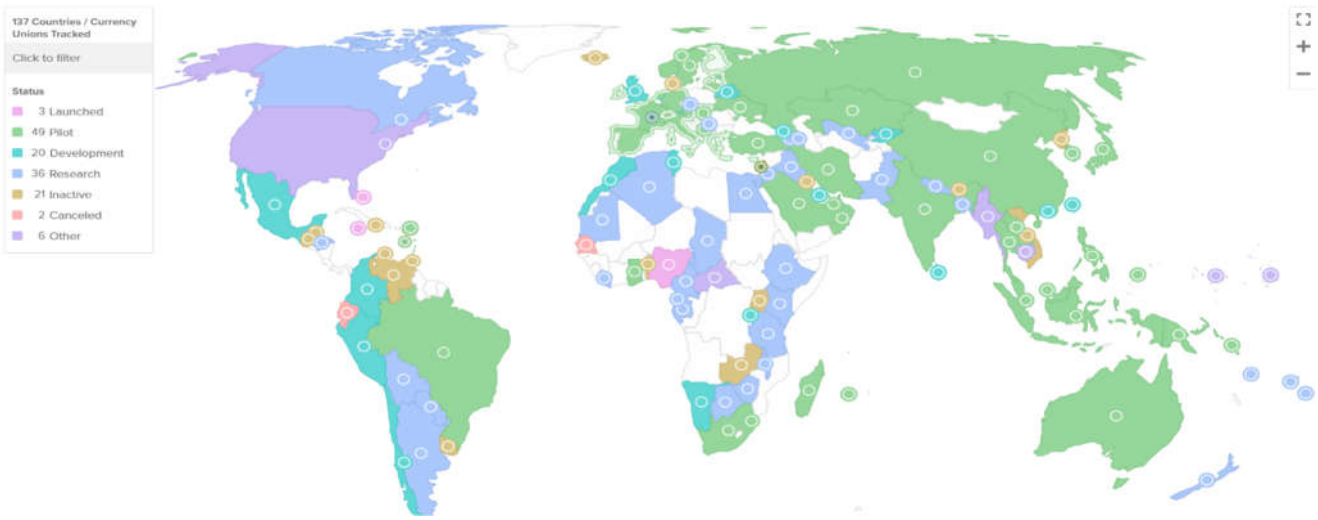
"Global digital currencies, primarily Central Bank Digital Currencies (CBDCs), are electronic forms of sovereign money issued by central banks to enhance payment efficiency, security, and financial inclusion. Major projects include the digital euro, digital yuan (e-CNY), and various stablecoins, with many nations exploring or piloting these to modernize financial systems and improve cross-border transactions.

Key Aspects of Global Digital Currencies

- **Central Bank Digital Currencies (CBDCs):** These are digital liabilities of a central bank, aimed at providing a safe, regulated, and efficient digital payment method.
- **Major Initiatives:**
  - **Digital Yuan (e-CNY):** As of June 2024, China's CBDC pilot reached 7 trillion yuan ($986 billion) in transaction volume across 17 provinces.
  - **Digital Euro:** The European Central Bank is developing a digital euro to enhance payment security and data protection, with a focus on privacy.
  - **Others:** Sweden is testing an e-krona, and the Bank of England is examining a 'Britcoin'.
- **Stablecoins & Private Crypto:** Digital assets like Bitcoin are decentralized, whereas stablecoins are typically backed by real-world assets (e.g., US Treasuries) to maintain a stable value.
- **Goal of Digital Currencies:** The core objective is to improve payment efficiency, reduce costs, enhance cross-border transactions, and foster financial inclusion.
- **Risks and Challenges:** Issues include regulatory, cybersecurity, and financial stability risks that require international cooperation.

Global Trends. The rise of digital assets is changing global trade, with many countries focusing on developing their own CBDCs as part of a more competitive, multipolar currency landscape."

https://www.google.com/search?client=firefox-b-d&q=global+digital+currency



https://www.atlanticcouncil.org/cbdctracker/

"**Key findings** (Last updated: July 2025)

137 countries & currency unions, representing 98% of global GDP, are exploring a CBDC. In May 2020 that number was only 35. Currently, 72 countries are in the advanced phase of exploration—development, pilot, or launch.

There is a new high of 49 CBDC pilot projects around the world. 3 countries have fully launched a digital currency—the Bahamas, Jamaica, and Nigeria. All three countries are focused on expanding the reach of their CBDCs domestically.

