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THE GOLD STANDARD AND THE ORIGINS OF THE MODERN INTERNATIONAL MONETARY SYSTEM

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Abstract

This article explores the ways in which the classical gold standard established the foundation for a modern international monetary system with its distinctive forms of regulation and crises. The specific nature of this system is often occluded by the tendency to compare the gold standard in relation to subsequent monetary systems, such as Bretton Woods. To remedy this historical bias, I compare the classical gold standard with previous monetary systems and conclude that it contributed to expand the array of monetary instruments to conduct monetary policy. By progressively subjecting the management of fiduciary money, most importantly the issue of banknotes, the institutions of the gold standard created a new monetary framework which opened the way for central banking. However, the commitments taken to this effect, such as provisions on the convertibility of banknotes, created new opportunities for speculation. This new weakness would become the main preoccupation of monetary policy in the 20th century and laid down the foundations for international cooperation and its novel emphasis on monetary stability.

Introduction: The Formal Approach to Regimes and the Gold Standard[1]

Nineteenth century financial developments have profoundly influenced contemporary financial structures in shaping the forms of financial regulation and financial crises in the 20th century. For this reason, the classical gold standard adopted in the late 19th century represents a significant period in financial history. However, there have been few explicit attempts to clarify the nature of this transformation. The literature generally holds that the gold standard served to make states more accountable to markets. Hence, the gold standard is generally presented as a liberal monetary regime that privileged market-led adjustments among national economies, and posed important limitations on the monetary policies of states. Because of these limitations, it has often been suggested that the gold standard represented an attempt to subject societies to market discipline (Polanyi, 1957). According to this view, the gold standard reflected the growing prominence of capitalists and the spread of liberal ideology across Europe (Gallarotti, 1995; Milward, 1996).

However, two issues place into doubt the liberal nature of the gold standard. The first pertains to the origins of the gold standard. Many authors now assert that the classical gold standard was not the product of any international agreement, but resulted from the concatenation of domestic dynamics (Redish, 1990; Helleiner, 1998). But if the gold standard emerged mainly for domestic purposes, it becomes ambiguous as to what extent states consciously aimed at subjecting monetary policy to the discipline of international capital flows. This caveat is reinforced by a second fact concerning monetary policy under the gold standard. There is now a widespread recognition amongst scholars in the field of IPE that the gold standard was not a purely automatic monetary system (Cohen, 1977: 79). There is indeed considerable evidence that central banks did not fully manage their money supply based on the idea that markets would make the necessary adjustments: "[Central] banks could and did respond to gold flows in a highly discretionary manner in order to cushion the effects on domestic prices and the domestic economy" (Gilpin, 1987: 124). Numerous studies have thus pointed out ways in which European central banks limited the effects of capital flows on their national monetary system (Jonung, 1984; Flandreau, 1996). This also makes the extent to which the gold standard subjected countries to market discipline unclear, since central banks acted to thwart, at least partially, the effect of capital flows presumed to be the main engine of monetary adjustment.

IPE scholars have attempted to account for these facts (Frieden, 1997; Eichengreen, 1995), but remain loathe to let go of the idea that the gold standard represented a liberal monetary regime. While they recognize that states enjoyed more

[1] I would like to thank Candace C. Archer, Etienne Cantin, Eric Helleiner, Matina Karvellas, Geoffrey Kennedy, Martijn Konings, Thierry Lapointe, and Leandro Vergara for their comments and helpful suggestions.

flexibility than it was once thought, they still attempt to define the classical gold standard according to the way markets disciplined monetary policy. But the notion that the gold standard was restrictive, I argue, is largely due to a tendency amongst financial historians to compare the gold standard to subsequent monetary systems, particularly the Bretton Woods system. Such a comparison inevitably leads scholars to exaggerate its restrictive aspects and to neglect the changes in monetary policy which occurred with the advent of the gold standard. By inverting the perspective in order to compare the gold standard to previous forms of monetary policy in Western Europe, this article concludes that the classical gold standard in fact expanded the margin within manoeuvre of monetary policy. While there is no doubt that markets created pressures on monetary policies during the gold standard, as during any other monetary regime, to seek in the discipline of the market the defining feature of the gold standard is to miss its historical significance.

More specifically, I make two broad claims. First, I argue that the gold standard marked a profound institutional change that was generally aimed at establishing a viable framework to use fiduciary money. As I will show, an efficient use of fiduciary money proved to be markedly more flexible than most monetary systems still heavily relying upon metal coins. What characterized the gold standard was the attempt to institutionalize the creation of fiduciary money by imposing the convertibility of banknotes and establishing a central bank. Both of these measures represented an attempt to subject the management of fiduciary money to a certain control of the state. In England, where these institutions first emerged, the parliament increasingly attempted to regulate the issue of banknotes of a banking sector increasingly volatile. But in the process, a series of institutional innovations established the ground for central banking and a more active form of monetary policy. These new techniques in managing fiduciary money would become attractive to other Western European countries for different purposes, most notably for addressing the increasing need for liquidity which the dominant metallic circulation could no longer satisfy. Far from a strategy to subject monetary policy to the discipline of the market, the institutions of the gold standard were actually adopted by European states to regulate and discipline banking. In the process, these states expanded the range and flexibility of their monetary policy.

Second, I contend that the gold standard marked the emergence of a modern international monetary system with its own distinctive dynamic. Indeed, the new monetary arrangement created a new form of vulnerability that would come to shape the international monetary preoccupations of the 20th century. The commitment to the convertibility of banknotes into gold, adopted in many continental European states to ensure the credibility of fiduciary money, left central banks vulnerable to transnational capital flows which could exploit such commitments for speculative purposes. Hence, a new institutional framework appeared in the late 19th century with new actors (central banks), new forms of monetary policy (management of the supply of money) and new preoccupations (protection of central banks reserves), which distinguished the classical gold standard from any previous monetary system. In developing tools to deal with the destabilizing effects of capital flows, this institutional framework consolidated the new mediating role of central banks in the management of national monetary systems. Moreover, with the growth in capital flows since the mid 19th century, central banks were increasingly encouraged to turn towards international rules of reserve management to mitigate speculative threats. In the process, Western states established the basis for the international monetary regimes of the twentieth century. Hence, the new domestic monetary flexibility provided by fiduciary money created new vulnerabilities at the international level which would slowly drive states to develop new means to manage and regulate international capital flows. Ultimately, financial cooperation would emerge as a product of the institutions of the gold standard, rather than as its constitutive element.

This article is divided into four sections. The first section surveys the literature on the specific nature of the gold standard. The second section examines the general framework in which the literature has come to problematize monetary systems, and criticizes its overemphasis on international mechanisms of adjustment at the expense of a fuller institutional understanding of this monetary architecture. The third section discusses the emergence of modern banking in England and argues that institutional innovations transformed the nature of monetary policy. It is argued here that the adoption of English financial practices by many other European countries unwittingly set out the basis for the modern international monetary system characterized by the management of monetary aggregates by central banks. In the final section, I argue that the modern international monetary system, with its emphasis on the problem of adjustment between states, was an unintended product of these domestic measures. The gold standard established the basis for the international monetary dynamics which were characteristic of the 20th century.

