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Gold's overly long farewell as money

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Abstract

Today all countries have fiat money issued by a central bank. There is no obligation by a central bank to exchange its money for gold or any other good. Central banks have the monopoly to issue central bank money and have the power to create their money out of nothing. Creating such a monetary system is functional for a capitalist economy and must be regarded as a major feat of civilization, which could only be completed after around 200 years of capitalist development. This article traces the painful farewell from gold from the Classical Gold Standard in the early 19th century up to the end of the Bretton Woods system in the mid-20th century.

Key words: money, gold standard, currency systems

JEL classification: E40, N20, P20

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1. Introduction

Money has a long history and in early societies of mankind, many things took over money functions. Cocoa was used in Mesoamerica and also used in ceremonies; whale' teeth were used in the Fiji Islands and also for ceremonies; carved stones were used as money in the island of Yap and used in ceremonies and as signs of a high status of persons. Rice was used as money in many countries, as well as tea, cattle, or musket balls (Gentle 2021). The birth of money has to be found in the cult of religious sacrifices. The objects sacrificed or playing an important role in ceremonies at the same time took over the early functions of money. This implies that money did not develop as a technical means to make barter exchange easier; from the beginning, it had the flair of God (Laum 1924).

Even the use of money in the form of precious metals and paper can be traced back hundreds of years before the birth of Christ, for example the use of metal as money in Babylon 2000 years before Christ. The first standardized and certified coins go back to the 7th century before Christ in the Kingdom of Lydia in present-day Turkey. Coins also existed very early in China. Recently, what is probably the oldest mint in the world to date was found in Henan province, where small spade-shaped bronze coins were produced in large quantities 2,600 years ago. Due to their natural scarcity and relative ease of creating small units, various metals were used as coins. Gold and silver were the material for the most valuable coins, for example in ancient Greece and the Roman Empire. There were minted coins in ancient Greece and the following Roman Empire, for example, as well as in the same historical period in China. However, simpler materials such as bronze or copper were also used as coins. Paper money was first used in China during the reign of Emperor Zhenzong (997–1022) (Kramer 2021; Tikkanen 2023).

Today all countries in the world have fiat money, which is issued by a central bank. There is no obligation by a central bank to exchange its money for gold or any other good. Central banks have the monopoly to issue central bank money and have the power to create their money out of nothing.

The creation of such a monetary system is functional for a capitalist economy and must be regarded as a major feat of civilization, which could only be completed after around 200 years of capitalist development. This article traces the painful farewell from metal and especially gold as the basis of the monetary system. The first international capitalist currency system was the Classical Gold Standard in the early 19^{th} century. It was transformed into the gold standard after World War I. However, the end of gold in the currency system only came with the end of the Bretton Woods system in the mid-20^{th} century.

This article is primarily concerned with the development of money in Europe and especially in the United Kingdom, as this is where the capitalist mode of production first developed.

2. *The Classical Gold Standard*

We start with the monetary system of the Middle Ages in Europe. The minting of coins and the determination of units of account were taken over by state institutions. Local principalities and monasteries were also granted minting rights. The price of gold, silver, and other metal coins even within one country changed in their relative value according to the development of metal prices. In many cases, coins from different countries circulated in one place. The forerunners of banknotes were bills of exchange, which became established as payment between important merchants in the early medieval times, particularly in Venice. In Europe in the 15^{th} century, the first banknotes came into circulation. The Casa di San Giorgio (Bank of Genoa) issued a pre-run banknote in the form of a per which could circulate by means of repeated endorsements. The first modern banknotes were issued by the Stockholms Banco (Bank of Stockholm, founded in 1656) and the Bank of England which was incorporated by act of Parliament in 1694 with the immediate purpose of raising funds for the English government and the right to issue banknotes. Other European countries followed and established central banks. The latter were in many cases privately owned but fulfilled important functions for governments. Based on changing regulations step-by-step central banks became more powerful. Usually, a number of banks in a country had the right to issue their own banknotes. On request, banks had to exchange their banknotes for the corresponding precious metals, which functioned as money (Britannica 2024; Le Goff 2012).

