The International Monetary System in the 21st Century: Could Gold Make a Comeback?

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Out of respect for Philip M. McKenna, the founder and president of the Gold Standard League, I am going to emphasize gold in the title of my lecture. What will be the character of the international monetary system in the next century and how will gold intersect with it? This subject may strike modern audiences as a strange topic, but I can assure you that, back in the 1960s, when people were deliberating about the future of the international monetary system, gold figured importantly in the discussions. Even today, the importance of gold in the international monetary system is reflected in the fact that it is today the only commodity held as reserve by the monetary authorities, and it constitutes the largest component after dollars in the total reserves of the international monetary system.

It is true that gold today suffers from persistent attacks on it in the press and it is fair to say that there is still a conspiracy of silence on it among international monetary officials. The competing asset, the SDR or Special Drawing Right, was a "facility" or "reserve asset" created by the members of the IMF in 1968 as a substitute for gold. It was initially given a gold guarantee by members of the Group of Ten, which would have made it extremely valuable today; however, its gold guarantee was stripped away in the early 1970s when the price of gold soared, and ever since the SDR has floundered as an important component in the international monetary system. Later in the 1970s, when the Second Amendment to the Articles of Agreement, which endorsed managed flexible exchange rates, was enacted, it was decided to emphasize the SDR as an asset and de-emphasize gold; to further this end both the IMF and the US Treasury sold part of their gold holdings.The other countries, however, held onto their gold and experienced as a result reaped huge (if unrealized) capital gains when the price of gold soared in the late 1970s. Since that time a few countries (notably Holland, Belgium and Canada) have sold gold to help finance large budget deficits, but by and large the total gold holdings of all central banks and international monetary authorities today is not very different--at about 1 billion ounces--from what it was before the international monetary system broke up in 1973. Despite attempts to demonetize it, gold has kept much of its allure to the public and monetary officials; despite attempts to promote it, the SDR has remained, like the Susan B. Anthony silver dollar, a wallflower in the monetary system.

Gold's Mystique

We certainly have to examine gold's link to the monetary system, but not in any sense of any mystique; some of that has now been shed from the yellow metal. There was much talk in the 1970s of banalizing gold, stripping it of its mystique and luster and regarding gold as a commodity like any other commodity. But it was not really successful. Even when the price of gold soared above $850 an ounce, central bankers held onto it as if their lives or careers depended on it.

It is useful to reflect on the mystique of gold. Historically, it has been far from a banal subject. From the beginning of civilization, gold was such an attractive metal that it was coveted as an object of beauty and quickly monopolized by the upper classes. It soon found its way into the palaces and temples that controlled the autocracies of the ancient world. Many of the early empires used gold as reserves for their banking systems with exchanges being effected by means of clay notes and seals convertible--at least nominally--into one or both of the precious metals.

The introduction of overvalued coinage provided a strong economic motive for the cultivation of a mystique. From its very beginning, probably in Lydia in the 7th century B.C., coinage was overvalued; one could say that was its very purpose. The earliest coins of the Lydian kings were made of electrum (from the Greek word meaning amber), an alloy of gold and silver.

We mustn't be misled by the textbook fiction that coins were first struck to guarantee the weight, and therefore the value, of the earliest coins. There is no point stamping the weight on a lump of electrum metal if the fineness of the alloy is neither known nor constant; in fact the electrum coins from the early hoards varied widely in fineness. The earliest coins were not the *natural* electrum found in the beds of the Patroclus River near Sardis, but *artificial* electrum made by a metallurgical technique that had been pioneered by the Egyptians over a thousand years earlier and which was well known to such monarchs of the Mernmad line like Gyges, Alyattes and Croesus. The conventional wisdom that these Oriental despots stamped the coins to confirm their weight and thus provide a convenience for their subjects, is sheer nonsense. The stamp meant that the coins passed *ad talum*--by their face value--equal to 1/3 of a stater (the word meant "standard").