1- Defining the Classical Gold Standard

The difficulty of scholars to define the classical gold standard, I argue, is largely due to the analytical framework employed to understand it. By looking at the gold standard as an international phenomenon, contemporary approaches have stumbled on what could be called a surface effect produced by their own conceptual tools. That is, the attempt to grasp a complex *institutional* phenomena within a framework that emphasizes international transactions between monetary systems has led historians to focus on the outward appearance of the gold standard. The gold standard has thus been traditionally discussed as a set of norms to solve a transaction problem *between* countries: a mechanism to adjust monetary systems between one another. Furthermore, it has been assumed that the defining feature of the classical gold standard was that it addressed the problem of transaction by promoting market adjustments. But the focus on the market constraints of the system over monetary policy makes it difficult to grasp the novelty of the institutions of the gold standard. Indeed, as I will show, the problem of monetary adjustment only emerged as a consequence of the adoption of the gold standard.

The gold standard is generally characterized by two principles which are deemed responsible for transmitting the pressures of the market onto monetary policy.[2] First, currencies were fixed and fully convertible into gold at a fixed rate. To ensure this, central banks were responsible for purchasing or selling gold at a fixed price. Secondly, the gold standard rested on the free movement of capital. Hence, individuals could export and import gold freely. These formal commitments, it is said, constrained states' monetary policies, because expansionary policies with inflationary risks would trigger a capital outflow. While scholars agree on the centrality of these two principles, the main debates in the field concern their significance in the process of monetary adjustment.

In the classical account of the gold standard, economic adjustments between countries are said to be natural and automatic, that is, without political intervention. In David Hume's price-specie mechanism, a commercial imbalance between countries increases or reduces their respective stock of gold and triggers a series of adjustments which tend to re-establish a monetary equilibrium. The arrival of new gold in a country, for example, increases the money supply in this country and enhances the ability of its inhabitants to buy commodities. This rising demand increases prices, notably in relation to prices in other countries, and thus reduces the competitiveness of this country's exports. At the same time, the growing demand tends to increase the amount of goods that are imported. Hence, this country would see its commercial balance decline, leading gold to flow back out until a monetary equilibrium is re-established.

However, the development of fiduciary forms of money, such as banknotes, creates a wrinkle in Hume's theory. Because the money supply is no longer limited to gold, a certain link is required in order to explain how the flow of gold influenced the rest of the monetary circulation. For the balance of payment to remain the main conveyor of economic adjustments between countries, a tight link between gold and fiduciary money is required. Indeed, the more the stock of fiduciary money is independent from the stock of gold, the less a country's economy is forced into competitive adjustments by pressures from international gold flows. Hence, fiduciary money must expand and contract in proportion to the inflows and outflows of gold. To cover this link, the hypothesis of the "rules of the game" was developed to explain how the gold standard

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[2] By stressing the formal nature of these rules, I wish to highlight the fact that these rules do not inform us of the strategies adopted by economic actors in order to respect them. They are thus formal in the sense that they do not suffice to offer a substantive explanation for the behaviour of monetary authorities. They only represent rules which need to be respected. But how they are dealt with depends on the agents themselves.

operated.[3] Because central banks were the main issuers of banknotes in most European countries, they were considered the crucial link to enforce this mechanism. The rules of the game thus referred to informal rules that central banks were required to respect in order to ensure market-led adjustments. For the gold standard to operate according to market-led adjustments, it was necessary for central banks to reinforce, or at least allow, international flows of gold to have an effect on the supply of money of a country. In periods of gold outflows, for example, central banks had to adopt monetary policies that restricted the supply of money in order to convey market adjustments. The guarantee of convertibility could thus lay the basis for such a connection between the stock of gold and the supply of money by obliging central banks to adjust their issue of banknotes according to their gold reserves. Because they had to protect themselves against the possibility of a mass conversion of their banknotes into gold, central banks would thus adjust the circulation of their banknotes according to the fluctuations of their reserves.

However, historical research on the pre-war gold standard shows that states and central banks had in fact not enforced the dictates of international monetary markets, and generally acted to protect their own reserves (Eichengreen, 1995; Bloomfield 1959). In other words, they were more interested in buffering the effects of international gold flows on their reserves than in transmitting those effects to the national supply of money. The fact that central banks were generally more active in periods of gold outflow than during periods of gold inflow reinforces the view that they were essentially concerned with covering losses of gold in order to protect their reserves (Eichengreen 1995: 36). When their reserves increased, central banks took little measure to counter gold inflows. Furthermore, even in periods of gold outflows, central banks often used extra reserves of gold, or other institutional devices, in order to avoid taking restrictive measures to reduce the supply of money (e.g. raising interest rates) because it hampered their competitiveness (Cassel 1966). This evidence thus suggests that central banks, more often than not, did not follow the rules of the game as described in theory.

But why then would countries adopt principles deemed to favour market adjustments if they had repetitively acted to thwart them? The fact that countries did not systematically follow the rules of the game and instead acted to neutralize the effects of monetary outflows on the supply of money poses problems for the traditional view that the gold standard constituted a liberal regime.[4] In reaction to this problem,

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[3] It should be stressed that this need to reflect on the rules of the game represented an acknowledgement that the formal rules of the gold standard were not in themselves sufficient to derive what were the mechanisms of adjustment. These rules did not necessarily oblige states to adopt liberal policies of money management.

[4] Michael Bordo and Finn Kykland have reformulated the liberal conception of the gold standard to maintain the essence of the traditional conception (1995). These authors recognize the frequent departures from the liberal rules embodied in the gold standard, but argue that the gold standard was designed as a limit to monetary and fiscal policies through a commitment to convertibility by which the state engaged

many historians have moved away from the thesis that the gold standard represented a monetary system governed by market-led adjustments in favour of a more flexible approach. According to this new reading, the gold standard did not require any specific policy, only commitments from countries on the gold standard that their currency would remain convertible into gold at a fixed rate (Bordo and Kykland 1995; Eichengreen 1995). This helps to shift the issue away from the problem of monetary adjustment through the balance of payment in order to focus more specifically on the monetary imperative for central banks to protect their gold reserves.

Barry Eichengreen provides an influential version of this fallback position to account for the liberal nature of the gold standard and its ability to display a strong stability (1995). He emphasizes two different factors that account for the dynamic and the stability of the gold standard. First, that the isolation of central banks from political pressures imbued them with a strong credibility that they would adopt the necessary measures to counter gold outflows and protect the value of their currency. This credibility meant that there was less reaction on the part of capital to trade or monetary imbalances. Not only did this credibility reassure investors, but it also convinced them to invest precisely in the countries that suffered from capital outflows on the expectation that the value of financial assets in such countries would rally after being temporarily depreciated. For Eichengreen, "markets anticipated the actions of the central bankers, basing their anticipations on the policy makers' track records. Their anticipations and consequent actions rendered official intervention largely redundant" (1997: 204). The classical gold standard would thus have been continuously driven back towards equilibrium by speculative capital, pushing back exchange rates to their official rate of conversion. Second, Eichengreen argues that cooperation between central banks limited divergences in their policies which could have created dysfunctional pressures on the system. In normal times, the implicit leadership of the Bank of England reinforced common expectations. In times of crisis, explicit cooperation, notably through loans made among central banks, managed to limit the pressure on the system and rapidly quell any critical situation.