With the development of capitalism and the integration of production, employment, and distribution into the logic of a monetary economy, the role of money in the economy and society became much more comprehensive. Existing financial systems had to be fundamentally reformed and adjusted to the needs of capitalism. Old rules had to be abolished. In 1139, for example, Pope Innocent III reaffirmed the prohibition of interest in the then unchallenged Catholic Church. In the Reformation movements in the early 16th century, the attitude towards money lending at interest looked similar to that of the Catholic Church. Martin Luther loudly rebuked the existence of interest and called it wicked. The attitude against interest was softened in the course of the emergence of capitalism, but it was not until 1830 that Pope Pius lifted the ban on interest (Kurkliński 2017).

Modern capitalism was first established in England in the 18th century and became the dominant mode of production in the early 19th century. For this reason, let us take England respectively the United Kingdom[1] as an example as it was the leading country in this period also in the field of banking and monetary policy and the role model for all other countries. In 1717 England introduced bimetallism, a system in many countries used in the 18th century. It meant that with the motivation to standardise the system of units of measurement in a country in the area of money the value of gold and silver coins was fixed to each other, but at the same time, the coins had to contain a certain amount of gold and silver to guarantee their acceptance. The problem of such a system is that according to Gresham's Law good money is driven out of the market. If, as an example, according to production costs silver increases its price in the market against gold, then it is advantageous to melt down silver coins and use them for jewellery and other purposes.

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[1] In 1707 the *Kingdom of Great Britain* between England (including Wales) and Scotland was founded, in 1801 Ireland was included and the *United Kingdom of Great Britain and Ireland* was founded, from 1922 only including Northern Ireland.

In 1797, in the United Kingdom, the obligation to redeem banknotes in precious metal was suspended after a bank run which was caused by false news that French troops would cross over to England in the context of the ongoing war with France. In the following years, a lively debate developed about how a monetary system in the expanding capitalist economy should look like. A question was whether or not a monetary system could and should be introduced without a precious metal such as gold as a basis. John Fullarton, an influential writer about money, for example, argued that a monetary system without a commodity like gold is at least theoretically possible. "That, as far as concerns our domestic exchanges, all the monetary functions which are usually performed by gold and silver coins, may be performed as effectually by a circulation of inconvertible notes paying no value but that factitious and conventional value they derive from the law is a fact which admits, I conceive, of no denial." (Fullarton 1845: 21) However, the majority of economists including Fullarton and the political and economic elites believed that trust in a currency could only be established if gold was the basis of the monetary system. Typical was the argument of David Ricardo that a currency without a link to a commodity like gold is theoretically possible, but that such a system would not work as governments would abuse such a system. "Experience, however, shows that neither a State nor a Bank ever have had the unrestricted power of issuing paper money, without abusing that power; in all States, therefore, the issue of paper money ought to be under some check and control; and none seems so proper for that purpose as that of subjecting the issues of paper money to the obligation of paying their notes, either in gold or bullion." (Ricardo 1821: 241)[2]

In 1810 the Bullion Report written for the parliament, influenced by Ricardo and other at that time important economists, recommended a return to the gold standard with a convertibility of banknotes in gold. In 1816 in the United Kingdom bimetallism ended and the role of gold was strengthened. Silver

[2] Karl Marx thought that money always needs to be a commodity like gold. "Paper money is a token representing gold or money. (…) Only in so far as paper money represents gold, which like all other commodities has value, is it a symbol of value. Finally, someone may ask why gold is capable of being replaced by tokens that have no value? But, as we have already seen, it is capable of being so replaced only in so far as it functions exclusively as coin, or as the circulating medium, and as nothing else." (Marx 1867: 68) Marx (1867: 68) explicitly opposed Fullarton that at least theoretically a monetary system without any role of commodity would be possible.

coins not any longer had to represent substantial intrinsic value. Finally, in 1821 England established a gold standard. This meant banknotes of the Bank of England had to be exchanged in gold and gold in banknotes. Private banks besides the Bank of England could also issue private banknotes following the same rules. A fixed relation between the stock of gold and issued banknotes did not exist.