Emerging markets are driving global retail CBDC growth to reduce cash use, enhance financial inclusion, and improve regulatory oversight. This trend is also a response to the growing proliferation of US dollar-backed stablecoins internationally.

The ECB is advancing a 'global euro moment' as it pilots the digital euro, aiming to strengthen the euro's international role. Similarly, the PBoC is promoting the digital yuan as part of its strategy for a multipolar currency system. Both efforts signal a competitive push toward currency internationalization through CBDCs.

Digital yuan (e-CNY) is still the largest CBDC pilot in the world. In June 2024, total transaction volume reached 7 trillion e-CNY ($986 billion) in 17 provincial regions across sectors such as education, healthcare, and tourism. This figure is nearly four times the 1.8 trillion yuan ($253 billion) recorded by the People's Bank of China in June 2023.

India's e-rupee is now the second-largest CBDC pilot. Digital rupee in circulation rose to ₹10.16 billion ($122 million) by March 2025, up 334% from ₹2.34 billion ($28 million) in 2024. In 2025, the Reserve Bank of India is expanding both retail and wholesale CBDCs with new use cases, offline functionality, and broader participation.

The US is an outlier amongst its peer central banks. In 2025, President Trump issued an executive order to halt all work on a retail CBDC, making the US the only country to do so. However, the US continues to engage in wholesale cross-border payments research through Project Agorá, an initiative in collaboration with six other major central banks.

Since Russia's invasion of Ukraine and the G7 sanctions response, cross-border wholesale CBDC projects have more than doubled. There are currently 13 of them—including Project mBridge—which connects banks in China, Thailand, the UAE, Hong Kong, and Saudi Arabia. mBridge is now managed by the participating central banks, without BIS involvement.

Countries prefer to take a phased approach to piloting their CBDCs. They use controlled environments like regulatory sandboxes to gradually test and scale implementation. This progressive rollout allows them to assess technological resilience, address privacy and security concerns, evaluate user adoption, and ensure interoperability with existing financial systems."

https://www.atlanticcouncil.org/cbdctracker/

34. The blockchain trilemma (Vitalik Buterin)

"A feature making the blockchain structure appealing is decentralization: as there is no centralized entity controlling or regulating, the structure depends on the decisions of its users.

To remain appealing, the structure must accommodate new users without sacrificing its performance. That is, the network should be designed to allow mass adoption. Scalability is a network's ability to expand in a stable manner.

The blockchain trilemma claims that the more decentralized and scalable a blockchain, the less secure it is (the more manipulable it can be).

Security could be associated with centralization: the more influence an agent has in a network, the less secure it is, because most likely the agent will explote its influence to its own advantage, regardless on the effect on the the network stability.

Therefore, the blockchain trilemma refers to the tension between three concerns:

- decentralization (no central authority)
- scalability (mass adoption, network expansion)
- security (the network operates as expected, no one can break the rules at the expense of others).

For instance, the blockchain cryptocurrency Bitcoin is decentralized (nodes dispersed worlwide) and secure (no individual or collective controls the network of nodes), yet its scalability is limited (since the number of transactions that can be processed per time unit is limited). This means that the network is not immune to congestion. Is the solution to the trilemma (as for Bitcoin) to add more nodes with new participants? That every participant should become a node for transactions?

https://www.cryptowisser.com/fixing-quadrilemma-defi-will-live-up-to-its-promise/
https://phemex.com/academy/what-is-the-blockchain-trilemma
https://www.zeeve.io/blog/shardeum-solving-the-blockchain-trilemma/

"Ethereum is becoming a 'fundamentally new' decentralised network due to two recent technical advances, according to co-founder Vitalik Buterin.

The upshot? It has solved the notorious blockchain trilemma, Buterin argued.

'The trilemma has been solved — not on paper, but with live running code,' he wrote on X on Saturday.

The trilemma is a purported constraint on blockchain technology that states a blockchain must sacrifice one of three key features: decentralisation, scalability, or safety.

One advancement cited in Buterin's post was Ethereum's recent upgrade, codenamed Fusaka, which introduced a concept known as peer data availability sampling, or PeerDAS. That allows for a substantial increase in the amount of data that layer 2 blockchains can send to Ethereum.

The other was the slow improvement of zero-knowledge virtual machines, which dramatically slash the cost of validating blocks of transactions on Ethereum.

