

gold standard

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For nearly three thousand years coined weights of metal have been used as money and for just as long, gold, silver and copper have been the preferred metals for minting coins. Currencies consisting of coins whose value is expressed by the weight of the metal contained in them at market prices, however, have seldom been used.

Until the inception of metallist reforms, the necessary amounts of the metals required for coinage were brought to the Mint by the sovereign or by the public. The sovereign's monetary prerogative consisted in fixing the Mint price of the metal, i.e. how many coins of a certain denomination could be coined from a given weight of metal. The Mint price was established with reference to a money of account, and it could diverge, and very often did, from the market price of the metal. When the sovereign deemed it necessary to devalue his coinage, he could change the parity between the coins and an 'ideal' currency, usually one which had circulated in the past. This made it unnecessary to resort to recoinage operations. The latter were also available but were considered as more radical policies, while changing the relative value of coins in terms of the 'ideal' currency was a more gradual instrument, which could be used almost daily if need be. But it was only very rarely that the sovereign would renounce his prerogative of giving coins a face value by law. Indeed, for many students of money this sovereign prerogative was what transformed a coined metal into money. Theodor Mommsen wrote some unforgettable passages (*Histoire de la Monnaie Romaine*, vol. 3, p. 157) on Emperor Constantine's decision, in the 4th century AD, to resort to free minting of gold coins whose value was given by their weight at market prices. To Mommsen this was the lowest point reached in the degradation of Roman monetary sovereignty. A Roman coin had always been taken at its face value, whatever its weight. Indeed, this had been the chief testimony of the credibility of the Roman State.

After the fall of the Roman Empire, none of the successor states can be said to have enjoyed, in the following centuries, an equivalent degree of monetary sovereignty. The plurality of successor states implied a plurality of currencies, with ample possibility of speculating and arbitraging between currencies. Citizens learned to defend themselves when the sovereign's privilege became exorbitant. Seignorage tended to be inversely correlated with the commercial openness of States. The less truck subjects had with foreigners, the greater the divergence between the legal and intrinsic value of coins could be. A trading nation very soon found that it had to have a currency whose value corresponded to its metallic content. With the rise of the absolute state, the sovereign's monetary privilege tended again to become exorbitant. The ratio of internal to international trade increased, in spite of the rise of mercantilism, and the fiscal use of money by the State became greater. It is obvious that this sovereign prerogative, when it became exorbitant, made life very difficult for the sovereign's subjects, who could only defend themselves by changing prices, provided that had not been declared illegal by the sovereign. Metallist reforms were an expression of the new power acquired by the subjects

vis-à-vis the State. At the core of these reforms was the actual coinage of the 'ideal' money as a real full-bodied coin, whose weight and fineness was decreed, and this coin became the 'standard' of the national monetary system. The sovereign, by these reforms, saw his monetary prerogatives diminished to that of a keeper of weights and measures. In the intentions of the reform's advocates, it was a way of constitutionalizing the sovereign, so that he would be compelled to resort openly to his fiscal powers, which had been constitutionalized long before.

The Gold Standard was just one of the possible metallic standards. It was adopted in England, while the French preferred to choose a silver standard. In the course of the following centuries intellectual debate centred around the choice of metal, and economists, statesmen, intellectuals, declared themselves in favour of or against silver or gold, in favour of or against bimetallism or monometallism. But the basic choice in favour of a pure metallic standard, where an actual coin whose value as given by the weight of its metal content at market prices was the only money of account available, was not seriously discussed again for a long time, until the development of banking and the integration of world commodity and financial markets gave reason to challenge existing institutions.