Eichengreen's explanation constitutes an innovative alternative to the traditional conception of the gold standard. There is still an emphasis on the restrictive nature of the gold standard for monetary policy and on the fact that capital flows had a stabilizing effect. However, in contrast to explanations based on the rules of the game, which are tied to the impact of capital flows on economic growth, Eichengreen limits his central argument to a financial one. The dynamic of monetary adjustment is thus simplified by his claim that central banks did not need to conform to a method of adjustment so long as they maintained their credibility. Their liberal commitments

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itself to exchange a specific metal against any other form of currency. This ensured stability by setting strict rules of the game for market actors. For Bordo and Kykland, the gold standard represented a self-imposed limit on the state in order to free up markets and restrict arbitrary interventions. This commitment led generally to greater stability and it was precisely the move away from this commitment that explains the instability of the interwar period.

were sufficient to limit the destabilizing forces in the system. Hence, the gold standard appears stable because, ironically, it required few adjustments. As long as speculative flows would drive back exchange rates towards the official rate of convertibility, the gold standard remained stable.

However, Eichengreen's conception raises two problems. First, it is doubtful that the notion of a liberal commitment to convertibility at a fixed rate can bear the weight of explanation for the stability of the gold standard. For Eichengreen, capital flows have a stabilizing or destabilizing force depending on the liberal credentials of a monetary regime. Liberal credentials lead capital to move in the direction warranted by necessary adjustments. Their absence produces the opposite when capital fears that the commitments of central banks will not be honoured. But the emphasis on the expectations of investors leads Eichengreen to ignore the broader institutional context in which these capital flows are embedded. Considering that capital flows increased dramatically during the period of the gold standard, what must be demonstrated is not really that the institutions of the gold standard limited "unwarranted" capital flows which would have undermined them, but why the significant increase in capital flows did not destabilize the institutions which underpinned national monetary systems.[5]

More specifically, it is debatable whether these commitments truly served as a regulating force of capital flows in a way that can account for the stability of the gold standard in comparison to subsequent monetary regimes. Obviously, there is a sense that a central bank on the verge of abandoning convertibility incites capital to flow out. But these commitments were hardly the strong foundations that Eichengreen portrays them to be. While he is correct to point out that democratization transformed the way in which political pressures were exerted on central banks, 19th century central banking was far from immune to political pressure. Throughout the 19th century, the privileges accorded to central banks, notably the monopoly of banknote issue, were usually tied to clearly defined social expectations. States, generally very close to these banks, expected low interest rates in order to alleviate interest payments on their debt. Furthermore, most states openly pursued strategies of industrialiation and expected central banks to provide credit and liquidities to reinforce agrarian, mercantile and industrial activity (Prate, 1987). Conscious of these expectations, central banks often used interest rates with great precaution (Bopp, 1952; McGouldrick, 1984). Hence, despite the existence of formal commitments to maintain fixed rates of convertibility,

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[5] The same kind of circular logic can be found in Frieden's work. For Frieden, the integration of different economic systems becomes attractive and tends to reinforce a feedback effect by attracting more and more members. In part this is because " […] the existence of a stable system leads these members to trade, invest, and borrow more. As this happens the countries become more integrated and less vulnerable to unique shocks." (1997: 210). However, it is difficult to fathom why the increase of capital flows would have a stabilizing influence, when it could also have the opposite effect, as it is often argued in relation to the current period. What is missing from this picture is again the mediating role of institutions. More fundamentally, this raises the more important problem of why increasing capital flows did not create a greater need for monetary adjustment.

central banks were often obliged to adopt informal measures to restrict convertibility. The Bank of France, for example, exploited bimetallic provisions in order to redeem banknotes in either gold or silver, depending on the value of each metal. By sometimes converting banknotes into the metal with a depreciated value, the Bank managed to partly deter speculators (Flandreau, 1996). Similarly, many central banks harboured close connections with merchant banks, and offered them privileges that were contingent upon merchant bankers not threatening central banks with their activities (Flandreau, 1996; Jonung, 1984). In sum, as I argue in section 4, the political and institutional obstacles established to counter speculative flows of capital around exchange rate were much more significant than the liberal credibility of these banks. Such measures reduced the possibility to exploit in a speculative way the commitments for convertibility instituted within the gold standard.

Second, Eichengreen's argument makes it difficult to specify, from an historical perspective, the distinguishing features of the gold standard. It is striking that Eichengreen, as most authors, contrasts the classical gold standard with monetary regimes that followed it. This unfortunately offers a poor angle to contextualize the classical gold standard on its own terms. Indeed, the shortcomings of previous explanations, I argue, can be partially attributed to the fact that the gold standard appears restrictive only from the point of view of what followed after it. The traditional assessment of the gold standard is thus somewhat anachronistic because it is tinged by the experience of the gold standard during the Interwar period and by Keynes' critiques. Eichengreen, for example, argues that the lack of demand for social and expansionary policies was a stabilizing feature of the gold standard. But to characterize the gold standard in this way neglects the fact that, at that time, monetary policy had never been conducted with this expansionary aim. The kind of expansionist policies that are deemed incompatible with the gold standard had never existed before the gold standard.[6] I will argue later that the gold standard, in this respect, represents more of a turn towards the possibility of enacting such social policies, rather than a move away from them. Hence, the bias that besets conceptions of the gold standard is a product of our inclination to characterize it in relation to subsequent monetary systems such as Bretton Woods. From this perspective, the gold standard appears restrictive in large part because of its lack of institutional maturity.[7] But if we invert the perspective in order to assess the gold standard in relation to monetary systems which preceded it, this perspective will yield exactly the opposite view: the gold standard then appears as

[6] Banknotes have often been overissued, but these episodes were related to attempts by modern states to face the costs of warfare and had little to do with the expansionary monetary policies associated to the Welfare State. If banknotes could serve as a subsidiary means to cover budgetary needs, there was no clear expansionist policy tied to a conception of the regulation of the economy.

[7] It is interesting to note the rapid increase of public debt during the gold standard, which squares poorly with the argument concerning the probity of countries under the gold standard. As Flandreau and Le Cacheux show, there was a substantial expansion in public debts from the beginning of the 1870s onwards which resulted in a debt/GNP ratio that often exceeded 80%, reaching up to 120% in the case of Italy and France, and 160% in the case of Greece (1997: 532).

a flexible monetary system marked by a cluster of important institutional innovations which provided more possibilities for states to influence and regulate the economy. A direct manifestation of this flexibility can be seen in the fact that the supply of money of most European countries radically increased during the second half of the 19th century, a conclusion which seems to contradict the emphasis on the liberal discipline of the gold standard.

Although the ability to limit inflation was undoubtedly a feature of the gold standard, in many ways the institutions of the gold standard were more significant for what they allowed states to do, rather than for the constraints they posed on monetary policies. These institutions represented a solid basis to allow states to expand their money supply. Before this period, most countries had been unable to expand their banknotes in a meaningful way without avoiding a major monetary crisis. Britain represented the main exception to this pattern. It is thus unsurprising that the Bank of England and the English banking system were an object of envy for continental observers. Their ability to issue money and finance the state while maintaining a surprising financial stability starkly contrasted the monetary experience of the rest of Europe.

