Gold Standard

The monetary systems of world nations are based on paper currencies backed by legislative fiat rather than the value of any commodity. In a gold standard, the monetary unit is defined by a certain amount of gold. For example, in the period from 1834-1933, the US dollar was defined as .048 troy ounce of gold. This made the redemption ratio of gold $20.67 per ounce. A common misconception is to think of this as the fixed price of gold. But in a gold standard, gold is money. When a bank ATM gives you $50 in cash for $50 in your deposit account, it is at best misleading to think of this as an exchange at a fixed price. Similarly, it is misleading to characterize the ratio at which a bank is obligated to redeem its liabilities as a fixed price.

In a gold standard, gold is money either directly or indirectly. In a gold coin standard, banks redeem its liabilities in gold coins, which could circulate as money. But some have argued that it is more convenient or efficient for the central bank to hold on to gold, which would still define the value of currency in circulation. The currency would then only be redeemable in large amounts in the form of gold bullion, like in large foreign exchange transactions. This is a gold bullion standard. A gold exchange standard, like the Bretton Woods system in the post-war period, is even more indirect. Here, if a country's central bank was holding a large quantity of, say, French francs, it could redeem them for US dollars, which its central bank could then redeem for US gold.

When the government of a gold standard nation was involved in managing the currency, its minted coins or printed-paper denominations were officially convertible into gold. But at various times the legal system permitted private mints and commercial banks to issue gold-denominated currencies, as well. For example, commercial banks were prepared to redeem notes in gold at the pre-specified ratio. The rise in the political popularity of central banks eventually ended the system of free competitive banking. Legislators, in effect, granted central banks state monopoly privilege in issuing currency.

People who owned gold sometimes needed a reliable place to store their reserves. The institutions they used were not financing anything. They were more warehouses for people's gold than banks. For example, this seems to be the main use Harry Potter and other wizards made of Gringotts Bank. Also, we know at least from Muggle history that people using such warehouses paid a storage fee for the service. Another service institutions like these provided was to settle accounts between its users. One depositor could indicate in some way to the institution that they wished to transfer some money from her vault to someone else's. If the deposits were readily divisible, uniform and fungible, then the institutions would not need to keep deposits in separate vaults, but could simply keep separate account balances. Furthermore, in these circumstances, depositors might not even insist on all of their deposits being in a vault. The amount of gold in the bank's vaults might be a fraction of what is owed to depositors and the institution could use the remaining reserves to make loans, which earned interest. Here we have a financial institution, instead of merely a warehouse.

So gold reserves held on deposit might account for 100% of the currency in circulation or, in fractional reserve system of banking, a fraction of that amount. In the latter system, depositors would not need to pay storage or transaction fees. They would, however, insist that whenever they wanted to redeem currency for gold, or make a payment to someone with an account at another bank, their bank would have enough gold available. Currency would be liabilities or debt claims that people hold against the bank. The bank would know how many of its notes are circulating as currency, but the notes themselves are anonymous, payable to the bearer by the issuing institution.

If a gold standard nation featured a central bank that had a state-granted monopoly in issuing currency, it would back the government's monetary system with gold reserves. In addition, treasury notes were a form of government debt bearing interest that promised to pay gold at a future date, which circulated as currency. Sometimes, however, governments would suspend convertibility, as the US did during the Civil War.

The "classical" gold standard period began in 1880 when, after the US realigned Civil War greenbacks with gold-backed dollars, they successfully reestablished full convertibility and returned to a gold standard. The 1900 Gold Standard Act made the commitment official. This lasted until 1914, during which time every major international trading partner with the US had also converged on some kind of gold-backed monetary system. This convergence on the gold standard brought with it a number of beneficial features. Foremost among them was that it provided for the stable real purchasing power of money and an international system of fixed exchange rates. The result was a period of significantly freer exchange between countries in goods, labor and capital, and unprecedented levels of economic growth.