The great metallist reforms were the outcome of the intellectual movement which would later take the name of 'political economy'. This is now used to define an academic subject, taught in universities, but between the second half of the 17th century and the first decades of the 19th century, it became an intellectual, almost a political movement. It was composed of men who, in many countries, believed that human society was organized according to natural principles, which could be studied by the same methods used to inquire into the world of nature. By scientific inquiry the laws which governed society could be discovered and the action of the state could be made to agree with them. In particular, the laws governing the production and distribution of commodities could be discovered, and the principles according to which value was conferred upon goods and services. The political economists soon found themselves considerably disturbed by the existence of a human institution, Money, which continually interfered with the progress of commodity valuation. As hinted above, they tried to devise a solution which would allow society to enjoy the advantages of using money while being spared the problems which the creation and use of money entailed. The solution was a commodity money, a monetary regime whose standard would be a coin made of metal of fixed weight and fineness. They hoped that a commodity money would free the economic world from the uncertainties induced by the raids of those who exercised or usurped monetary sovereignty. A pure metallic money would be subject to the same laws of value to which other commodities were subject; its demand and supply would be determined strictly by the needs of trade.

By advocating the adoption of a pure metallic standard, the political economists were thus killing two birds with one stone. They were putting a stop to the exorbitant privilege of the State, which used its monetary prerogative to tax people without asking for the powers to do so, and were also recommending a type of money which would not disturb the functioning of economic laws, since it obeyed those laws. By the adoption of a pure metallic standard, a truly neutral money could be relied upon.

If the desires of political economists were important in actually pushing forward the adoption of metallic standards, however, it was more because both governing circles and

public opinions were anxious to put an end to the previous system, which was based on uncertainty and sovereign privilege, than because of a widely felt need to put economic theory on a sounder theoretical footing.

In this respect British experience is different from the French. In England, a metallic standard had been in use since soon after the great recoinage of the end of the 17th century. At the turn of the next century, Sir Isaac Newton, the Master of the Mint, had established the canonical weight for the Pound sterling in gold, at 123.274 grains of gold at 22/24 carats (corresponding to 7.988 grammes at the title of 0.916). Free minting remained possible but, as very little silver was coined, silver coins were soon demoted by the public to the role of subsidiary currency, as they were still of the old sort, without milled edges, and were badly worn, because of the repeated clipping. Thus, early in the 18th century, England went on the Gold Standard.

In France, metallist reform had to wait until the Revolution. After an early attempt to introduce the Gold Standard, and a gigantic outflow of gold under the Terror government, in the year XI of the Revolution the free minting of both gold and silver was declared. One franc was given a weight of 5 grammes of silver at 9/10 title. A fixed parity was also established between gold and silver, although the French legislators, in the Report of the Comité de Monnaies in 1790, had declared that a permanently fixed parity between the metals was impossible, and had quoted Newton and Locke to corroborate their declaration. Bimetallism was thus instituted in France, and would last almost as long as the Gold Standard in England, but from the beginning it was understood that the parity between gold and silver would have to be changed when necessary, even if it was to be done by law each time. The French lawmakers gave life, therefore, to a system which we would call today of fixed but adjustable parity between gold and silver.

Contemporary literature devoted much attention to the relative virtues of mono- and bimetallism. Modern economic literature, however, starting from the end of World War I, has almost exclusively focused on Gold Monometallism. From the point of view of monetary history this is a pity, because what commonly goes under the name of the International Gold Standard was, on the contrary, a complex system composed of a monometallist and a bimetalist part, where the importance of the former was not greater, for the functioning of the whole system, than that of the latter. We shall see, in what follows, how the smooth functioning of the Gold Standard essentially required the existence of a bimetalist periphery which surrounded the monometallist centre.

Let us first concentrate on the British Gold Standard. After it had been in existence for close to a century it had to be suspended in 1797, because of the difficulties which the Napoleonic wars entailed for monetary management. In the period of over twenty-five years in which cash payments remained suspended, a very lively debate took place among political economists, politicians, bankers, and industrialists on how suspension affected internal and international economic relations. Some of the best pages in the history of political economy were written as contributions to that debate.