2- The English Origins of the Modern International Monetary System

To understand the nature of the gold standard, it is necessary to set it into context and explore how this monetary regime marked a departure from what can be labelled premodern monetary systems. I argue here that the gold standard, institutionalized first in England, offered new monetary and financial possibilities that were unknown to previous monetary systems. It emerged from the attempt to coordinate the use of fiduciary money and its effect on the supply of money. Unwittingly, this new institutional framework set out the basis of a modern international monetary system when certain English financial practices, such as fiduciary money and central banking, were adopted in various ways by other European countries. Hence, the gold standard initially represented a means to establish rules in order to solve domestic monetary problems, not to manage transactions between countries. But, the problem of adjustment would emerge as an unintended effect of this solution. Hence, a new monetary system would emerge with the classical gold standard which eventually produced the distinctive monetary issues which preoccupied central banks in the 20th century.

2.1 Premodern Monetary Systems in Continental Europe

Premodern monetary systems emerged in the late medieval period and remained characteristic of Continental Europe until the mid, even late, 19th century. While they varied in form, there were certain features that were common to all of them. Metallic coins constituted the central component of premodern monetary circulation. This metallic basis provided little elasticity to the supply of money since the increase of the stock of money required the addition of new gold or new silver. This meant that without mines to produce these metals directly, most European states were constrained to attract precious metal from outside in order to increase their supply of money (de Roover, 1949). This inelasticity of the money supply was a central preoccupation of the period and explains in large part the mercantilist emphasis on the stock of precious metal (Wordie, 1997). The monetization of social exchanges had accelerated at a rapid pace and demands for an increase in means of payment were frequently heard, especially outside of the main trading centres. Indeed, metallic coins circulated mostly within restricted mercantile networks across Europe and rarely trickled down to the provinces which were often obliged to use token money (Thuillier, 1983).

During this period, monetary policy was primarily motivated by seigneurage that political rulers could reap in the form of commissions imposed on the minting of new coins. To gain agency in monetary matters, states needed to play on the ratio between gold and silver, tinker with monetary standards, and exploit differences between different coins. By manipulating the value of certain coins in relation to others, premodern mints managed to attract coins for minting. For example, the appreciation of the value of gold in relation to silver attracted gold coins from other countries where gold could be obtained at lower prices. Foreign merchants and bankers would thus bring gold coins to the mint in order to convert them into silver coins at advantageous rates for them. Premodern monetary strategies thus relied heavily on policies of exchange to pursue monetary objectives. By vying to attract foreign coins, policies of seigneurage also had a direct impact on the increase or decline of the money supply. For this reason, *the problem of liquidity within a country could not be disentangled from the practices around currency exchange.* In other words, the centrality of policies around currency exchange made it difficult to distinguish between the domestic and foreign effects of monetary instruments. In changing mint ratios, monetary authorities would affect both the flows of capital and the supply of money in a region. There was no clear differentiation between the two.

The tendency towards debasement, which characterized most monetary systems before the 19th century, was a direct product of the limitations of this monetary system. In order to attract coins to the mint, monetary authorities often needed to reward coin bearers with an advantageous exchange ratio. Being itself interested in profit, the mint was obliged to debase coins by creating more coins out of the precious metal contained in the initial coins brought to the mint (Davies, 1994). Profitable minting thus depended on a reduction of the real value of a coin (i.e. extracting a portion of the metal contained in a coin) in relation to its nominal value (Spufford, 1988). Creating more money with less metal became a central motif for premodern mints. The surplus of coins which resulted from this technique could thus serve to pay both the holders of coins and provide a revenue for the Crown. This partly explains why premodern economies, with the important exception of England, consistently opted for debasement. Debasement also had the advantage of increasing the money supply without having to produce more precious metal. Hence, debasement quickly became the central tool of monetary policy.

This institutional framework had important implications for the state of coinage. Policies around currency exchange required the establishment of multiple ratios, and the more ratios were created, the more precise a monetary policy could be. Not only was the manipulation of ratios among currencies crucial to attract foreign coins, but it also assisted in targeting or protecting certain social groups. The debasement of lower quality coins used by poorer social classes, for example, could allow a state to face financial obligations without affecting landlords, or merchants (Cipolla, 1967). The direct result of this form of monetary agency was the great variety of monetary standards and coins in Europe. The attempt to attract foreign coins only reinforced this unstable and chaotic situation, especially in 19th century continental Europe (Holtfrerich, 1989; Thuillier, 1983). With states adopting an increasingly active role in monetary matters during the 19th century, the monetary situation became increasingly untenable and calls for monetary unions were widespread (Perlman, 1993; Hefeker, 1995).

Because the change in monetary ratios tended to be detrimental to large portions of the population, this institutional framework made it nearly impossible to conceive of a "public" monetary policy. For one, it was difficult to delineate a clearly definable policy object. The medley of coins in circulation implied that state officials had little sense of a domestic aggregate of money. Without a homogenous national currency to tie the development of a national economy to a distinctive currency, it was difficult to realize that an active monetary policy could be pursued with a broader economic strategy in mind.[8] This created very little margin for states to manage or regulate a monetary aggregate. All attempts to vary the money supply ultimately depended on the limitations posed by capital flows, and thus on the decisions of other monetary authorities also vying for bullion.

The other side of this limitation was the absence of a clear understanding that exchange rates could serve as a means of adjustment in order to manage unequal development between economies. As long as monetary policy was pursued with the competitive intent of increasing the stock of bullion, there could be no consideration for a policy of adjustment geared towards influencing real economic growth. The difficulty of differentiating the direct interest of states, in terms of pecuniary benefits, from their monetary policies was thus partly an effect of the institutional framework in which monetary policies were implemented. Without the proper institutions to manage a monetary aggregate, monetary policy was shaped mostly by considerations over seigneurage. For this reason, premodern monetary policies often strike us as particularly arbitrary and self-interested. The one country where this pattern differed was England (Braudel, 1984: 356).

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[8] It should be noted that states at the time possessed little concrete information on the state of coinage to conceive of a national monetary situation on which they could act. All they could muster was the information drawn from the mint such as the quantity that were minted or the kind of coins circulating and their quality.

2.2 The English Gold Standard

We often forget that the gold standard first came into existence as a national monetary structure before it became the basis of an international system. This is significant because there was something new in the English gold standard that no other country had managed to accomplish. By contrast to premodern monetary systems mired in inefficient strategies revolving around exchange rates, England increased its stock of money without difficulty *while still maintaining with relative ease the value of the sterling pound until 1914*.