The earliest function of coinage was therefore profit. Coinage not only helped to market the electrum found in the Patroclus but the markup on them generated a substantial profit, helping these kings to achieve their dynasty's ambition of extending the Lydian Empire throughout Asia Minor. Accepted at face value as if they had a high gold content, the Lydian staters started out with a high proportion of gold but got progressively smaller, increasing the markup and the revenue for the fiscal authorities.

Coins cannot of course remain overvalued in a free market. Gyges and his successors were no libertarians. Overvalued coinage implies artificial scarcity, a monopoly and government control. Without exception in the ancient world, the gold and silver mines were controlled by the government. This was the basis for all the doctrines that would later evolve around gold: the assertion of mines royal, regalian rights, treasure trove, suppression of private, episcopal and baronial mints, the trial of the pix, and the regulation of the standard. To sell their coins and create the mystique, a full panoply of devices was called upon. Religious symbols helped to reinforce the mystique. Whether the symbol was called Marduk, Baal, Osiris, Zeus, Athena or Apollo, or Jupiter or Juno, or St. John the Baptist, its purpose was the same; the latter symbol made the florin the most famous coin of the Middle Ages. The gods changed but the principles stayed the same! Just look at the Masonic hocus-pocus that still remains on our dollar bills! "In God We Trust" introduced on our dollar bills in 1862 when their gold backing was dropped.

The Lack of an International Monetary System

When the international monetary system was linked to gold, the latter managed the interdependence of the currency system, established an anchor for fixed exchange rates and stabilized inflation. When the gold standard broke down, these valuable functions were no longer performed and the world moved into a regime of permanent inflation. The present international monetary system neither manages the interdependence of currencies nor stabilizes prices. Instead of relying on the equilibrium produced by automaticity, the superpower has to resort to "bashing" its trading partners which it treats as enemies.

After the revolution in East Europe and the collapse of the Evil Empire, we suddenly had tens of new countries entering the international monetary system, all with new currencies or new needs for currency policies. What monetary system should Managing-Director Michel Camdessus of the International Monetary Fund have recommended to these new countries? The answer would have been obvious before 1971: they should each stabilize their currencies to the anchored dollar or one of the other currencies that was stable vis-a-vis the dollar anchored to gold. Fixing exchange rates to the dollar bloc, which encompassed most of the world economy, would have given the new transition countries the relatively stable price level of the western countries.

I now want to point out a very important contribution made by the IMF between its opening in 1946 and 1971. The Fund gave countries a coherent philosophy of macroeconomic management based on the rudder of fixed exchange rates. A great deal is now left in the hands of national monetary leaders. To be sure, a country can move fix its currency to one of the major currencies, such as the dollar. In practice, such a move requires an act of great leadership; the stabilization plan involving fixed exchange rates implemented in Argentina by Domingo Cavallo illustrates how rare that quality is. In the period of fixed rates before 1971, great leadership was not required because there was a system to which most countries adhered and the IMF had a package of techniques available to implement it.

Originally established to defend and manage the anchored dollar system of fixed exchange rates, the IMF lost its sense of purpose as guardian of the international monetary system after 1971 and especially after1973, the year the international monetary system was scrapped for flexible exchange rates. The Fund was then shifted from its role at the center of the international monetary system to a new role of ad hoc macroeconomic consultant and debt monitor, functions that might well have been provided by the private sector. When the challenge of the transition countries arose, the Fund had no coherent system for monetary stabilization to offer and the transitions were, almost without exception, bungled. The debâcle of the transition countries is confirmed by the fact that not one of the countries, at the end of 1996, had recovered to the level of output from which the transitions began, and with only one or two exceptions, inflation remains at two-degit rates. Recovery from the end of the Cold War has been far more disruptive than recovery from the end of the most devastating hot war in history.

An international monetary system in the strict sense of the world does not presently exist. Every country has it own system. Most people do not understand how unusual the system is. For thousands of years countries have anchored their currencies to one of the precious metals or to another currency. But in the quarter century since the international monetary system broke down, countries have been on their own, a phenomenon that has no historical precedent in the cooperative game known as the international monetary system.