Specie payments had been suspended by an Order in Council in February 1797. The same decree had undertaken that they be resumed, at par, six months after a definitive peace treaty had been signed. In the intervening period of open hostilities, the currency had depreciated, the Government had incurred a huge debt which was largely in the hands of

City financiers, and war demand for all sorts of commodities had favoured the amassing of great fortunes by a bevy of 'homines novi'. As peace approached, it was found that a resumption at the old parity would enhance the post-war slump which already appeared after Waterloo. This prospect united landowners and industrialists, who had been natural enemies heretofore, against creditors, Government Debt holders and, in general, people with fixed incomes. Because of its huge debt, the Government ought to have been on the same side as the debtors. It had, however, muddled through the war by putting up a system by which it held bond prices up and kept the financial market favourable to new debt issues. The system consisted of redeeming old long term debt and replacing it by floating debt. Pascoe Grenfell and David Ricardo were quick to chastise the Government's debt management policy. In 1816 and 1817 the Government's balancing act was successful but in 1818 it came unstuck, as the Government had to buy stock dear and sell it cheap. Meanwhile, the ratio of funded to floating debt had fallen, and this precluded the possibility of reducing the main debt.

Resumption was as highly political a measure as Restriction had been. The Whig opposition railed against Restriction, calling the Government a committee of the Bank of England. And, indeed, the Bank did its best to make the accusation credible. It tried to blackmail the Government into a continuation of Restriction by threatening to stop its support of the Government's debt management policy. It also threatened to stop accommodating Meyer Nathan Rothschild, who was the principal holder of Government Stock. But Resumption had also its advocates within the Cabinet; Huskisson, for instance, who with Parnell, Henry Thornton, and Francis Horner, had drafted the Bullion Report in 1810 and had thus permanently alienated traditional City interests. He had advocated a prompt resumption in a memorandum he submitted in 1816, and again, early in 1819, he submitted a memorandum calling for prompt resumption accompanied by fiscal deflation. The Government then appointed a Secret Committee to consider resumption, which soon became dominated by opinion in favour. When the Committee's Report was discussed in Parliament, Ricardo's vehement advocacy of resumption definitively swung parliamentary opinion. Payments were resumed, at the old parity, in May 1819. Ricardo called the decision to resume 'a triumph of science, and truth, over prejudice, and error'. It certainly was a triumph of new City blood over old financial interests, who had thrived in the easy days of inflationary finance, lending to financially weak Governments, at rates they themselves pushed up by manipulating the money market.

After resumption at the old parity, a shock wave went through all British economic circles. The Gold Standard did seem to have no advocates left among manufacturers and financiers. The Bank of England had been against it all along, and so menacing had been its representations that the Government had been driven by such impudence to breaking its useful wartime alliance with it, which had rested, it now appeared, on easy money. Landowners, on the contrary, were pleased. A measure that made them poorer in capital values, gave them, at the same time, a greater real value for their rents. It also represented a restoration of old values against the encroachment of industry and its social evils, which had occurred during Restriction. If the Gold Standard was bad for industry, which had flourished under the Paper Pound, then the relative power of the Old Order, which Agriculture represented, would grow again.

The Bullionists, who had campaigned for a resumption at the old parity, believed that a deflation would purge society of the most glaring speculators, of unsound industrialists, and, more generally, of upstarts who had grown rich on easy money. At the same time they believed that the Gold Standard would transform Britain – and we have Huskisson's testimonial to this belief – into the chief bullion market of the world. London would become the 'settling house of the money transactions of the world'. The intention was thus to favour the New City, to be 'Mart and Banker' to the world, rather than its workshop.

Finally, Resumption was seen as an instrument of social justice. Deflation would give back to creditors, who had lent their money to their country in wartime, the full value of what they had lent. To politicians, an automatic Gold Standard looked like a relief from the heavy responsibilities of managing the economy. It would restore them to true political activity, and mark the final transition to Peace.