Angela Redish has made an influential argument linking monetary stability in England to the gold standard that she presents as an attempt to create fiduciary money (Redish 1990). According to Redish, the English gold standard demonetized silver in order to allow the use of silver as a token money. This form of money allowed bankers to satisfy more easily the needs for small transactions and thus to expand the supply of money while consolidating the monetary circulation by recognizing gold as the only metal with an official monetary value. By eliminating speculation between gold and silver which was endemic in bimetallism, the gold standard would thus have ensured monetary stability. From a factual standpoint, this argument is somewhat true, but in my view Redish reduces the significance of the adoption of the gold standard. More than an attempt to move to a monometallic standard, the gold standard involved a deeper institutional transformation related to the issue of banknotes. As I will argue, this was central in the adoption of the institutions of the gold standard outside of England. Moreover, it seems doubtful that the adoption of a monometallic standard was the actual motivation behind the adoption of the gold standard, or that there was a powerful intent of creating token money by demonetizing silver. Redish herself notes that there was surprisingly little explicit discussion on these issues for a decision of this magnitude. As I will argue, the dominance of gold was more an unintended effect of banking developments in the 18th century which was only officially ratified in the early 19th century. The objective was not monometallism in itself but the use of convertibility as a means to discipline banking activities traditionally based on gold. Similarly, if the purpose of the gold standard concerned small coin convenience, the lack of discussion at the time would have been surprising considering that the official adoption of gold as the sole monetary standard in 1816 occurred in the midst of one the most prolific monetary debates in history (Deleplace, 1994). The use of silver as tokens seems to have been more an attempt to calm the fears of dissenters who raised the deflationary risk in disciplining banknote issue. In the end the main concern revolved around banknote issue and it was the attempt to discipline it which would provide new monetary tools to the state.

Why was there a distinctive attempt to discipline banking in England in the 19th century? This stems from the emergence of modern banking in England and its increasing influence on the economy. Modern banking represented a set of banking practices of a fundamentally different nature than the traditional form of banking prevailing outside of Britain. Modern banking emerged with the development of a new framework for the use of fiduciary money[9] when two kinds of banking practices, deposit and issue banking, were combined. The first refers to a set of practices of deposit and lending that are traditionally associated with banks, while the second refers to the issue of paper assets, such as bills of exchange, which served as means of payment. Various combinations of these practices had been repetitively prohibited because of the instability associated with the use of note issue as a means to make credit (Bizaguet, 1974).[10] When banks can issue banknotes to make loans, there can be strong incentives for banks to over-issue banknotes without any secure basis by which to guarantee their circulation. Indeed, even when banks heeded demands for converting banknotes back into gold or silver, they were vulnerable to fluctuations in demands for conversion. Pushed by the imperative of competition and lured by the prospect of profits, banks tended to adjust their activities according to the basic requirements of their normal operations. But the relatively small demands for banknote conversions in normal times, increased radically during times of economic difficulty, leaving banks extremely vulnerable. For this reason, the attempt to combine both practices frequently led to financial crises in premodern societies and were often condemned and forbidden.

In the mid 17th century, English goldsmiths devised a solution to partially curb this danger by using discounting as a means for issuing notes (Bisschop, 2001). Discounting is an operation by which one agent offers liquidities to a client for a financial asset that has not yet come to maturity. In return for this service, the discounter obtains the financial asset at a discounted price. In England, this practice took a distinctive form since goldsmiths, instead of providing coins as liquidities for discounted financial assets (generally bills of exchange), issued banknotes which could be later converted into gold or silver. This allowed them to create money by issuing banknotes on the promise of their future convertibility, once the bill of exchange had come to maturity.

This method of issuing banknotes had two important consequences for the development of modern banking. First, it provided a secure footing for the development of issue banking by partially neutralizing the risk of people converting banknotes into gold *en masse*. Indeed, bankers greatly reduced the risk of bankruptcy

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[9] Modern banking can be described as a new set of banking practices that were tied to the debt form of money which came to replace the commodity form typical to medieval and early modern forms of money. Whereas the commodity form of money based its credibility on a commodity which was said to embody the value it represented (e.g. gold or silver), the debt form rested on a promise for a future transaction (redeem a banknote in gold, etc.) This new form of money provided important new possibilities for banking which were exploited in England and gave rise to original institutional arrangements.

[10] It should be said that deposit banks often issued receipts to their clients in proportion of their deposits, but generally these certificates served as substitutes for coins rather than *bona fide* forms of new money. There was no creation of new money since each certificate was directly backed by bank deposits. Although some banks attempted to issue on a fractional basis, that is by covering only a portion of the certificate issued, these ventures often resulted in crises and prompted rulers to prohibit this practice. As late as the mid 18th century, the often vaunted Bank of Amsterdam could pride itself on the fact that it did not offer any credit. This was still considered a distinctive feature of banking soundness in note issue (Van der Wee, 1977).

by redeeming banknotes only once the bills of exchange, for which they were issued, came to maturity (usually within a period of three months). This delay allowed goldsmiths to cash bills of exchange in their reserve in order to acquire the gold coins necessary to redeem their own banknotes in circulation. In this way, goldsmiths had only to ensure that they accepted bills of exchange from sources they could trust. In return, their clients received banknotes that were more liquid than bills of exchange because of the positive reputation of goldsmiths and the practical features of banknotes such as their standardized denominations (Quinn, 1994).

Second, this mechanism reduced the inflationary tendencies associated with the issue of paper money. The danger in issuing fiduciary money is that no limit clearly indicates how much money is required for circulation. Hence, there is always a risk of over-issuing money and encouraging inflation. Yet, the method developed by goldsmiths provided an efficient means to extend the supply of money since all issues of banknotes, being issued against a bill of exchange, were associated to a real transaction occurring in the economy. Hence, the amount of banknotes in circulation varied broadly with the importance of economic activity. The success of this method was clearly reflected in the fact that banknotes came to represent over 60% of the monetary circulation in the early 19th century (Marchal and Picquet-Marchal, 1977: 84).[11] In contrast, the stock of money in France or Germany was composed almost uniquely of metal coinage until well into the 19th century (Day, 1994; Barkai, 1989).

This solution to the issue of banknotes offered a stable strategy for individual banks, but its success would create new economic problems on a different scale. Towards the late 18th century, the rising credibility of banknotes led to an extension in their use. The activities of bankers thus became increasingly important to the overall condition of the economy (Hoppit, 1986). This created incentives for bankers to issue banknotes on a less restrictive basis. Because banknotes remained in circulation for longer periods of time, bankers could afford to reinvest the money received from their discounted bills of exchange instead of keeping it in reserve. Growing in confidence, bankers also developed parallel means to issue banknotes, notably direct advances to industrialists, which only reinforced inflationary tendencies. This made it increasingly difficult both to gauge the reserves necessary to face sudden demands for conversion, due to the growing circulation of banknotes, and to contain the supply of money.

With the beginning of a protracted war against France, England was constrained to suspend convertibility. It is during the period of this suspension, which lasted between 1797 and 1821, that the new inflationary pressures became particularly manifest. Starting in the early 1800s, the growing premium of gold over banknotes raised concerns in political circles. As the situation deteriorated, intense monetary debates contributed to politicize the issue of the management of the money supply throughout the first half of the 19th century (de Boyer, 1992). In 1810, the Bullion committee, set

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[11] It should be noted that before the mid 19th century, the monetary aggregate known as M1 (especially coins and banknotes) constituted the greatest portion of the supply of money since deposits were only starting to become important.

up by Parliament to clarify these matters, emphasized the necessity to return to convertibility in order to contain inflation (Horsefield, 1953). However, the context of the war with France delayed any concrete action on the part of the state.