Economic theorists know that the interdependence of the international monetary system stems from the fact that balances of payment are connected together. If one country has a balance of payments surplus, the rest of the world has a balance of payments deficit. If one country has a balance of trade surplus, the rest of the world has a balance of trade deficit. So one country's movement toward a surplus or deficit automatically affects other countries. This has an influence on the exchange rate system. In a world of n countries with n currencies, there are n-1 independent exchange rates. Every country can not fix exchange rates. There would be too many fixed exchange rates. There is one degree of freedom, giving rise to what theorists called the redundancy problem. The role of that extra degree of freedom was to maintain a stable price level, or in the case of the gold standard, to maintain the price of gold.

On paper, a collection of nearly 200 countries with individual currencies and flexible exchange rates would appear to result in incredible confusion. In practice, however, the system is not so bad. There is an important coherence in the world financial structure due to the configuration of powers in the world economy and the special role played by the currency of the superpower. When one country is a supereconomy, its currency often fulfills many of the functions of an international money, a subject to which we now turn.

A Theory of Superpower Influence

Historically, whenever there has been a superpower in the world, the currency of the superpower plays a central role in the international monetary system. This has been as true for the Babylonian shekel, the Persian daric, the Greek tetradrachma, the Macedonian stater, the Roman denarius, the Islamic dinar, the Italian ducat, the Spanish doubloon and the French livre as it has for the more familiar pounds sterling of the 19th century and the dollar of the 20th century. The superpower typically has a veto over the international monetary system and because it benefits from the international use of its currency, its interest is usually in vetoing any kind of global collaboration that would replace its own currency with an independent international currency.

In the 1870s, the United States and France were campaigning for international monetary reform in the sense of an international return to bimetallism and the development of a standard international unit of account. Which country was saying no? It was Britain, the leading world power in the 19th century. As top power, or at least "first among equals," Britain always said no to international monetary reform, no to an alternative to the pound as a unit of account and the sterling bill as the most important means of payment. But when Britain's star faded and America's rose, the positions were reversed, with Britain wanting international monetary reform and the United States, the new superpower, rejecting it.

At the world gold conference in 1933, France wanted international monetary reform. France wanted the United States and Britain to go back to fixing of the price of gold. President Roosevelt said no, and the dollar continued to float until, unilaterally, the U.S. devalued the dollar, raising the price of gold from $20.67 per ounce to $35. The United States did not want to move back to an international monetary system, except under terms that gave it leadership.

At Bretton Woods in 1944, President Roosevelt told Treasury Secretary Henry Morgenthau to make plans for an international currency after the war. Economists remember that Harry Dexter White and the staff at the US Treasury made a plan that involved the creation of a world currency to be called the *unitas*. Keynes, in London, made a comparable plan for reform that included a world currency called *bancor*. When the British delegation came over for the Bretton Woods conference, it kept bringing up the question of a world currency, but the Americans now had second thoughts and kept silent. Thus academic internationalist idealism fell prey to economic national self-interest. As a result the enlightened superpower backed away not only from Keynes' *bancor* plan, but from its own *unitas* plan. Bretton Woods did not create a new international monetary system; it kept the system that had been in place since 1934.

It is inappropriate to speak of a "Bretton Woods system." The conference at Bretton Woods, New Hampshire, in 1944 did not create a new international monetary system. Rather, it created two new international institutions, the IMF and the World Bank, were set up to manage international interdependence in the international financial system and provide a supranational veneer for the anchored dollar standard. As Joan Robinson once said, shrewdly: the IMF is "an episode in the history of the dollar."

Price Stability and Gold

The 20th century has not been a very satisfactory century from the standpoint of price stability. If we measure the magnitude of inflations both the product of its rate and the total value of commodities affected by it, we can be sure that more inflation has been created since 1914 than in all preceding millennia put together. Note that the starting date of the great inflations, 1914, begins with both the opening of World War I in Europe and the opening of the doors of the Federal Reserve System in the United States. Of the two events, the latter has been more culpable.