A domestic gold standard primarily functioned as an inherent restriction on the growth of a country's supply of money ensuring stability in its value and purchasing power. Mining operations would add only a very small amount to the total. Since the amount of gold was stable and governments more or less reliably assured full convertibility, price levels would be remarkably steady. The discovery of gold in California in 1848, and a few years later in Australia, caused a sizeable increase in the supply of gold. Critics of the gold standard worry that it makes the economy vulnerable to monetary shocks like this, which will cause price levels to fluctuate. But price index data developed by William Stanley Jevons in 1863 measure the inflation rate in the aftermath of the largest gold shock in history to be at most only about 1% per year. Furthermore, by 1871, increased world productivity brought the purchasing power of gold almost back to the same level as it was in 1849. By contrast, US price levels increased much more, and more consistently, after the monetary system was unleashed from gold.

Money that has a more stable purchasing power allows for more predictability and better planning over longer periods of time. This encourages longer-term investment projects. Advocates of the gold standard also point to its disciplining effect on government spending. US Treasury debt is considered risk free because the

government is able to pay back the principal and interest by issuing more currency, if necessary. This is not an option in a gold standard and so it would limit people's willingness to purchase government debt. Finally, as an international standard, gold provided participating countries with a fixed ratio of exchange between the value of one national currency and all the others. This reduced some of the riskiness associated with international trade and borrowing.

All the countries involved in World War I found it necessary to finance their efforts by either abandoning or conditioning the operation of the gold standard beginning in 1914. For example, the US government placed an embargo on the export of gold in 1917. Nations attempted to restore something resembling the gold standard in the 1920s, but it was actually a system that required participating countries to hold as their reserves British pound credits or, to a lesser extent, US Federal Reserve credits, rather than gold. This gold exchange standard lasted only until 1931. Postwar inflation was still high relative to the amount of gold available and when countries, led by France, began presenting those credits in for redemption around the time of the Great Depression, Britain abandoned the system rather than allow its gold reserves to empty. The US Congress refused to untie its domestic currency from gold, but President Roosevelt eventually nationalized gold in 1933 by executive order. The Gold Reserve Act of 1934 made this the law of the land and devalued the dollar against gold to $35 per troy ounce.

After World War II the US led an attempt to construct an international system having the veneer of the classical gold standard. This was the Bretton Woods system that spanned (at least on paper) from 1946 to 1971. It was essentially the gold exchange standard system that Britain had attempted to hold up after World War I, except it was based on the US dollar instead of the pound sterling. It implemented a fixed exchange rate relative to the dollar, but it also had a built-in mechanism for participating countries to devalue their currencies in certain circumstances. This served to signal a less than full commitment to gold parities and made the system more vulnerable to speculation. In the late 1960s and early 1970s, the US Federal Reserve printed more and more dollars to help finance the Vietnam War. As more countries, again led by France, began exchanging their dollar reserves for US gold, President Nixon was eventually forced to close the gold window on August 15, 1971. This ended any link between any country's monetary unit and gold.

Since then, the purchasing power of gold and the purchasing power of the US dollar have diverged. The latter has fallen significantly and the former is actually much higher than it was in 1971. This might be surprising because the most important economic argument against the gold standard, made popular by Milton Friedman, is that the gold standard is too costly to maintain. It costs too much to mine, mint and store gold. But if that were really a problem, then we should expect the real value of gold to have fallen after abandoning the gold standard, since we no long need gold for the monetary system. Furthermore, Friedman's calculation in 1960 of the cost to maintain a domestic gold standard – 2.5% of annual GNP – assumed a full gold coin standard, and no use at all of fractionally backed (but redeemable) banknotes or deposits. If specie reserves

actually do not need to be that high to maintain the system, the resource cost of a gold standard would be much lower. Finally, Friedman himself later argued that the resource costs of a fiat paper standard are themselves significant, and perhaps greater than a commodity system, once you include all the costs associated with the decline in long-term price predictability.