After the fall of Napoleon in 1815, the English Parliament gradually implemented a series of measures which established and solidified the institutional framework of the gold standard. In 1816, it adopted gold as the official standard and posed rules of convertibility to limit inflationary issues of banknotes. But subsequent crises in 1825 and 1836-39 demonstrated that convertibility was not in itself a sufficient constraint. The opposition to banknotes in parliament intensified and encouraged numerous revisions to the monetary framework with the aim of institutionalizing the issue of banknotes. This move to regulate the issuing of banknotes culminated in 1844 with the Peel's Bank Act. The Act consolidated the gradual monopolization of banknote issue under the Bank of England. But since the Bank was still a private institution, the Act also imposed tight constraints on the Bank's issuing policy. The Bank was notably obliged to maintain reserves in gold equal to the amount of banknotes put in circulation, in order to contain inflationary tendencies. Such a measure reflected the growing awareness that control over the money supply was a matter of public interest which required state control. It could not be left to the arbitrary power of the Bank.

The new legal framework changed banking structures in important ways. It incited banks to abandon the issue of banknotes and find new means to provide liquidity. Their solution was to turn towards deposit transfers, notably by popularizing the use of cheques (Marchal and Picquet-Marchal, 1977). Deposits thus progressively became the new dominant form of money as it became the main portion of the supply of money. The systematic use of deposits as a means of payment established a powerful money multiplier which radically increased the flexibility of the system.[12] Banks thus became central to the process of money creation.

Ironically, this new banking structure provided the Bank of England with a growing leverage to influence the money supply, despite constraints placed upon it (Whale, 1953). Indeed, a small variation by the central bank in the monetary basis could have far reaching effects because of the multiplying effects of the banking structure. However, this leverage was not directly exploited by the Bank of England, partly because of its tight restrictions imposed by parliament to limit the power of this private institution and the fact that, being privately owned, the Bank continued to give priority to its shareholders (Lévy-Leboyer, 1982). Yet, while there is considerable evidence that the Bank was not an *active* stabilizing force, we tend to neglect how this new monetary structure institutionalized banking. The Bank of England became the first central bank because the institutionalization of monetary networks surrounding it

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[12] This monetary multiplier stems from the fact that each deposit is used simultaneously in two different ways. It serves to make loans to someone who uses the deposit as a means of payment outside the bank, but still serves at the same time as money for the depositor who can make payments through various means of deposit transfers (cheques, credit cards, etc.). Hence, every time money is deposited in a bank, it virtually creates its equivalent in new money, less a portion that is not lent and which is left aside as a reserve of liquidity for the bank.

transformed it into a regulator of monetary circulation, without the Bank having to take an active role. In protecting and stabilizing its reserves, the Bank fulfilled a vital role in the regulation of the system by disciplining the monetary basis. This role marked the decisive shift which had occurred in the locus and nature of monetary agency in the 19th century.

After a long transition, the Bank of England was replacing the mint- so central to premodern monetary systems- as the main regulatory institutions in monetary matters. Because the Bank used interests rates and various open market operations, such as gold devices, to exert a monetary agency, it no longer depended on the manipulation of exchange rates as the mint did. This new monetary authority could thus continue to exert an agency in monetary matters while keeping fixed exchange rates, which was previously impossible. This partly explains why the gold standard stands out for its stable exchange rates. Moreover, this central position situated the Bank of England as a fulcrum between two circulations. By partially dissociating an internal circulation based on fiduciary money, from transnational flows of capital based on gold, this new institutional framework allowed to differentiate the issue of liquidity from the problem of adjustment in ways which would later enable the Keynesian revolution. It is not coincidental that the Keynesian revolution occurred precisely in the country most closely associated with the gold standard. This reflected the growing flexibility and complexity of England's new monetary framework which Keynes tried to exploit in a more dynamic way.

2.3 The Diffusion of Modern Financial Practices

England developed the institutions associated with the gold standard, but how did the gold standard become international in scope? A reconfiguration of the European monetary map occurred in the 1870s with the widespread adoption of gold as the standard of value. However, as Eichengreen and Flandreau suggest, the institutions based on the convertibility of paper money were probably more significant in explaining the distinctive dynamic of the gold standard than the adoption of gold, silver, or both as monetary standards (Eichengreen and Flandreau, 1996). Indeed, the classical gold standard reflected a deeper institutional transformation which had already changed the parameters that shaped the strategic considerations of monetary authorities. It is therefore important not to conflate the decisions made over the kind of standard adopted (gold, silver or bimetallism) with the new institutional form that characterized that standard. From this standpoint, it is arguable that the nature of the international monetary system in the late 19th century was shaped foremost by the widespread adoption of certain British banking practices throughout Europe. Since the late 18th century, Continental European countries widely admired English financial institutions, and many of them, including France and Germany, sent observers to study British credit institutions. Joint stock banks and the Bank of England eventually became blueprints used to tailor new forms of financial practices as central banks and joint stock banks were created throughout Europe.

The reasons for this diffusion are complex, partly because the motivations behind the adoption of English financial practices were themselves numerous and diverse. Various social forces borrowed elements from English banking in Continental Europe and their purposes often conflicted with one another. But for the purpose of this article, it is sufficient to stress that the old premodern monetary structure was becoming increasingly constraining and destabilizing in the 19th century. One of the important impediments produced by premodern monetary policies concerned the attempt by most Western European states during the 19th century to transform their fiscal system. Indeed, the revenues which seigneurage could yield were overshadowed by the rapidly growing fiscal needs of states. Moreover, debasement, by which seigneurage was previously conducted, affected taxation by undermining the value of coins, in which taxes were paid. Hence, the payment of taxes in coins of poor quality became a central concern for European states. By contrast, issuing banknotes allowed states to face short-term shortages of revenue without directly affecting the economy or taxation. The increase of fiduciary money did not necessarily decrease the value of money, so long as there was a corresponding demand. Monetary flexibility was thus particularly important, considering the rapidly growing demand for money.

The limitations of premodern monetary systems also created a second problem which manifested itself indirectly. The absolute limit set by the quantity of bullion in circulation posed problems for satisfying the rapidly growing need for money in 19th century economies. A monetary circulation resting on metallic coins involved a zero sum game that could quickly deteriorate into a mutually destructive pattern: what a country would attract in bullion, another would lose. In addition, the old networks of monetary circulation increasingly failed to satisfy the dramatically changing needs for money in the 19th century. The chief concern was the lack of liquidities in provinces where the monetization of social relations made the supply of money largely insufficient. The traditional mercantile networks, with their focus on the trading centres, were poorly equipped to circulate money on a broader scope. If anything, they tended to drain money towards them, rather than irrigate provinces. Domestic groups thus exerted growing pressure on the state for better sources of liquidities and to stop adverse monetary manipulations.