The first half of the 19th century showed frequent strong credit expansions which led to high investment and stock market bubbles. These sooner or later came to an end, led to panic, collapsing asset prices and deep financial crises during which banks were not able to exchange their banknotes in gold and went bankrupt. This period of great financial and economic instability led 1844 to the famous Peel Banking Act.

Around the law, there was a lively debate about the construction of the monetary system (for the details of the debate see Viner 1937). On the one side, there was the *currency school*. It argued in the tradition of the quantity theory of money that inflationary developments are rooted in too high emission of banknotes. Supporters of this school, most famous Ricardo (1824) and Thornton (1802), suggested that banknotes should be completely backed by gold. It also was discussed to back bank deposits by gold. Much later Milton Friedman (1948) took up a similar idea and suggested a hundred percent statutory reserve holdings for bank deposits which could take over the money function. The purpose of Friedman's suggestion is to give the central bank complete and direct control over the money supply including bank deposits. The Currency School was criticised by the Banking School. Main supporters like Thornton (1802) or Fullarton (1845) argued that as long as the money supply is in line with increasing production it would not be inflationary. Their so-called real bill doctrine was supported by the observation that in the 19th century, the main refinancing instrument of central banks were bills of exchange which indeed reflected business activities. They also argued that the private financial sector could expand credit endogenously, for example via bills of exchange, and the control of the volume of banknotes would not be sufficient to control economic expansion. The Banking School supported the argument that banknotes should be backed by gold, but to guarantee the needed flexibility of monetary policy the central bank should be able to refinance business in a legal framework of a changing relation between banknotes and the stock of gold held by the central bank.

Both positions are not correct. The currency school has the same weaknesses as the quantity theory of money in general: There is empirically no close relationship between money supply and inflation rate, the money supply cannot always be controlled by the central bank, and it is difficult to define what money supply should be. In addition, the neoclassical division of economic models in a real and monetary sphere and the assumption that money, at least in the long run, is neutral is theoretically highly questionable (Keynes 1933). The banking school does not see that even the most productive refinancing of economic activities can lead to an overheating of the economy with demand inflation in case of full capacity utilisation and /or high demand for labour can trigger a wage price spiral (Heine & Herr 2003).

The currency school was the winner of the debate and Peel's Bank Act more or less followed its idea. But there were also some ideas of the banking school taken into account. According to the new law the Bank of England was only allowed to issue a volume of 14 million pounds of banknotes without gold cover, all additional banknotes had to be hundred percent backed by gold. The Bank of England was divided into two parts. The Issue Department had to exchange gold in banknotes and vice versa, the Banking Department carried out monetary policy and had discretionary freedom to do so.

The Bank Act also reduced the right of commercial banks to issue private banknotes and strengthened the monopoly of the Bank of England in this field.[3] But in this context, it must be seen that bank deposits gained importance and took over monetary functions for larger companies, in the financial system, and for wealthy households. Gold backing of bank deposits was never introduced despite the increasing role of bank deposits.

[3]To give another example: In Germany private banknotes lost importance and the Reichsbank gained a more and more powerful position. However, as a substitute for private banknotes bank deposits increased sharply (Heine & Herr 2023).

The gold standard became the epitome of economic modernity at the time. In the 1870s all at that time important countries joined the system and the global Classical Gold Standard was established with slightly different rules in different countries regarding how banknotes had to backed but all with the basic rule that banknotes could be exchanged in gold and gold in banknotes. Germany joint 1871 the Classical Gold Standard when the German Empire was founded, the Scandinavian countries of Sweden, Norway, and Denmark followed in 1872, the Netherlands in 1876, France in 1878, Austria-Hungary in 1892, Japan in 1897, Russia in 1899 and the USA in 1900 (de facto already 1879). The decision in favour of a gold backed currency was facilitated by the discovery of new gold mines in the middle of the 19th century in California and South Africa. The Classical Gold Standard functioned under the hegemonic position of the pound sterling as the leading currency and London as the financial centre. The system broke down at the beginning of World War I (1914-1918) (Herr 1992; Heine & Herr 2022).[4]