In some respects, the period of inflation could be better dated from 1934. It is true that the price level doubled during World War I. But in two steps, the price level of 1914 was restored. The deflation of the 1920-1 recession brought the index of the price level, based on 1914 = 100, down to 130, and the deflation of the great depression of 1930-34 brought it the rest of the way back to the pre-war equilibrium level.

Before 1914, price levels based on gold were remarkably stable over the long run. In 1977, Roy W. Jastram published an excellent study, called *The Golden Constant*, and followed it up with a second book in 1982 called *Silver: The Restless Metal*. In these books, he developed figures for the price level based on the wholesale price index in Britain from the 1500s to the present, and for the U.S. from 1800. England's data provided a very consistent series of prices over four centuries.

From 1560 to 1914, England's price index remained fairly constant. There were waves of gentle inflation and deflation but they tended to cancel out. World War I brought inflation followed by post-war deflation, and, with the onset of the great depression, Britain went off gold. From that time forward, Britain lost the monetary discipline it had since the time of Alfred the Great. The inflations since Britain left gold in 1931 and especially since the breakup of the anchored dollar system in 1971 have been the highest in Britain's history, higher by several orders of magnitude. In the quarter century after 1971, Britain's price level rose 7.5 times! Over this period, Britain lost its centuries-old reputation for monetary stability and the pound ceased to be a leading international currency.

Like the pound, most currencies lost their gold base in the 1930s, thus removing an important convertibility constraint on money supplies. Nevertheless, until 1971, the system did preserve an indirect link to gold through fixed exchange rates with the anchored dollar. It was the severing of the link to gold in 1971 and the movement to flexible exchange rates in 1973 that removed the constraint on monetary expansion. The price level of what had become the mainstream of the world economy was now in the hands of the Federal Reserve System, the greatest engine of inflation every created. Because there was no other international money, the Fed could now pump out billions and billions of dollars that would be taken up and used as reserves by the rest of the world. Not only that, but US government Treasury bills and bonds became a new form of international money. Dollars became the reserves of new international banks producing money in the Eurodollar market and other offshore outlets for international money.

The newly elastic international monetary supply was now made to order to accommodate the supply shock of the oil price spike at the end of 1973. The quadrupling of oil prices created deficits in Europe and Japan which were financed by Eurodollar credits, in turn fed by US monetary expansion. The Fed argued that its policy was not inflationary because the money supply in the United States did not rise unduly. The fact is that it had been exported to build the base for inflation abroad. As I showed in an article published in 1971, it is the world, not the national dollar base, that governs inflation.[(1)] US prices rose 3.9 times in the quarter century after 1971, by far the most inflation than at any other time in the nation's history.

There is a strong parallel between the experiences of the U.S. and the U.K. Between 1800 and 1930, leaving aside the greenback era when the dollar was inconvertible and the World War I period when the pound was inconvertible, British and American prices moved together. This should be expected of two countries in the same currency area. Except for the adjustment required for the British devaluations in 1949 and

1967, the price levels continued to move together in the post-war period. But a fundamental change came about with the breakdown of the international monetary system in 1971. As already noted, both countries inflated, but the British price level rose by 750% while the US price level rose by 390%. The pound lost half its value relative to the dollar after it moved to flexible exchange rates.

National price levels of every country became unstable after 1970. This is true even for the price levels of the few currencies that have appreciated against the dollar since 1971. The most rapid inflations, as a purchasing-power-parity theorist would say, are in the countries with the most depreciating currency. The country with the lowest inflation is the country whose currency has appreciated the most. But even in Germany and Japan, whose currencies have appreciated strongly against the dollar, the price levels have increased by 240% and 290% respectively between 1971 and 1976. Prior to 1971, the international monetary system, anchored to the dollar which was in turn anchored to gold, kept world inflation in check. After 1971, when the Golden Anchor was lifted, inflation control had to depend on the slender reed of Federal Reserve discipline. The result was pandemic inflation that has all the characteristics of becoming a permanent feature that future generations will have to cope with.