The agricultural sector, still by far the dominant economic sector, suffered directly from the lack of monetary elasticity. Indeed, its monetary needs fluctuated greatly depending on the season and this put undue stress on the monetary stock, which was relatively unflexible (Leclercq, 1999). The harvest season, for example, required large amounts of means of payment and put undue stress on the credit market. The emerging industrial sector also required substantial liquidities to sustain its great need for working capital (i.e. payments of wages and raw materials). The attraction of bullion from other countries through trade and seigneurage clearly proved inadequate to satisfy the need for liquidities, which was growing at an exponential pace. Provincial and industrial actors were thus compelled to turn increasingly towards token money, notably copper coins, to compensate for the lack of legal tender (Thuillier, 1959). But in doing so, they reinforced the fiscal difficulties of states.

Interested in the prospect of exploiting these needs, many entrepreneurs and bankers attempted to circumvent the limitations established by states and thus increased the pressure by creating *de facto* credit institutions. There was also a growing interest in channelling the substantial savings hoarded by the middle classes and small entrepreneurs who had little access to banking facilities (Gueslin, 1991). Banking projects thus multiplied, often on a quasi-informal basis, obliging governments to position themselves in relation to this development. Threatened by the prospect of losing control over financial networks, many states decided to recognize certain institutional developments, but under their own terms in order to supervise and benefit from them (Brophy, 1992). They thus favoured the highly institutional model of fiduciary money adopted in England over more diffuse forms that existed in Scotland and the United States.

Beginning with the Bank of France in 1800, a series of countries created public banks in the 19th century: Finland (1811), Holland (1814), Norway (1817), Denmark (1818), Belgium (1850), Germany (1876), Austria-Hungary (1877) and Italy (1893). These banks progressively acquired a central position in their economy as measures were taken to regulate and institutionalize the issue of banknotes.[13] While it is true that with the gold standard, these banks accepted convertibility at a fixed exchange rate, this did not represent an attempt to subject the management of the supply of money to the market. For many countries, adopting convertibility was a means to gain the credibility necessary to issue banknotes. Following the dramatic inflation of the period of the *assignats* during the French revolution, the Bank of France in 1800 emphasized convertibility in order to distance itself from the tragic fate of previous forms of paper money in France and lend credibility to its banknotes (Prate, 1987; Plessis, 1989). Similarly, after a long period of suspicion towards paper money in German principalities, the Reichsbank was ultimately created in 1875 emulating in many ways the Bank of England, particularly its emphasis on convertibility, in order to offer a solid basis for the issue of banknotes (McGouldrick, 1984). For both of these countries, the guarantee to repay gold on demand at a fixed rate for banknotes strongly reinforced the credibility of banknotes. But if the gold standard had restrictive rules necessary to confer a minimal soundness to money, this does not mean that the *raison d'être* of these rules lay foremost in the constraints they instituted. Rather than a means to tie the hands of political authorities, these constraints had more to do with ensuring that the use of fiduciary forms of money would be conducted in an orderly way *under the supervision of the state*. In shifting the strategies of economic actors, the gold standard profoundly influenced the future development of monetary systems. As convertibility

[13] The originality of these central banks, in comparison to most traditional public banks, lies in the systematic use of fiduciary money, particularly banknotes, and their position at the heart of a banking infrastructure through their operations of rediscounting.

reassured holders of banknotes that the value of their money would not depreciate, it led many of them to shift their preoccupations and monetary strategy towards other considerations.

This development was accompanied by a similar process in the private banking sector. From the mid 19th century onwards, commandite banks[14] and joint stock banks began to emerge in continental Europe, such as the *Société générale* in Belgium in 1824, the *Société du Crédit Mobilier* in France in 1852, and the *Disconto Gesellschaft* in 1856 in Germany. Such banks would ultimately lead to the emergence of modern banking on the continent (Bouvier, 1970). These developments resulted in the growth of a fiduciary structure more flexible than any previous banking structure. More generally, the adoption of English financial practices enabled these states to expand their supply of money independently from the manipulation of exchange rates. This was manifested in the important increase in the stock of money in the second half of the 19th century.[15] Although most countries did not initially base their monetary system on gold, and adopted silver instead, the adoption of English monetary institutions profoundly changed the parameters of monetary policy. The distinctive features of the gold standard were already appearing in the 1850s and 1860s before the generalized adoption of gold as the standard during the 1870s.

3. The Emergence of Modern International Monetary Regimes

In the previous section, I discussed the emergence of a modern international monetary system in Europe. But did the classical gold standard institutionalize a collective agency? Was there cooperation among the different countries on the gold standard? Some recent contributions raise doubts about the prevailing view that cooperation was an integral feature of the gold standard (Gallarotti, 1995; Flandreau, 1997). For both Gallarotti and Flandreau, the gold standard did not institute a collective agency in the form of cooperation among central banks. This thesis, they argue, rests upon scattered evidence which cover too broad a period in order to be very meaningful. Cooperation was more piecemeal and instrumental than regulative. Still, the gold standard marks a turning point in this regard because the institutional changes that occurred in the 19th century led to a convergence of expectations in monetary matters. Therein lies the novelty of the gold standard for international relations: the unintended effects of domestic monetary developments created new problems which

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[14]. The commandite system rested on a silent partnership which protected investors who did not play any active part in the decisions of the bank, by contrast to shareholders in joint stock banks. This allowed to preserve a clear locus of responsibility while setting a method to channels resources for more important investments. Commandite banks represented a means for financiers to circumvent the restrictions imposed by European states on joint stock banking. These restrictions were then justified on the basis that the limitation on responsibility in joint stock banks increased financial risks

[15] It should be emphasized again that despite some similar results, British banking practices were adopted in markedly different ways across Europe, depending on the objectives pursued by the social actors behind their adoption.

increasingly called for collective solutions. Indeed, the new institutions associated with the gold standard, which provided more flexibility and more possibilities in terms of monetary policy, were also responsible for shaping new forms of financial instability.

One of the important features of the 20th century is the distinctively international form of monetary crises which were often expressed through exchange rates. In premodern monetary systems, the manipulation of exchange rates incited movements of capital, but the monetary problems lay foremost in the quantity of money available and the way the mint ratio could influence the movement of money in order to attract coins and bullion. With the development of fiduciary money, the problem of the quantity of money, typical to premodern economies, subsided while a new problem surfaced. Fiduciary money had no value in itself, and thus it was essential to find institutional means to ensure its credibility. The gold standard did this by guaranteeing a fixed conversion rate into gold. Whereas the premodern concern for the monetary stock drove monetary authorities into competitive debasements of currencies,[16] the modern problem of upholding the value of fiduciary money drove monetary authorities to stabilize their currencies.

However, the ability to maintain the value of banknotes evolved because the institutions of the gold standard transformed the nature of monetary circulation. Indeed, not only did the gold standard peg fiduciary money and gold, it also transformed the role played by gold in monetary circulation. With the development of fiduciary forms of money, gold became increasingly a stock of value, guaranteeing banknotes in circulation, and progressively losing its role as a means of payment. As central banks acquired a monopoly over the issue of banknotes, they gradually concentrated in their reserves the greater part of the gold used for monetary purposes. However, gold kept its role as a means of payment in international transactions. By pegging national currencies to gold, states on the gold standard had established an implicit exchange ratio between them. Transactions between countries often involved gold as the mediating link between currencies. However, this monetary arrangement, in which gold mediated the national and international circulation, created new problems for the credibility of a currency. Indeed, the ability of guaranteeing the value of a national currency through a fixed rate of convertibility became increasingly tied to international transactions. An outflow of gold could deplete the reserve of a central bank and thus undermine the basis of a national monetary stock.[17] For this reason, the exchange rate increasingly became the main concern for monetary authorities.