The Classical Gold Standard was, as mentioned, characterised by the possibility of any person to exchange banknotes against gold and vice versa at a fixed price at any time. Thus, there was a link between the private production of gold and the volume of banknotes as producers of gold could go to central banks to exchange their gold against banknotes. As the transport of gold between countries was not restricted, the system led indirectly to stable exchange rates between the currencies belonging to the system. For example, central banks had the obligation to exchange one fine ounce of gold for 20.67 US dollars in the USA, for 86 marks in Germany, and for 4.25 pounds in the United Kingdom. Appreciated for example the pound against the German mark, then at a certain appreciation covering transportation costs it became advantageous for German importers from the United Kingdom or German wealth owners exporting capital to the United

[4] In many countries the right of minting coins, including the resulting revenue, was the responsibility and right of governments, i.e. public households. The volume of coins was usually regulated. The old tradition that governments have the right to mint coins and earn the revenues related to it exists in many countries until today, for example in the USA or in the European Monetary Union. In some of the countries, for example Germany, under the gold standard in addition to banknotes state paper money circulated especially for daily transactions. It was issued by public households and was essentially a kind of treasury note that consisted of small denominations, did not bear interest and could be exchanged in coins or banknotes at any time at the issuing state institution (Heine & Herr 2023).

Kingdom to get gold from the German Reichsbank, ship it to the United Kingdom and exchange it in banknotes of the Bank of England.

The most important monetary policy instrument of central banks under the Classical Gold Standard was to fix the interest rate when they bought bills of exchange which at that time played an important role for financing firms. In this way, the central bank could influence the general level of interest rates. Over the years, the central banks became more powerful and developed additional instruments to carry out monetary policy. Commercial banks became more dependent to be refinanced by central banks. This allowed central banks to dictate the interest rate in money markets as today. The United Kingdom is an example of this. The Bank of England over the decades increasingly financed commercial banks and managed the money market between banks. The Banking Department for this purpose accumulated reserves for stress situations in financial markets. By changing fees, the Bank of England could also moderately modify the prices to buy or sell gold against banknotes (Dutton 1984).

Under the gold standard central banks tried to keep gold flows between countries as small as possible. When an outflow of gold was noticed the discount rate was increased, an inflow led to a lower discount rate (Goschen 1861).[5] Lastly central banks also had to learn to take over the function as lenders of last resort in crises situations (Bagehot 1873).

The Classical Gold Standard provided a relatively stable currency system that was not only based on the learning of central banks to carry out monetary systems. Of key importance, the Classical Gold Standard was in many aspects a pound sterling standard as the pound dominated the currency hierarchy before World War I. A central role in the stability of the Classical Gold Standard was played by the haute finance in London. London

[5] The standard-model of the gold standard assumed that gold would flow from countries with a current account deficit to countries with current account surpluses, the latter would increase automatically the money supply and experience a higher inflation. In the country with gold outflows the opposite would be the case. This mechanism would reduce the current account imbalances and create an equilibrium. Such a mechanism did never exist, for example, because the central bank in the country with gold inflows was not forced to increase money supply, it simply could hoard inflowing gold (Herr 1992).

became the nucleus of the global financial centre, stabilized capital flows and also took on the role of an international lender of last resort (Ford 1962).

During the second half of the 19th century, especially from the 1880s on, not only national and global financial markets became more regulated and by state interventions more stabilised, other markets became more regulated as well, for example the labour market. Elements of a welfare state were established.[6] A more regulated type of capitalism emerged. Based on these changes, economic development until World War I showed substantially increasing living standards in the Global North including high GDP growth, better living conditions and higher real wages (Polanyi 1944).[7]

The overall prosperous development was not caused because of the role of gold, it was achieved *despite of the role of gold* in the monetary system. Gold (or any scarce good) with intrinsic value is not suitable as the basis of a monetary system in a capitalist economy. Its value against the rest of goods can change, for example when new technologies allow a cheaper production of gold or new gold discoveries are made. The characteristic of gold, its overall inelasticity of supply, turns out to be the biggest problem. Keynes (1936: 236) writes: "It is interesting to notice that the characteristic which has been traditionally supported to render gold especially suitable for use as a standard of value, namely, its inelasticity of supply, turns out be precisely the characteristic which is at the bottom of the trouble." A good like gold lacks a quantitative adjustment mechanism to the needs of the economy. It can restrict a central bank to refinance a healthy credit expansion. It can lead to very restrictive monetary policy in case of a lack of gold, curb the freedom to act as a lender of last resort and, becomes a disturbing factor for financial and economic development. On the other hand, goods like glass balls or small copper plates easily producible by the private sector are not able to