A Historical View

Now let us take a longer view of the international monetary system, dividing it up into its phases. The period form 1815 to 1873 was a period of bimetallism, for which gold and silver were the basic reserve assets and the main countries were France and the United States. During the Civil War, the United States suspended convertibility, leaving France alone among major powers, on bimetallism. Remember that in a world economy, as long as one country fixes the price of both silver and gold, then that fixes the relative prices of both gold and silver in the world. From 1815 until 1873, the relative price ratio of gold and silver varied only between 15:1 and 16:1. This bimetallic system gave the world a monetary unity, providing countries that were on the silver standard with a fixed exchange with countries on the gold standard. Support for the bimetallic monetary system dwindled a bit when the United States dropped its commodity standard and incurred inflation from 1862 until 1879.

But, what happened in the 1870s? France went to war with Germany and had to suspend convertibility. Then nobody was on bimetallism, except for a few countries like Belgium and Switzerland that were in the Latin Monetary Union, but these countries were too small to managed the system and therefore followed France's lead and suspended convertibility. France pondered the idea of returning to a bimetallic monetary standard, but with American production of silver going up and Germany dumping silver as the new German Empire shifted to gold, France realized it would have to buy up all the excess silver in the world on it own. Silver would have displaced all gold currency. So France did not go back to bimetallism and that system therefore became a dead letter. The world economy now split into an international gold standard on one hand and an international silver standard on the other. Silver's monetary role was diminishing and the gold brigade was beginning to encompass the mainstream of the world economy.

Over the period from 1873 to 1896, the price level was falling. This was the period of populist revolts in the Midwest. The populists hated the fact that farmers had to pay back debts with an appreciated currency. In 1896, William Jennings Bryan's electrified his audience with his Drexel Avenue speech in Chicago in which he charted that the American farmer was being "crucified on a cross of gold." There was deflation in the gold countries in this period because when countries shifted fro bimetallism to the gold standard, the movement created an excess demand for gold--tight money--and as a result, deflation. Also in 1873, Prussia and the Scandinavian countries abandoned the silver standard, depressing silver and creating inflation in countries sticking to silver. So there were two worlds during that time period: an inflationary silver world and a deflationary gold world until 1896, when, finally, soaring gold supplies from South Africa, where gold had been discovered in the Witswatersrand in 1886, combined with the introduction of the cyanide process to bring huge amounts of gold into the system.

In 1914, European countries went off gold, by and large, to finance deficit spending. This sent gold to the United States in return for munitions and other war supplies. Gold flooded into the United States and the newly-created Federal Reserve monetized it, causing the price level to double. As always happens when countries shift onto or off of the gold standard, gold became unstable in 1914.

From 1914 to 1924, we had an anchored dollar standard because the United States was the only major currency on gold and the other countries started to base their currencies more on the dollar than on gold. Then in 1924, Germany went back to gold in its stabilization plan to stop its hyperinflation. In 1925, Britain, not wanting to be left behind by Germany, went back to gold. In 1926, France went back to gold more or less because Britain and Germany had gone back to gold; and it went back at a rate that left the franc undervalued. So the world went back to a gold standard, and what do you think happened? Just as in 1914, when countries went off the gold standard, creating inflation, when they went back to gold this created an excess demand for gold, causing deflation. The deflation of the 1930s, which was a major contributing factor to the depression, was a direct consequence of the movement back to gold at a price level in the 1920s that was above the equilibrium price level for equilibrium under the gold standard. Of course, other factors were involved din the Depression, including the immediate impact of the Smoot-Hawley tariff, but the major factor was the deflation inaugurated by the restoration of the internal gold standard with gold undervalued.

Britain went off gold in 1931, and America in 1933. America then went back to gold after devaluing the dollar in 1934. France was still on gold, but in 1936, France had to devalue and was the last country to leave the Reformed Gold Standard of the post war period. 1936 was also the year of the Tripartite Monetary Agreement which established a new kind of international monetary system, a dollar standard where the dollar was the only currency anchored to gold. All of the other countries in that system kept their respective currencies pegged to the dollar. That system lasted form 1936 to 1971.