The French monetary reform was very different. It was aimed directly against the Ancien Régime, seen however in its fiscal capacity, and not as an unholy alliance of politicians and financiers. It ended up by establishing a long lasting bimetallic system, which did not overlook the interests of those whose prices were fixed in silver, like wage earners and petty traders. The Reform thus did not represent a clearly determined social choice, like the Resumption in Britain. A more neutral system was devised, which tried to accommodate both the third and the fourth estate. The revolutionary experience was too recent to invite, by a deflationist monetary regime, new social disorders. It is somewhat ironic to see how the country, on the verge of defeat, opted for a regime much less radically deflationist than the one the victorious country would choose. In both countries money was constitutionalized, but in Britain, the coalescence of interests of the New City and the landowners made the country the world pivot of monetary radicalism. It is fair to say that the expectations of those who had favoured the Gold Standard in Britain were not fulfilled. Deflation brought in its wake unemployment and social disorder. It also induced British industrial producers to invade world markets, as home demand shrank. The benefits the New City interests had expected did indeed materialize, but only a few decades later. The Gold Standard induced export-led growth in Britain, and to become 'mart and banker' to the world she first had to become the workshop of the world. The mechanisms the bullionists had set working thus functioned in reverse. But it would be unfair to say that Huskisson's expectations were representative of those of all bullionists. David Ricardo, for one, expected the Gold Standard to bring about industrial expansion. And he wanted industrial growth to employ the labour made available by the working of the Law of Population, in which he firmly believed.

The Gold Standard was supposed to check the power of the Bank of England, which seemed to have become so great under the Paper Pound as to represent a threat to a truly constitutional institution like Parliament. But its actual functioning enhanced that power even further. As Britain became the workshop of the world and Sterling was more and more widely used as an international currency, the importance of London as a financial centre grew apace. The Bank of England thus became pivot of an international payments system founded on Britain's industrial and financial supremacy. The Bank of England's importance as a commercial bank was enhanced by its monopoly position as a joint stock bank. Just as it had flourished as the chief source of Government finance under restriction,

the Bank flourished as a commercial bank as a result of Britain's ascent to industrial and commercial leadership.

Its international pre-eminence was always dependent on its domestic primacy. Under the auspices of the Bank's monopoly, the centralized reserve system, which remained for a long time unique to Britain, was developed. It was a very lean and efficient system, which minimized the amount of cash needed to oil the wheels of the domestic payments network. But it was also highly unstable, since its leanness did not tolerate any serious obstacle which might appear in the national and international flow of cash and capital. The fact that it could carry on for such a long time, until the First World War, is explained by a series of fortunate circumstances which occurred in succession. We shall examine them in some detail.

We must, however, strongly underline the fact that, under the Gold Standard, Britain experienced very strong cyclical swings. The hundred years after resumption were marked by commercial and financial crises which recurred about every ten years, even if the last part of the period saw crises appear at longer intervals than before. The regularity of crises gave rise to much monocausal theorizing, and the Gold Standard was often indicted as one of the chief culprits. It was, by contemporary opinion, accused of being a monetary regime too inflexible to allow for the smooth growth of the economy. Critics invariably quoted the French and then the German monetary systems as preferable, since they were supposed to possess a greater degree of flexibility and made possible better management of the economy.

Yet, in spite of a very lean centralized reserve, and of recurrent financial crises, Britain never abandoned the Gold Standard. One of the most important reasons why she was not compelled to do so under the pressure of crises must be found, as we noted earlier, in the peculiar features the international financial system possessed in the combination of a monometallic and a bimetallic part. Since oldest antiquity, silver was the metal preferred by the Far East for coinage. And for almost as long as history goes, the Western trade balance with the Far East has shown a deficit. A structural trade imbalance with the Far East meant a continuous support of silver towards the East. Around the middle of the 19th century, this structural trend combined with gold discoveries to depress the price of gold. In the last thirty years of the century, however, the trend was reversed, as silver started to be abandoned by most developed countries as a monetary standard. The gold-silver parity rose accordingly.

Throughout the century, London retained a quasi-monopoly of gold and silver transactions. And it maintained, without any interruption, a free gold market. It is certain that it could not have afforded to do so, had not first France and, later on, the Indian Empire come to the rescue.

The Anglo-French financial connection is one of the most fascinating, and least researched, features of the 19th century international payments system. From what we know, however, it appears that the much greater liquidity the French monetary system retained throughout the 19th century was skilfully exploited by Britain. Bank rate would be raised when pressure was felt on the Bank of England's reserve, but the expectation was that gold would flow mainly from Paris. Why did it flow? First of all, because there was a lot there, because of both the wealth of the French economy and of the underdevelopment of the

French banking system, which rendered the use of gold coins for large transactions necessary (whereas in Britain cheques were commonly used). We must not forget, however, the essential role played by the House of Rothschild in connecting the French and British money markets. The archival evidence available shows that, in most British financial crises, the reserves of the Bank of England were refurbished with gold procured by Rothschild from France. The House of Rothschild intermediated between the gold and silver sides of the international monetary system. They were the super arbitrageurs who had the huge reserves and prestige necessary to play successfully a role which remains to be described in full detail, but whose importance it is possible to detect even in the present state of research. They were the 'protectors' of Bank Rate. It is not without importance that a Rothschild sat in the Court of Directors of the Bank of England and a French Rothschild occupied an equivalent position in the Directorate of the Banque de France.