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[6] Child labour became forbidden by law or a maximum working time was established. Elements of a welfare state were established. In Germany, for example, health insurance was introduced for workers in 1883, accident insurance in 1884 and pension insurance in 1891.

[7] The OECD (2014: Chapter 3), with a certain degree of uncertainty in the data, calculated the following annual GDP per capita values expressed in 1990 US dollars at purchasing power parities: 1820: Western Europe (WU) $1226, Western Offsprings (WO) (USA, Canada, Australia, New Zealand) $1294; 1850 WE $1589, WO $1809; 1910 WE $3070, WO $4915. The values in 2010 were in WE $20841 and WO $29581. It is worth noting that the differences in per capita income between the countries of the Global South and North have increased massively. In 1820 was the estimated GDP for the whole world $605, in 2010 $7890.

take over monetary functions in capitalist economies as there would be overproduction of such goods. Thus, a capitalist economy needs a monetary system, which is not backed by goods and is independent of any good producible by the private sector.

3. Gold standard after World War I

After World War I despite of its dysfunctionality, the gold standard was reestablished, especially the right to exchange banknotes in gold. But there were some modifications. Firstly, banknotes had to be backed only to a certain percentage by gold. For example, at the end of the 1920s, central bank reserves as a percentage of issued banknotes had to be 40% in the USA, Netherlands, Germany, or Switzerland, 37% in Spain, 35% in France, 30% in Denmark, or 25% in Australia. In some countries also deposits at the central banks had to be backed by reserves, for example in the USA. The Bank of England had to follow a modified system based on the Banking Act of 1844 (Keynes 1930a: 237ff.). Secondly, gold could in many countries be substituted by foreign reserves, especially in the form of pound sterling or US dollar reserves. This implied that the gold-exchange standard which already existed in countries of the Global South before World War I, for example in India, was now generally established (Keynes 1913). Thirdly, central banks got the monopoly to issue banknotes and private banknotes almost disappeared.[8] Fourthly, gold coins stopped to circulate in the public. Fifthly, central banks stopped to take over functions of commercial banks and became modern central banks.

The USA went back to the gold standard directly after the end of World War I. The United Kingdom joined the gold standard in 1925 together with nearly three dozen other countries, France joint de facto in 1926, and Italy in 1927 (Eichengreen 1996). Keynes (1923: 173) railed against the revival of the gold standard: "In truth, the gold standard is already barbarous relic. (…) Advocates of the ancient standard do not observe how remote it now is from

[8] Traditions often live on for a long time. For example, three Scottish banks still have the limited right to issue private banknotes, but these must be backed by the banks' reserves and are not legal tender (Bank of England 2017).

the spirit and the requirements of the age."[9] The renewed gold standard had fundamental weaknesses from the beginning. The United Kingdom, with the dream to regain again the international position of the pound sterling before World War I went back to the gold standard with the old gold parity before the war even though during the war the inflation rate in the United Kingdom was much higher than for example in the USA and the pound became dramatically overvalued in 1925. Keynes sharply criticized this decision and argued that a strong deflation with significantly falling money wages was necessary to achieve price competitiveness in the United Kingdom. He predicted that "it must be war, until those who are economically weakest are beaten to the ground" (Keynes 1925: 211), which meant that there would be terrible distributional struggles over which group in society would accept falling nominal incomes. For him it was clear that a decreasing wage level is not a recipe for higher employment, but for deflation and crisis. France joined the gold standard with a new parity to gold completely undervalued. And last not least Germany was burdened with high reparation payments. Realistically it could only serve the high foreign debt by realising high current account surpluses, something the victorious powers of World War I did not like. Keynes (1920) criticized the high war debts imposed on Germany by the victorious powers, arguing that it could not be in the interests of the United Kingdom to have high current account deficits with Germany. Importantly, there was no sufficient cooperation between the key countries of the gold standard.: The City of London was no longer able to stabilise the global financial system with the pound, as it had done before World War I the USA as the new hegemon in the global financial system did not take over sufficient responsibility to stabilise the system; France and Germany were too weak to internationally have an important role and Germany, in addition, was burdened by high reparation payments (Kindleberger 1973; Ahamed 2009).