'This was a 10-year journey,' Buterin wrote, 'but it's finally here'."

https://www.dlnews.com/articles/defi/ethereum-solved-the-blockchain-trilemma-per-vitalik-buterin/ (5 Jan 2026)

35. The financial stability trilemma

"The financial stability trilemma states that a stable financial system, an integrated financial system and national financial stability policy are incompatible."

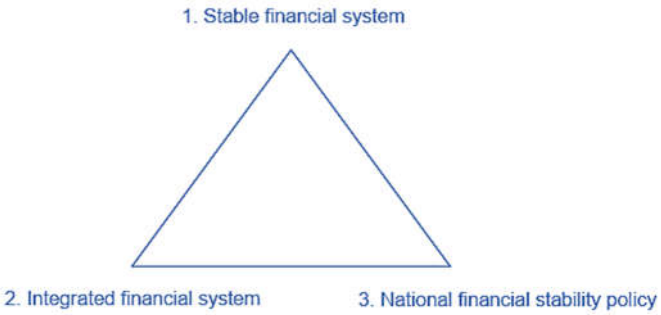
Schoenmaker, Dirk (2009): "The financial crisis: Financial trilemma in Europe",
https://cepr.org/voxeu/columns/financial-crisis-financial-trilemma-europe

Schoenmaker, Dirk (2011): "The financial trilemma", Economics Letters 111(1), 57–59.
https://www.econstor.eu/handle/10419/87091,
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2243105

The financial trilemma claims that financial openness is a threat to financial stability when financial supervision and financial policy is just a national responsibility. In other words, without international financial coordination global financial integration produces financial instability.

"It posits that only two of the following three can coexist at the same time:

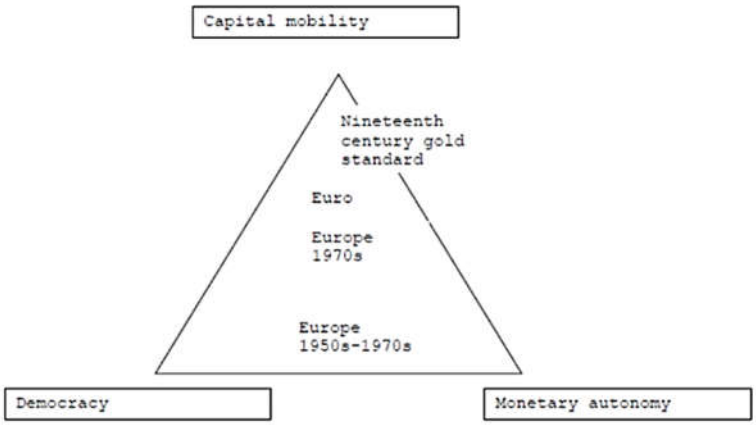
1. Sole national responsibility for financial policy.
2. International financial integration.
3. Financial stability.



The euro area crisis, which erupted when banking oversight and resolution were still fully vested at the member-state level, is a poster child for the financial trilemma. Additional structural weaknesses played a role in the euro crisis, so it is vitally important (…) to point out that flexible exchange rates do not offer a full escape from the financial trilemma. Because the financial trilemma implies that national prudential policies cannot be fully effective when capital markets are open to cross-border transactions, even when exchange rates are flexible, it provides the main rationale for a globally collaborative international reform agenda."

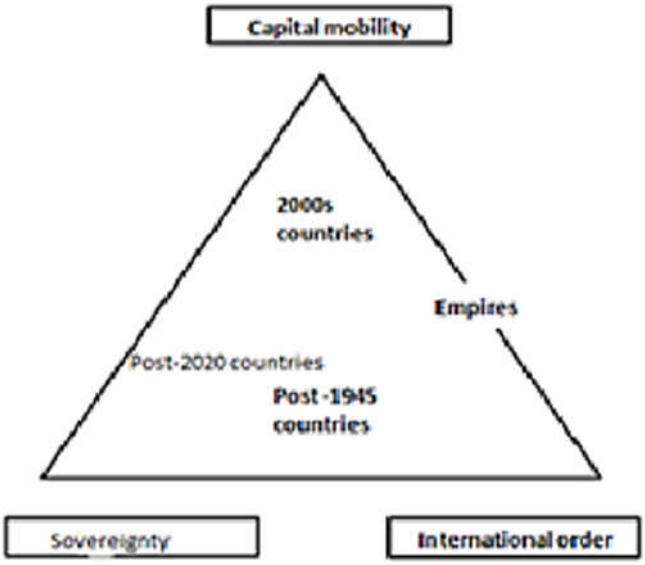
Maurice Obstfeld (2017): "Two Trilemmas for Monetary Policy"
https://www.imf.org/en/News/Articles/2017/07/24/sp072417-two-trilemmas-for-monetary-policy