Towards the end of the century, however, the precipitous fall of silver, induced by and in turn determining the abandonment of silver as a monetary standard in the whole developed world, reduced the role played by the French monetary system as a stabilizer of the Gold Standard. France had herself to close the mints to silver, to avoid being flooded by a metal nobody seemed to want any more. In the remaining period, commonly referred to as the 'heyday of the Gold Standard', the Bank of England's balancing act could continue with the help of two other shock absorbers, the Indian monetary system, still based on silver, and South African gold production. The Empire of India was kept by the British on a silver standard even when silver was fast depreciating against gold. This made exports of primary commodities and raw materials easy and was undoubtedly responsible to a large extent for the large export surplus India earned in the last part of the pre-war period. It is in the management of this surplus in a way conducive to the stability of the Gold Standard that the British financial elite proved most imaginative and successful. The Indian surplus was invested in London, in Government bonds or in deposits with the banking system. The 'Council Bills' system, which had been devised to effect financial transfers between India and the Metropolis, was managed so as to keep the Rupee's value stable. The whole system, called the 'Gold Exchange Standard', was extolled as a paragon of skill and efficiency by J.M. Keynes, in the book that first gave him notoriety, *Indian Currency and Finance* (1913). Indeed, the young Keynes was right, as far as the functioning of the Gold Standard was concerned. Whether it was also efficient from the point of view of promoting Indian economic development, is entirely another matter, and one with which Indian economic historians have seldom concerned themselves.

South African gold production also helped to stabilize the Gold Standard. All the gold mined there was commercialized in London, and the proceeds invested there, at least in the short run. It is easy to imagine how important the British monetary authorities considered the control of that huge flow. This became evident, after World War I, when an attempt was made to revive the Gold Standard. Following Professor Kemmerer's advice, South Africa decided in favour of the Gold Standard, and against pegging its currency to Sterling. The connection with London was cut, to the great discomfort of Montagu Norman, who saw one of the main props of Sterling suddenly disappear.

If France, India and South Africa contributed to making the Gold Standard stable, the United States represented, throughout the century in which the Gold Standard lasted, one

of the great, perhaps the single greatest, disturbing elements to its smooth functioning. After the political and economic forces which stood for an orderly financial development of the Republic had been routed in the first decades of the 19th century, the growth of the American economy took the spasmodic features it would keep until the Second World War. The United States was deliberately deprived of the Central Bank that Alexander Hamilton, imitating the Bank of England, had designed. Banks proliferated everywhere, following a model of wildcat finance which, if it promoted the phenomenal growth of the US economy, also gave it a very strong cyclical pattern. For the whole Gold Standard period, the Bank of England was called to play the difficult role of being the lender of last resort to the American financial system. The growth of American farm exports, coupled to local industrial growth and the peculiar development-underdevelopment of the US banking system, gave rise to a notorious seasonal pattern of financial difficulties, which was called the 'autumn drain'. This recurred every year, when American crops were sold on world markets and the proceeds disappeared into the entrails of the completely decentralized American banking system, and, more generally, into the hands of American farmers. A gold drain was felt first in New York, the main US financial centre. Interest rates rose violently, as there was no centralized banking reserve in New York, and the US Treasury, which kept a very large gold reserve, knew only very imperfectly how to use it for stabilization purposes. The rise of New York rates would thus be transmitted to London, which kept the only free gold market. Gold would thus flow to New York and it would be months before it could be seen again, as farmers spent the proceeds of crop sales and US local banks recycled the money back to New York.