The imbalances within the gold standard after World War I led to an increasing concentration of gold especially in the USA, but also in France.

[9] Keynes criticized the economists for not massively opposing the gold standard with their expertise. "Whilst the economists dozed, the academic dream of a hundred years, doffing its cap and gown, clad in paper rags, has crept into the real world by means of the bad fairies — always so much more potent than the good — the wicked Ministers of Finance." (Keynes 1923: 173)

Taking gold held by central banks and treasuries in 1929 the USA had a share of 38.5%, France of 16.2%, United Kingdom of 7.0%, Germany of 5.4%, Argentina of 4.4%, Japan 5.2%, and the rest of the world 23.3% (Keynes 1930a: 266). At the same time, Germany took large amounts of short-term credits to pay reparations.

In early 1931 Germany and Austria were affected by deep financial crises and capital flight and switched to a system of strict foreign exchange controls. These crises led to assessments that the United Kingdom could also face a financial crisis. This triggered further gold outflows in the United Kingdom. In September 1931 after a long struggle with restrictive monetary policy, low growth with unemployment close to 20% the United Kingdom stopped the exchange of banknotes in gold. It left the gold standard, and devalued the pound around 25%. Two currency blocks emerged. One group led by the USA continued with the gold standard with the old parities; the second group was the sterling block consisting of the countries leaving the gold standard with the United Kingdom. Also in the USA was a tendency to exchange banknotes for gold. In April 1933 US President Roosevelt forbade the hoarding of gold coins, gold bullion, and gold certificates in the USA. People turning in the gold would be given a set price of $20.67 per ounce. The official explanation was that gold hoarding would intensify the deep recession the USA was suffering. In June 1933, the USA effectively left the gold standard. This was because the right to exchange banknotes for gold at a fixed rate was cancelled by Roosevelt. This allowed the Federal Reserve to increase its expansionary policy during the deep economic crisis (New York Times 1933). In 1934 the price of gold was increased to $35 per ounce. This gave the Federal Reserve much more room to issue money.

4. Gold in the Bretton Woods System

In July 1944 under the dominance of the USA (head of US-delegation was Herry Dexter White) representatives from 44 nations met in Bretton Woods, New Hampshire, United States, to discuss the monetary order after the end of World War II (1939-1945). In the centre of the debate were the White-plan and the Keynes-plan by the United Kingdom (head of delegation John Maynard Keynes). The Keynes plan suggested a global currency system with fixed but, if needed, adjustable exchange rates, certain permanent capital controls, and an international artificially created currency as reserve assets for central banks, the “bancor”. Gold should not play any role; official international reserves should be held in the bancor. The bancor should be created by an international institution, the “clearing union”, which also should have the power to help countries to defend exchange rates if needed (the plan was officially published in 1943, see Keynes 1943). Realised was more or less the White-plan.

The Bretton-Woods-System reflected the politically and economically hegemonic position of the USA at the time and came into formal existence with twenty-nine countries in December 1945. It had the following elements. First, all participating countries pegged their exchange rate against the US dollar with a permitted fluctuation margin of plus/minus 1%. This was a huge privilege for the USA as it could remain completely passive even in the case where the US dollar came under pressure to depreciate. Second, in case of a so-called fundamental disequilibrium and after a political decision the central exchange rate vis-à-vis the US dollar could be adjusted. Third, the system made the US dollar the key international reserve for central banks. Part of the agreement was that the USA promised to exchange US dollar reserves held by central banks and treasuries belonging to the system in gold at an exchange rate of $35 per ounce gold. Thus, behind official US dollar reserves was gold. Fourth, the USA promised to keep the price in the private gold market, via interventions, also close to $35 per ounce of gold. That means banknotes could be exchanged at a fixed price in gold. Fifth, as a stabilising institution the International Monetary Fund (IMF) was founded which supported countries to defend exchange rates within the Bretton-Woods-

System. In the IMF according to their economic importance in the world countries received quotas that determined how much they had to contribute to the IMF, how much help they could automatically and in case of bigger problems with conditions could get, and how big their voting share in the fund was. The World Bank was founded as well to support development in the Global South.