After President Nixon took the dollar off gold in August 1971, there were flexible exchange rates for a few months. Then countries went back to the dollar, not gold, in December 1971. The system was now a pure dollar standard. The problem with the pure dollar standard is that it works only if the reserve country can keep its monetary discipline. Previously, since 1945, the dollar had been partly disciplined by its 25% gold reserve requirement, lifted in the 1960s. Convertibility of the dollar was at least promised, and that always kept the lid on inflation. But in this period, the United States followed a monetary policy that was too inflationary for the rest of the world. In February 1973, the United States devalued the dollar again, a not very sensible act that only whetted the appetites of speculators. Dollars kept flowing abroad and the Eurodollar market was exploding. Europe tried a joint float against the dollar, but the Europeans could not decide to settle their differences or whether Britain, France or Germany should lead the float. By this period, Germany's mark had become the most important currency in Europe, but Britain and France were not willing to concede a leadership position to the mark. It took another decade before the two former great powers would acknowledge that the mark was the most important currency in Europe.

In June 1973, the Committee of Twenty decided to abandon the International

Monetary System and move to flexible exchange rates until the inflation problem had been solved. This was a most astonishing explanation because the whole function of the International Monetary System was to have a joint approach to the solution of inflation!

Since 1973, we struggled with a flexible exchange rate regime where the United States and Europe have experienced the most inflationary peacetime monetary policies in their respective histories. In the 1970s, inflation rose to annual rates of 13% or 14% in the United States, and the price of gold shot up above $850 the ounce in February 1980. This occurred because of the fear that the United States had lost its monetary discipline and that the depreciation of the dollar against foreign currencies would continue. That episode of U.S. inflation forced the Europeans to act because the fever for European monetary integration has been directly connected to the weakness of the dollar. The weakness of the dollar was the reason Helmut Schmidt and Giscard d'Estaing met in Bremen in 1978 and agreed to from the European Monetary System. Price stability is one of the motives for the formation of currency areas.

In 1985, the Plaza Accord came about, moving the system into a kind of managed dollar system relative to European currencies. It was focused mainly on the need to get Japan to appreciate the yen against the dollar.

International Monetary Reform?

Currently, there is no point in talking about international monetary reform. There is no game for international reform now, because the name of the game right now is the Euro. Is there going to be a European Monetary System or not? I bet there will be, and I feel that something will come about in 1999 that will qualify as the embryo of a European money. Because of this prospect, Europeans do not want to talk about international monetary reform. IF the United States started to talk about international monetary reform now, Europeans would interpret it as an attempt on the part of the United States to break up their play for a European money. But the United States would not talk about international monetary reform now anyway, because a superpower never pushes international monetary reform unless it sees reform as a chance to break up a threat to its own hegemony. The dollar liabilities of the United States have been rising by bushels and bushels. From a national standpoint, the United States is never going to suggest an alternative to its present system because it is already a system where the United States maximizes its seigniorage.

The country that would want international monetary reform the most, although it is never going to say this, is Japan. Japan is the number two economic power and has been increasingly uncomfortable with its subservience to the number one power. But Japan is not in any political position to make an advance in the direction of international monetary reform, particularly because Japan is so politically dependent upon the United States vis-a-vis what it perceives to be the looming threat across the Yellow Sea.

Symmetallism vs Bimetallism

The country of Lydia created electrum coins, which were an allow of gold and silver. Electrum coins spread all over Asia Minor. In the 1890s, electrum was advanced as a special proposition by Alfred Marshall, the great writer of the *Principles of Economics*. Marshall saw the defects of the gold and silver standards: deflation in the gold standard countries and inflation in the silver standard countries. He did not like monometalism, and he also dislike bimetallism as it existed in the past, because he thought that it was unstable. Electrum, he thought, would avoid the defects of these other standards.