36. The political economy trilemma



"After a period of financial opening, the consequent development of financial imbalances may strain the political system. States (whether they are autocracies or democracies) initially like the benefits that flow from open capital markets. Democracies, in which governments are responsive to short term demands of voters, are also likely to want to set monetary policy independently. They need to work out a trade-off between present monetary autonomy and the ability to attract inflows. Thus the third trilemma may be formulated as the incompatibility of capital flows, independent monetary policy, and democracy. It poses a severe problem for people who believe that a major area of policy in a modern state should be capable of being decided by a democratic process."

37. The international relations trilemma



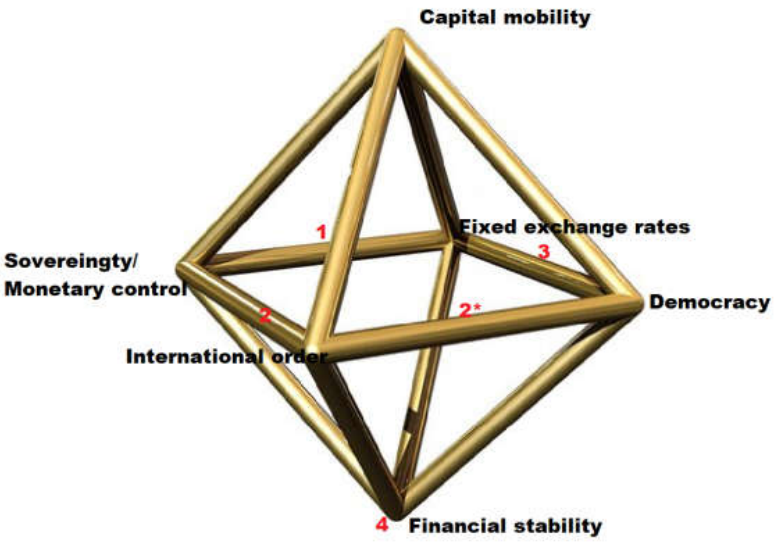
"… in democratic societies the redistributory impulse generated by the political process may – especially when the limits of domestic redistribution become apparent– translate into a wish to redistribute the resources of other countries. The burden of an unpleasant adjustment could conceivably be shifted onto other people –who are outside the national boundary and thus outside the political process. It is this impulse (Let the others pay!) that is restrained by treaties and security commitments. An alliance system or closer political union (as in modern Europe) helps to restrain destabilising democratic impulses, in which one country's democratic choices are confronting the voting preferences of other democracies."

"… capital flows, democracy, and a stable international political order cannot be reconciled with each other simultaneously."

James, Harold; Michael Bordo (2015): "Capital flows and domestic and international order: Trilemmas from macroeconomics to political economy and international relations"

https://cepr.org/voxeu/columns/capital-flows-and-domestic-and-international-order-trilemmas-macroeconomics-political

38. Financial stability octahedron



"Financial stability and free capital movements thus stand in a permanent tension, that produces many trilemmas, that affect both international political order and the chances of a liberal democratic domestic political order. We can thus think of these two as poles in a complex system of trade-offs or multiple trilemmas that can be captured figuratively by, or folded into, a polyhedron which offers a three dimensional policy space in its interior, and includes a wide variety of possible trilemmas."

Bordo, Michael; Harold James (2022): "Trapped in the Trilemma: When Security Trumps Economics", Hoover Institution, Economics Working Papers.