To this seasonal drain, to which the Bank of England was never able to find a remedy, other sudden drains would be added, when the peculiar American banking system went into one of its recurrent panics. After the most violent of them had, in 1907, brought chaos to the whole international economy, the US Congress decided to move and the Federal Reserve System was established, in 1913. But it took another twenty years, and another huge crisis, that of 1929–33, before it really began to work as a central bank.

We have dedicated considerable space to a summary of US financial history because it must be fully appreciated what the peculiar structure of American finance meant for the world financial system in the age of the Gold Standard. What by the end of the century had become both the largest industrial producer and largest agricultural exporter, was still importing huge financial resources from the rest of the world. It lacked a central bank and had developed a thoroughly decentralized banking system which, if it was functional to rapid economic growth, had also a strong vocation for recurrent instability. The US Congress and Government also did their part to enhance instability, by unwise and partisan policies concerning, for instance, silver prices, and the management of fiscal revenues.

In the last decade of the 19th century the crisis of silver induced a veritable stampede by Governments and Parliaments, in most countries, to adopt the Gold Standard. More than the unidirectional movement of silver, it was its wild oscillations, made deeper by the inconsiderate silver policies of the United States, that convinced most interested parties to opt for gold. Even European farmers, who were fighting a desperate war against cheap New World imports, were reduced to favouring the Gold Standard by the impossibility of forecasting a price for their harvest at sowing time. Industrialists in developing countries

who had started import substitution activities were in favour of a strong currency, to repay foreign loans without problems, and preferred protection as a means of keeping out foreign industrial products. Most countries, when they went on the Gold Standard, also started a centralized gold reserve, which they intended as an exchange stabilization fund. Very often they surrounded this reserve by an outward layer of foreign currency reserves, which they called upon under pressure in order to keep their gold reserve intact.

Contrary to what British monetary authorities thought and did after the First World War, their pre-war predecessors were extremely worried by the universal trend in favour of Central Banking and of the Gold Standard. They very correctly understood that Britain had succeeded in staying at the centre of the system as long as it remained a free flow system, where the only stock of gold was the one kept by the Bank of England. French gold accumulation had been seen favourably, as it enhanced the *masse de manoeuvre* of the Bank of England at almost no cost. But already German gold accumulation was a threat, as Germany did not believe in a free gold market and Bank Rate found obstacles in attracting gold from there. The German pattern was, unfortunately for Britain, the one that found the largest number of followers among countries that established a Central Bank, and a central reserve to manage the Gold Standard. The result was the increasing seclusion of previously free-flowing gold into large stocks, over which the British traditional control instrument Bank Rate scarcely exercised any leverage and which dwarfed in size the reserves of the Bank of England.

To these external difficulties with which British monetary authorities were greatly concerned, others of a more domestic nature had to be added.

The British financial system had emerged from the turmoil of the Napoleonic wars apparently unscathed. It was formed by a cluster of merchant banks and other financial institutions, like the discount house, and by the great commodity and service exchanges, and it had the Bank of England at its centre. The composition of the governing body of the Bank of England ensured that most City voices would get a fair hearing. It is impossible to exaggerate its internal homogeneity and cohesion (especially at a time like the present, when the system is definitively being demolished). A good study of the City in the years of the Gold Standard ought to be conducted by structural anthropologists, rather than by economists. A very serious threat to this semi-tribal system, which had succeeded in controlling world trade and payments for many decades, was developing fast in the late years of the Gold Standard. It was represented by the rapid concentration of British deposit banking, which resulted in the survival of only a handful of giant joint-stock banks. The Clearing Banks – as they came to be called – provided the City with a large part of the short term funds which were used as raw material to finance world commodity trade. They had huge branch networks which channelled savings from the remotest corners of Britain to London, and thence to all parts of the world through City intermediation. Thus the Clearing Banks provided the base for the whole British financial system. But their power was not constitutionalized by any matching responsibility. They had no say in the conduct of monetary policy. They were not represented in the Court of Directors of the Bank of England. Moreover, as concentration increased, the Clearing Banks thought they might as well invade some of the markets traditionally reserved to merchant banks, and in particular, they started invading the field of commodity trade financing. Finally, they began

to lay the foundations for their own centralized gold reserve, alternative to that kept by the Bank of England.