Lydia had a symmetallism monetary system from the time of King Gyges down to the time of Croesus who reigned from 560 to 546 B.C. Croesus created a pure bimetallic system at this time by creating coins of pure gold and pure silver in a ratio of 10:1. It did not last very long; however, because Lydia was invaded by Cyrus the Great of Persia, and Croesus was killed in 546 B.C. But Croesus' monetary innovation was important, and it spread over the Mediterranean world and throughout the Middle East,

In 46 B.C., Julius Caesar set the Roman monetary system on a 12:1 silver-to-gold basis and established the foundation for a kind of overvalued Roman gold standard, or limping bimetallism, that lasted through all of the Roman, and its Byzantine successors, rule until the sacking of Constantinople in 1204 A.D. How could the price of silver in terms of gold be kept constant for 1250 years? Only because one of the metals was overvalued.

The standard interpretations of the Roman monetary system are completely wrong. Nineteenth century scholars looked at the 19th century form of bimetallism, which was based on free markets and free coinage and incorrectly assumed that bimetallism had the same meaning back in Rome. In Rome, the market price ratio between silver and gold was about 6 1/2: 1, but the Romans priced gold at 12:1. They took a markup on their gold currency of about 100%. This kept the Roman system operating for the astonishing period of 1200 years. It was possible only as a result of a carefully enforced monopoly of gold production.

From Roman bimetallism, we go to a bimetallism dominated by silver in 1666, when Charles II introduced free coinage, setting the stage for that long period, from 1666 to 1968, in which gold and silver were worth the same whether a commodity or money.

The Evolution of the Dollar Standard

From 1666 to 1934, seven great powers existed. With the possible exception of Britain, there was no superpower, Britain was the first of equals. Think of gold as the sun and theses superpowers as the planets. What if one of the planets in our solar system, say Jupiter, keeps getting bigger and bigger until it becomes bigger than the sun? What would Newtonian dynamics tell us about what would happen in that case? Eventually, if it gets really big, Jupiter is going to take the position of the sun and the other planets are going to move around Jupiter rather than the sun. Eventually, the sun itself would orbit around Jupiter.

That is what happened to the international monetary system in the 20th century. One country outstripped the others and caused a new framework. This occurred when the dollar domain became bigger and bigger and was allied to the prestige of gold with the anchored dollar standard from 1915 to 1924. The dollar became the center of the system and the world started to base its reckoning on the dollar rather than gold as the unit of account in that system.

The devaluation of the dollar in 1934 undervalued the dollar against gold as long as U.S. price inflation was moderate. With Bretton Woods in 1944, the international monetary system was supposed to enhance equality among countries, but still the dollar was used as the unit of account. That system broke down due to, as always, the perennial problem of disciplining the central power. The more powerful the superpower becomes, the more it is tempted to expand beyond its international monetary potential and exact seigniorage from it clients (or victims?). Other countries became exasperated and moved to flexible exchange rates in the 1970s. They thought that it would at least set them free from reliance on the dollar. But they were completely wrong, just as Milton Friedman was wrong when he predicted that under flexible exchange rates countries would not need reserves. Countries need more reserves today under flexible exchange rates than they ever needed under fixed exchange rates. The main reserve they use if dollars, with a little exception for German marks which are used heavily in Europe's exchange rate mechanism (ERM).

Missing Dollars?

Where is all of the money that the Federal Reserve has created? The total amount of United States' currency outside banks is nearly $400 billion. If Americans held that currency, they would hold a great deal more purchasing power than anyone else in the world. They would have currency preferences that would be astonishing. But we know that is not the case. Americans, because they ten to have more credit cards and bank accounts, ten to hold a smaller amount of currency relative to their incomes. Nobody knows precisely where the $400 billion is. No one can track it down, they can only estimate it. But most of us think it is outside the United States, being used as the international currency of the world.

A staff member at the IMF did a study to estimate how many United States dollars are abroad. He assumed that American and Canadian currency preferences are the same in relation to their income. On this assumption, it turned out that only 10% to 15% of the $400 billion in circulation would be held in the United States. The rest of it would be used outside--not just by central banks but by travelers, the drug cartel, tax evaders and foreign banks. The dollar is everyone's second currency in the same way that English is everybody's second language. For this reason there is little scope for international monetary reform without the intimate involvement of the United States just as there is little hope for Esperanto to replace English as the world language.