39. The financial sector's rise to power (Michael Hudson, 2015)

- "A nation's destiny is shaped by two sets of economic relationships. Most textbooks and mainstream economists focus on the 'real' economy of production and consumption, based on the employment of labor, tangible means of production and technological potential. This tangible Economy #1 is wrapped in a legal and institutional network of credit and debt, property relations and ownership privileges, while Economy #2 is centered on the Finance, Insurance and Real Estate (FIRE) sector. This 'debt and ownership' economy transforms its economic gains into political control to enforce payment of debts and to preserve property and natural resource or monopoly rent privileges (typically inherited)."
- "Today's banks don't finance tangible investment in factories, new means of production or research and development –the 'productive lending' that is supposed to provide borrowers with the means to pay off their debt. Banks largely lend against collateral already in place, mainly real estate (80 percent of bank loans), stocks and bonds. The effect is to transfer ownership of these assets, not produce more."
- "Borrowers use these loans to bid up prices for the assets they buy on credit: homes and office buildings, entire companies (by debt-leveraged buyouts), and infrastructure in the public domain on which to install tollbooths and charge access rents. Lending against such assets bids up their prices –Asset-Price Inflation."
- "Mainstream policy pretends that economies are able to pay their debts without reducing their living standards or losing property. But debts grow exponentially faster than the economy's ability to pay as interest accrues and is recycled (while new bank credit is created electronically)."
- "Debts that can't be paid, won't be. The question is: how won't they be paid? There are two ways not to pay. The most drastic and disruptive way (euphemized as "business as usual") is for individuals, companies or governments to sell off or forfeit their assets. The second way to resolve matters is to write down debts to a level that can be paid. Bankers and bondholders prefer the former option, and insist that all debts can be paid, given the "will to do so' (…) This is the solution that mainstream monetarist economists, government policy and the mass media popularize as basic morality. But it destroys Economy #1 to enrich the 1 percent who dominate Economy #2."
- "The financial sector (the One Percent) backs oligarchies."
- "Every economy is planned. The question is, who will do the planning: banks or elected governments? Will planning and structuring the economy serve short-term financial interests (making asset-price gains and extracting rent) or will it promote the long-term upgrading of industry and living standards?"

Michael Hudson's ten reforms to restore industrial prosperity

1. Write down debts with a Clean Slate, or at least in keeping with the ability to pay
2. Tax economic rent to save it from being capitalized into interest payments

3. Revoke the tax deductibility of interest, to stop subsidizing debt leveraging
4. Create a public banking option
5. Fund government deficits by central banks, not by taxes to pay bondholders
6. Pay Social Security and Medicare out of the general budget
7. Keep natural monopolies in the public domain to prevent rent extraction
8. Tax capital gains at the higher rates levied on earned income
9. Deter irresponsible lending with a Fraudulent Conveyance principle
10. Revive classical value and rent theory (and its statistical categories)

Hudson, Michael (2015): ***Killing the host. How financial parasites and debt bondage destroy the global economy,*** **CounterPunch Books.**

40. Minsky's Financial Instability Hypothesis

Hyman Minsky

Hyman Minsky suggested the Financial Instability Hypothesis as a theory of the business cycle according to which the stability of a capitalist financial system is ultimately destabilizing.

Financial markets can be viewed as entities that transform stability into instability. A booming economy validates the bets made by borrowers, as a growing economy allows them to repay debt. The more the boom continues, the more evident becomes that borrowers prosper. It then appears not so necessary to follow the prudential rules of less expansionary periods when incurring debt. Therefore more debt accumulates and the boom goes on… until it cannot; that is, until lenders perceive that lending has been excessive or repayment is less likely than before.

A Minsky moment (also called 'Wile E Coyote moment'; see the image on the right) is the time when the perception that indebtedness is excessive or repayment more doubtful has become widespread (when the general impression is the world is floating in debt). It is followed, to increase liquidity, by massive sales of financial assets, which in turn precipitate a market crash.

The Financial Instability Hypothesis holds that "over periods of prolonged prosperity, the economy transits from financial relations that make for a stable financial system to financial relations that make for an unstable system." (Minsky, 1992)

Minsky explains the transition from a stable to an unstable financial system in terms of three types of finance. In hedge finance cash flows are enough to meet all payment commitments on debt. With time, hedge finance tends to be displaced by speculative finance, where cash flows are insufficient but expected future cash flows would be enough to cover all debt payments. Again, with time (that is, with 'stability') speculative finance tends to be replaced by Ponzi finance, which occurs when debt

can only repaid with more debt. Ponzi finance cannot go on forever at a general scale (arguably 'too big too fail' entities might live out of Ponzi finance).

Minsky, Hyman P. (1977): "The financial instability hypothesis: An interpretation of Keynes and an alternative to 'standard' theory'", Challenge 20(1), 20-27.

Minsky, Hyman P. (1992): "The financial instability hypothesis", Working Paper 74, The Jerome Levy Economics Institute.

41. A Minsky trilemma

Minsky's Financial Instability Hypothesis could be formulated as a trilemma claiming the inconsistency of:

- a growing economy (or a continuous increase in debt);
- a stable financial system in the short to medium run; and
- a stable financial system in the long run.

Insofar as economic (and debt) growth is unstoppable in a capitalist economy, financial stability cannot last (what does a growing economy financially stable in the long run but financially stable in the short to medium run look like?).