Speaking more generally, a trend can be noticed in the last 25 years of the pre-war Gold Standard, away from homogeneity and towards decentralization, in the British financial system. The Clearing Banks increasingly balked at being disciplined by the Bank of England. Often, especially in times of crisis, they pulled the rug from under the financial establishment, by withdrawing their short term deposits with City houses. By this behaviour they showed their muscle and demanded recognition. This pattern is clearly detectable in the 1890, 1907 and 1914 crises. It was a trend that greatly disturbed the financial elite and contributed, with the exogenous factors we have mentioned before, to making the Gold Standard more unstable. It could even be said that the loss of cohesiveness and homogeneity of the British financial system brought the Gold Standard to its demise, in July 1914. The system collapsed long before Britain entered the conflict.

The gold standard and the economists

The development of Gold Standard theory coincides with the development of economic theory. We have already mentioned the role played by commodity money in the theoretical apparatus of the classical economists. A commodity money would obey the rules dictated by Nature (of which even human behaviour was part) as far as its supply, demand, and price were concerned. Thus a monetary economy based on a pure metallic standard would enjoy all the advantages afforded by the presence of money, without being subject to the many disadvantages induced by a man-made currency not tied to a metal. For David Ricardo, the recommendation to adopt the Gold Standard meant not only preventing the Bank of England from usurping monetary sovereignty, which he recognized as a Parliamentary prerogative, it also meant giving the economic system a standard, like gold, which had the virtue of being a good approximation to his invariant measure of value. He wanted to see the price system uninfluenced by political power, so that Nature would be free to play her game and gold would be distributed among the 'different civilized nations of the earth, according to the state of their commerce and wealth, and therefore according to the number and frequency of the payments which they had to perform' (Ricardo [1811], 1951, p. 52). If freedom of gold movements existed, this redistribution would soon bring about a state of rest, when gold had been allotted to each nation according to its needs and would not move again. If all countries promoted metallist reforms, fixing a gold weight for their currencies, arbitrageurs would operate, within the gold points, to keep gold prices uniform. Gold would function as the numeraire of the world economic system and it would be enough to ensure gold arbitrage to guarantee uniformity of all the world price systems. There would be no need for arbitrage to involve other, bulkier, commodities, whose transportation would imply greater costs. This, of course, did not mean that international trade would not take place. Commodities would move across countries according to the Law of Comparative Advantage, and the Gold Standard would make sure that this law did not suffer perturbations because of 'unregulated' money supplies. 'Regulation', of course, meant that fiduciary money would depend, for its supply, on the dynamics of the gold reserve of the issuing agency. Ricardo's view of how the world economy worked, based on his analysis of commodity currency systems, rapidly conquered not only the economics profession but also politicians and intellectuals. It was a scientific system of political

economy, whose core was the Gold Standard. John Stuart Mill and Alfred Marshall were to refine and qualify that world view.

Mill analysed with great care the implications of a commodity money, whose exchange value would be equal to its cost of production. He did, however, clearly point out the importance of the existing stock of gold relative to its current or even potential flow. The gold stock/flow ratio made full adjustment a lengthy process, so that, in the short run, the price level would be determined by the demand for, and supply of, money. He never doubted, however, that a commodity money would not be able to change the international production relations as they existed under barter. To him money was, like oil in the wheels of moving mechanisms, 'a contrivance to reduce friction'. He fully trusted that David Hume's adjustment mechanism would have only nominal consequences in the case of a discovery of a hoard of treasure in one country. This would raise prices there, discourage exports and induce imports. The resulting balance of payments deficit would redistribute the hoard to the rest of the world and lower prices in the original country to their previous level. In Mill's opinion, real effects would, however, result in the case of a loan from one country to another. Then a real transfer would have to be effected.

Neither Mill nor Marshall considered the Gold Standard a perfect system. Both of them opposed bimetallism at fixed rates. They believed that relative changes in the costs of production of the two metals would be likely, and that would involve a scarcity of the dearer metal and a shift in favour of the monetary use of the cheaper one. Instability was therefore built into the bimetallic system. Mill preferred a 'limping' gold standard, where gold would be the only legal tender, and silver would be coined at market prices. John Locke's tradition obviously lived on.