The United States would be the last country to ever agree to an international monetary reform that would eliminate this free lunch. Again, I have to disagree with my good friend Milton Friedman, who says there is not free lunch. I fell there are all kinds of free lunches. Every time you make a trade with somebody, there are gains that represent a free lunch shared between the trading parties.

The Long Run Prospects

So much for the past and present: We now move to the 21st century. The dollar is the preeminent currency of the world. Europe is struggling to meet the Maastricht conditions to forge new European monetary arrangements. I believe that Europe is going to be much more successful than people generally believe. It will take three years after 1999 to put the currency into place. Then it will take another seven or eight years of growing pains while countries get used to the new procedures that are needed. By the year 2010, we will probably have a European currency firmly in place and generally accepted.

The European continent, as a country, will have a GDP that is probably 10% to 15% larger than the United States. The European Community will produce a currency that is internationally important. Geographically, Europe is more convenient to all of the former Soviet Union countries,. Africa and the Middle East than is the United States. The single Eurocurrency will become very important.

There will also be a role for gold. The total amount of gold mined since the days of Nefertiti is about 3.5 billion ounces (120,000 tons). One billion ounces is in the central banks, more than another billion ounces is in jewelry, and the rest is in speculative hoards. This last holding is why Alan Greenspan says he looks at gold whenever he gets a chance. I look at three things for signs of inflation in the economy: I look at the money supply, I look at interest rates, and I look at gold. You can see this in the bond market. If there is a big outbreak in the price of gold, you know that there is an increase in inflationary expectations and people will start to sell bonds, sending interest rates up. The stock of gold in the world is going to maintain itself as a viable reserve asset for a long time to come.

But I do not think that we will see the time when either of those two great economic powers, the United States and the European Union, will ever again fix their respective currencies to gold as they have in the past. More likely, gold will be used at some point, maybe in 10 or 15 years when it has been banalized among central bankers, and they are not so timid to speak about its use as an asset that can circulate between central banks. Not necessarily at a fixed price, but a market price.

The more countries start to think about gold as an index, as a warning signal of inflation, the more the monetary authority will try to keep the price of gold from rising. Imagine that tomorrow the price of gold rises form $350 to $400. Don't you think that immediately the Fed will see that as a signal of an increase in inflationary expectations and the need to tighten? Europe has already done that. There are long periods when it appears that Europeans have been stabilizing gold whenever the dollar has been depreciating against gold. This will be a major factor in moderating the exchange rate fluctuations between these two great blocks. This is vital to Europe, because nothing could make Europe more uncomfortable than to have big fluctuations in the Dollar-Euro exchange rate. Looking at gold would be one way to circumscribe these fluctuations.

Thinking ahead to the year 2030, we can not ignore the fact that the yen is going to be a very important player. Japan has a GDP in nominal terms of 60% of the United States' GDP. China's renminbi--I hope by then the name will be changed!--will also become an important currency. After July, when Hong Kong integrates with China, China will have foreign exchange reserves coming close to $150 billion, not counting Taiwan which has another $100 billion. The greater China area, if you think of it in those terms, is a formidable force, growing at double digit rates. By the year, the yuan will be a very important force. However, we do not really know what the relationship is going to be between the yuan, the yen and the dollar. Lets just hope that our predictions do not have to take into account major superpower confrontations.

Conclusion

Gold is going to be a part of the structure of the international monetary system for the 21st century, but not in the way it has been in the past. We can look upon the period of the gold standard, the free coinage gold standard, as being a period that was unique in history, when there was a balance among the powers and no single superpower dominated.

Let me just conclude with a final thought: Bismarck once said that the most important event in the 19th century was that England and America spoke the same language. In the same spirit, the most important event in the 20th century was the creation of the Federal Reserve System, the vehicle for the spread of the dollar. Without that, you would not have had the subsequent monetary events that took place. Let us hope that the most important event of the 21st century will be that the dollar and the Euro learn to live together.

1. "World Inflation and the Eurodollar" *Economic Notes* 1, no. 2 (August 1971).