After World War II there was no obligation any longer by any central bank to exchange banknotes directly in gold. But central banks could exchange US dollar reserves at any time in gold. In addition, the price of gold in gold transactions between central banks was fixed at $35 per ounce, the same as the exchange rate between US dollar reserves and gold. Most international reserves were held in US dollars and used for transactions between central banks. Gold flows were rare. Spectacular, however, was the operation by France, which in 1965 and 1966 under President De Gaulle exchanged its US dollar reserves for gold on a large scale and shipped the gold to France.[10] In fact, at the end of the 1960s, US dollar reserves of central banks far exceeded the gold holdings in the USA. Already much earlier Robert Triffin (1961) discussed this point. The so-called Triffin-dilemma stated that the growing world economy needs permanently increasing international reserves, but when the US dollar takes over this function and provides the reserves the stock of gold held in the USA will not be big enough to back the US dollar reserves by gold.

To stabilise the gold price in the private market close to $35 per ounce became an increasing burden for the USA. In 1961 the eight leading central banks of the Western World founded the Gold Pool. They set up a selling syndicate and a year later a buying syndicate for gold with the aim of stabilizing the gold price on the London gold market at $35 per ounce. After the devaluation of the pound sterling in 1967, there was a flight into gold and the gold price could only be defended by massive gold sales by central banks. In March 1968, based on the Washington Agreement, the countries of the Gold Pool decided to stop intervening in the private market for gold. The

[10] The Time (1965: 1) wrote about de Gaulle: "Perhaps never before had a chief of state launched such an open assault on the monetary power of a friendly nation. Nor had anyone of such stature made so sweeping a criticism of the international monetary system since its founding in 1944."

gold market became divided. Among central banks the price for transactions remained $35 per ounce, in the private gold market the price became much higher. In 1973 the divided gold market came to an end when central banks stopped to use among themselves a gold price of $35 per ounce (Wirtschaftslexikon24.com 2024).

The final blow to the role of gold in the monetary sphere came with the Nixon shock. On August 15, 1971, US President Richard Nixon announced that the USA gold redemption obligation for US dollar reserves would no longer apply with immediate effect. This was a decision with far reaching consequences as it eliminated the last role of gold in a monetary system and transformed the global economy (Garten 2021).

The background of Nixon's announcement was the relatively high inflation at that time in the USA and in 1971 was the first-time that the USA had a deficit in its current account for decades, something that was considered as a weakness of the economy. Confidence in the stability of the US dollar, already becoming weak at the end 1960s, further eroded and led to high capital outflows and depreciation pressure, especially against the D-mark. The US government – in the middle of the Vietnam War (1964 -1973) – and under pressure to strengthen the welfare state – think of the black panther movement which became strong at the end 1960s – understandably hesitated to pursue a restrictive monetary and fiscal policy to stabilize the situation with the consequences of a stabilization crisis.[11] In such a constellation, high conversion of US dollar reserves into gold had to be expected. In 1948 official US gold reserves were $25 billion. They dropped to $12 billion in 1971. The official foreign exchange reserves of central banks in US dollars in the early 1970s were $50 billion (Allen 2005). Nixon therefore had to reckon with the fact that the gold reserves of the USA would flow completely into the cellars of other central banks.

The consequence of the Nixon shock was the collapse of the Bretton Woods System. Although in 1971 an attempt was made to save the system with the

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[11] The announcement ending the gold redemption obligation for US dollar reserves was part of a major economic policy package to stop the inflationary trend in the USA. Among other things, a 90-day price and wage freeze were imposed by Nixon and tariffs on imports were increased (Heine & Herr 2024).