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[16] Again England represents an exception. The value of English coinage remained stable for surprising stretches of time dating back to the late middle ages. See Munro (1992).

[17] This risk was absent in premodern monetary system where the outflow of money could have adverse social effects, but did not threatened the legitimacy of any currency because gold did not stand as a guarantee for the circulation of other monetary effects.

Many central banks developed strategies to sterilize capital flows in order to limit the pressure of capital flows on their reserves. Avoiding the "rules of the game" was thus an integral part of the gold standard because it often represented a necessary means for a central bank to secure its reserves.[18] These neutralization strategies took on different forms depending on a country's monetary history. The Bank of England regularly purchased gold on the market to replenish its reserves, sometimes turning towards foreign central banks to borrow gold. Most continental European banks also opted for measures of sterilization to protect themselves and to limit their need to use their bank rate. They actively discouraged people from converting monetary assets into gold (McGouldrick, 1984; Jonung, 1984). Since merchant bankers often depended on privileged relations with central banks to pursue their speculative activities, it was difficult for them to adopt courses of action which antagonized central banks (Flandreau, 1996). Tacit agreements between these bankers and central banks explain in part why in Sweden, for example, the rate of exchange could sometimes remain for a significant period of time at a level that should have prompted merchants to export gold, without any significant harm to the reserves of the central bank (Jonung, 1984). A different kind of measure was France's use of its bimetallic monetary structure to discourage speculation. Although the Bank of France pegged the franc to gold, it was never formally required to convert its banknotes into gold, and could choose the metal (silver or gold) by which to redeem its notes (Flandreau 1996). This placed the Bank of France in a favourable position since it could remit the metal that was being devalued on the market and deter banknote holders from redeeming them because they could not choose the metal. Because of all of these institutional obstructions and enticements, speculators had limited opportunity to exploit convertibility commitments during the classical gold standard, especially those made by dominant central banks.

These *ad hoc* measures are emblematic of the fact that central banks did not enjoy a sufficient credibility to stave off destabilizing speculative runs. Despite their commitments, banks were sometimes incapable of maintaining convertibility because the pressure exerted by capital flows was felt in a radically new way within the institutional fabric of the gold standard. Far from being a source of stability on the international scene, these commitments created a new form of vulnerability which could be exploited by other agents. For this reason, these commitments had to be flexible enough in order to avoid any easy opportunity of arbitrage. Central banks required means to sterilize capital flows or to prevent speculators from taking advantage of banking provisions for convertibility. However, such *ad hoc* measures were limited and proved insufficient to counter growing capital flows. With reserves becoming vulnerable to transnational flows of capital, central banks were increasingly compelled to consider international rules of management to mitigate the effects of growing capital flow. The interest in monetary cooperation at an international level was thus the product of a distinctive institutional framework and stemmed from the

[18] de Cecco makes this point regarding semi-peripheral countries. See de Cecco (1996).

destabilizing effects of growing monetary flows upon this new institutional configuration of finance.

The gold standard marked an important step towards the modern international monetary regimes of the 20th century. It led to a new convergence of interests, which had been almost non-existent in premodern monetary systems. In the latter, seigneuriage on minting created almost insurmountable free rider dilemmas because of the inherently competitive nature of this practice. By contrast, the institutions of the gold standard somewhat alleviated the direct competition over monetary flows, by partly dissociating monetary and fiscal policy from the exchange rate. Even though such competition still existed in relation to trade protectionism, the exchange rate became, at least, amenable to cooperation because it lost its centrality in states' ability to exercise agency in monetary matters. The much-vaunted monetary stability of this period was thus a direct product of this new flexibility rather than simply the product of a new financial orthodoxy. By relinquishing the manipulation of exchange rates as a monetary policy tool, and by adopting fixed exchange rates, states established a ground upon which cooperation became conceivable.

Conclusion

I have argued that the specificity of the modern international monetary system, which emerged in the second half of the 19th century, rests on the gradual separation of a national circulation from international transactions, and on the establishment of central banks invested with the task of managing the relationship between both. This new structure established the basis for conceptualizing the problem of monetary adjustments among national economies which became the focus of monetary policy in the 20th century. First raised in Britain in the middle of the 18th century, this concern for monetary adjustment became widespread in the 19th century as central banks became increasingly preoccupied with exchange rates and international flows of gold in their monetary decisions.[19] Increasingly, monetary policy became formulated as a means to adjust national circulation according to international circulation. This new institutional arrangement explains why the gold standard often appears as a turning point. In comparison to previous monetary systems, which appear awkward and primitive to modern eyes, the gold standard has an almost familiar outlook despite the different rules that governed its operations.

The IPE literature neglects this institutional specificity because it problematizes the issue from a transactional perspective. In focusing on the transactions among national

[19] The fact that the exchange rate became an *indicator* of the internal state of the currency rather than a political tool for influencing the nature of this currency represented a radical new shift that was reflected emphatically in debates over free trade and central banking in the first half of the 19th century. It progressively became commonplace to see in the exchange rate an indicator of the condition of the economy in relation to other economies.

systems, scholars emphasize the rules that govern these exchanges, but miss the more crucial institutionalization of gold reserves as a monetary basis and the emergence of central banking. Thenceforth, their emphasis is placed on gold and the establishment of fixed exchange rates. By contrast, I have argued that the adoption of the gold standard represented, more fundamentally, a wider set of institutional innovations which reshaped the nature of monetary policy in Europe. More specifically, the gold standard emerged with the adoption by most European countries of English banking institutions. Their attraction to the English model was not reducible to the transactional advantages associated with the adoption of gold as a standard. Beyond the restrictions imposed on states, the institutions of the gold standard marked the adoption of powerful mechanisms linked to the management of fiduciary forms of money which required, at first, strict rules of convertibility in order to operate properly. Hence, what appeared as a constraint at the level of transactions between states reflected a hitherto unknown ability to manipulate financial flows by institutional means.

This conflation explains why it seems difficult to reconcile the adoption of what appears to be constraining rules (convertibility and fixed exchange rates) with the policies of sterilization pursued by most states during the gold standard. While the gold standard involved adopting certain constraints on fiduciary money, it had little to do with opening the management of the supply of money to market adjustments. Hence, the gold standard did not represent a liberal regime in the sense implied by current debates. It emerged from the attempt to regulate the issuing of banknotes in more restrictive ways, in order to make it viable and amenable to political control. From this perspective, the problem of linking the aims of the gold standard to sterilization policies vanishes. These policies only constituted pragmatic measures to counter the international vulnerability that resulted from the institutional structure of the gold standard. Far from producing instability in the gold standard, these so-called free rider strategies adopted by central banks to evade the imperatives of market adjustment were often a condition of stability of the gold standard.

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