Marshall's creative thinking in the field of monetary standards included 'symetallism' and the 'Tabular standard'. According to the first scheme, vaguely reminiscent of the oldest currency, the Lydian 'Elektron', if the public wanted to give paper currency and receive metals it could only get gold and silver together, in bars of fixed proportions. Marshall thought this would link the paper currency to the mean of the values of the two metals and make possible, by this more stable currency, a world monetary area including both the gold and silver countries. It is easy to recognise in Marshall's scheme a forerunner of the contemporary European Monetary System's ECU.

Marshall's Tabular standard, on the other hand, reintroduced the concept of a money of account separate from the medium of exchange. The money of account would serve for long term contracts and would be tied to an 'official index number, representing average movements of the prices of important commodities' (Marshall, 1935, p. 36).

As far as the adjustment mechanism under a gold standard regime was concerned, Marshall clearly saw the growing integration of capital markets replacing traded goods, arbitrage and gold movements as the chief instrument of adjustment. This of course meant recognizing the importance of interest rate differentials and interest arbitrage. And, in turn, giving a great role to play to banks and Central Banks.

With J.S. Mill, Marshall, and, in particular, Irving Fisher, we begin to get out of the 'naturalist' world view which permeates the writings of Ricardo, his inspirers, and his followers. The world is not run solely according to forces of nature, which it is the

economist's role to discover and which cannot be violated without meeting an inevitable punishment. The Gold Standard is not a 'scientific method' of organizing a monetary regime. Like Marshall, Irving Fisher thinks of it more in historical rather than scientific terms. It is something the world embraced by historical accident. Supply and demand conditions for gold and silver are unstable. The system is not perfect and is perfectible, justifying proposals to make it work better.

As we advance toward what has been called the 'heyday' of the gold standard, in the eyes of contemporary economists its virtues seem to pale and its vices to come into relief. To Knut Wicksell, under a commodity standard there is no guarantee that a causal link will be able to exist between money supply and price level movements. Such a link can be seen to exist only if we take a very long view. Like the practitioner-theorists who staffed the British Treasury before 1914, Wicksell noticed that central banks, by keeping large gold reserves, had interposed themselves between gold supply and price movements. The price stabilization function of central banks is recognized and the new institutional set-up is in any case superior to a pure metallic standard, which in Wicksell's eyes would be totally at the mercy of the vagaries of demand for and supply of gold.

The 'heyday of the gold standard' which (as we hope to have shown above) was in historic reality the beginning of its decline, were thus also days of decline as far as Gold Standard theory was concerned. A growing scepticism begins to engulf Hume's price-specie flow mechanism. Commodity arbitrage is seen as prevailing over gold arbitrage. Adjustment must involve real, not just nominal changes. International capital movements are brought increasingly into the picture. Stock adjustment in all sorts of markets is a phenomenon which fascinates the economic theorists of this age. From recognizing stock adjustments to advocating stock management is a short intellectual distance and most of these theorists cover it at great speed.

Ironically, in the theoretical cycle the pendulum had swung in the 25 years before World War I, away from Ricardo and Locke and towards Lowndes and Thornton. The pure metallic standard has lasted only 'l'espace d'un matin' both in theory and practice. Economists had not been able to ignore the giant strides of banking and of world economic and financial integration. From Ricardo's golden rules, simple and infallible, we move to Mill, Marshall, Wicksell, and Fisher and their inventive recipes for national and international monetary management. Doubts prevail over certainties. We cannot accept J.M. Keynes's post-war strictures about the pre-war perception of the Gold Standard. It was not seen as immutable, frictionless, and automatic by its contemporaries. The seeds of post-war criticism and disenchantment were firmly sown before the war. In fact, we might go as far as to say that pre-war learned opinion was much less apologetic of the pure metallic standard than would be the post-war economists and politicians. Pre-war observers had realized that the Gold Standard was a game which had become increasingly hard to play, precisely because everybody had learned – and wanted – to play it.

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