Smithsonian Agreement without gold, with new fixed parities to the US dollar and wider bands, the monetary system finally collapsed in 1973 and flexible exchange rates prevailed (Calleo & Rowland 1973; Eichengreen 2011).

5. The (too) long route to abandon gold from monetary systems

In review of the history of national and global monetary systems from the beginning of the capitalist mode of production and the long process to eliminate precious metals such as gold from monetary systems, it is astonishing how long this process took and how entrenched structures remained in the past. Economists such as Knapp (1905) and Keynes were aware that money should be state money and that a monetary system based on a precious metal is dysfunctional and contributes to crises.

The establishment of a gold standard in the 19th century is understandable. The reestablishment after World War I was a big mistake and is partly responsible for the catastrophic economic and political developments after World War I. The Triffin dilemma points out that the Bretton Woods System had a construction failure and it was a mistake to make the US dollar backed by gold to a reserve asset of central banks. To give gold a role in the Bretton Woods System was not especially harmful as it played in the end no important role but it was unnecessary and prevented a more functional international currency system.

The fact that today's monetary systems have detached themselves from a scarce commodity and that a social institution like the central bank is responsible for the stability of money is functional for a capitalist system and can therefore be regarded as a civilizational feat which, however, could only be completed after around 200 years of capitalist development.

Modern money is based only on trust that central banks are able to defend the stability their monies. Money that is not stable and which is for any reason not trusted cannot take over comprehensive monetary functions – even if it is enforced as legal tender. For money without trust economic agents select substitutes. Different currencies stand in a competitive relationship and create a currency hierarchy with different levels of trust and different international functions (Herr / Nettekoven 2022).

Freeing currency systems from precious metals is therefore not a license for monetary policy. Central banks and governments have an obligation to keep their money stable. If this does not succeed, the money in question will not be able to take on any comprehensive monetary functions or even break down.

The end of the role of gold with the collapse of the Bretton Woods System does not imply that an optimal monetary system has been created. Several points catch the eye. In Keynes proposal for the Bretton Woods System the bancor played an important role. A kind of bancor was created in 1969 when the IMF the first time created Special Drawing Rights (SDR). The value of SDRs depends on a basket of currencies which is over time adjusted. In 2024 the US dollar followed by the euro had the biggest weight in the basket; also included are the pound sterling, the yen, and the Chinese yuan (IMF 2024).[12] SDRs are created by allocating a certain sum of new SDRs according to the country quotas to IMF members. Until end 2023 in several steps 660 billion SDRs ($879 billion) were created (IMF 2024). End 2023 total official reserves in the world had a value of 10 trillion SDR, that means SDR were only 6.6% of global official reserves (IMF 2024a).[13] Reform options of the international currency system would have to go back to the Keynes-plan for the Bretton Woods System. In the tradition of the Keynes-plan it would imply a much bigger role of SDRs and a smaller role of national currencies as reserves.

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[12] When calculating SDRs certain weights for the included currencies are assumed. These given weights allow together with current exchange rates to calculate the value of SDR. The exchange rate for 1 SDR equals 1 US dollar (IMF 2024). It follows: SDR value = (0.578130$·1 US dollar/ 1 US dollar) + (0.405282 euro· US dollar / 1 euro) + (0.091277 yen · US dollar/ 1 yen) + (0.102539 pound · US dollar / 1 pound) + (0.152891 Chinese yuan · US dollar/ 1 Chinese yuan).

[13] End 2021 for 93.1% of official reserves the structure of currency holding is known. From the identified official reserves in 2021 58.5% were in US dollar, 20.6% in euro, 5.6% in Japanese yen, 4.8% in pound sterling, 0.2% in Swiss franc, and 3% in other currencies (IMF 2024a). The Chinese renminbi does not play a relevant role.

A reformed and regulated global currency system would also include mechanisms to stabilise exchange rates. Flexible exchange rates can become a deeply disturbing factor for the global economy. At the same time current account imbalances should be limited, within countries in the Global North and Global South, but also between the Global North and South. To achieve this certain especially speculative capital flows have to be controlled. The Keynes-plan still can be used as a blueprint for a more stable and just global financial system (Herr 2011).

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