It is true that the marginal cost of production of paper money is negligible, but if fiat money policy is too inflationary, there can be significant costs. One cost is the amount of deadweight loss from holding a currency whose value is diminishing. Another cost, somewhat ironically given Friedman's initial worry about the gold standard, is the resource cost associated with mining, minting and storing gold people purchase as a hedge against inflation. This source of demand for gold explains the puzzling fact noted above that the purchasing power of gold has skyrocketed after the US left the gold standard in 1971.

In the event, fiat currency systems will generate fewer resource costs only if they avoid inflation and other policies that drive the investment demand for gold to high levels. So at least the following four data points are relevant for comparison: the resource costs of producing gold for a 100% reserve gold standard; the resource costs of producing gold during a period like the classical gold standard of the late 19th- and early 20th century; the resource costs of producing gold under a fiat paper money regime; and the resource costs of producing gold during a period where the gold reserves needed to back the currency might be quite low (historic Scottish private banks operated with reserves as low as 2%).

Of course, a fractionally backed domestic gold standard might raise problems of its own. Is such a system feasible? After all, banks are promising to redeem gold for currency notes, but the amount of currency in circulation exceeds the amount of gold reserves. If everyone shows up at the bank demanding redemption the bank has to default. It did sometimes happen that banks did not have sufficient reserves to redeem its notes when the demand for holding gold rose among the public. Commercial banks typically made convertibility subject to a "notice of withdrawal clause" in their deposit agreements, which allowed them to defer redemption for a short period to avoid taking drastic financial losses as they sold off assets in order to meet their obligations. At a certain point, though, the issuing bank could be subject to legal penalties for breaching its contract with the holder.

There are economic reasons, however, that such bank runs would be infrequent. Imagine someone issues 100 tokens, each redeemable for a basket pint of strawberries. The issuer better have a 100 pints of strawberries, because the tokens are good for little else than claiming the strawberries. Someone holding a token cannot eat it and its exchange value is limited to the shelf life of the strawberries. But someone holding a bank note redeemable in gold is in a different position. Bank notes that are issued and redeemable in gold can have the exact same function as the gold coins would have had in circulation. This makes it more likely that holders of the note will be happy to continue to hold them and less likely that all the holders will attempt to redeem the

notes at any given time. Therefore, the bank can generally issue more liability claims than it will be in a position to fulfill at once.

Bank runs and panics did occur during the pre-Federal Reserve period in the US, but this could have been because of legal rules that prohibited banks from establishing interstate branches. These rules made it more difficult for banks to diversify and manage risk. Other gold standard nations in the same period where there were no such rules, like Canada, Scotland, Sweden and Switzerland, avoided serious bank runs.

The gold standard has a faithful, even if small, fan base. It usually receives a brief hearing in the popular media during every run-up to the Republican presidential candidate nomination. However, the political appeal of discretionary monetary policy continues to trump long-term price stability.

– Kyle Swan

See also Austrian School of Economics; Central Bank; Free Market; Freedom of Contract; Great Depression; Monetary Policy

Further Readings

Bordo, Michael D. (1981). The classical gold standard – some lessons for today. *Federal Reserve Bank of St. Louis Review*, 63:5, 2-17.

Bordo, Michael D. and Rockoff, Hugh (1996). The gold standard as a 'good housekeeping seal of approval'. *The Journal of Economic History*, 56:2, 389-428.

Friedman, Milton (1986). The resource cost of irredeemable paper money. *Journal of Political Economy*, 94:3, 642-647.

Friedman, Milton and Schwartz, Anna (1963). *A Monetary History of the United States, 1867-1960*. Princeton University Press.

Watts, Tyler and Snyder, Lukas (2015). Current evidence on the resource costs of irredeemable paper money. *Cato Journal*, 35:2, 411-427.

White, Lawrence (1999). *The Theory of Monetary Institutions*. Oxford: Blackwell Publishers.