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The Dynamics of International Monetary Systems: International and Domestic Factors in the Rise, Reign, and Demise of the Classical Gold Standard

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An international monetary system of fixed nominal rates is at one and the same time very simple and very complex. Such a system is rudimentary in that all participants simply agree to a set of stable values of their currencies. The prime example of a fixed-rate system is the classical gold standard, which was a pillar of the world economy from about 1870 until 1914. That such a system is complex in many ways is indicated by the abject failure of continued attempts to reestablish the gold standard during the interwar years, and by the involved and extended negotiations over a limited fixed-rate system among the members of the European Community since 1973.

The purpose of this essay is to examine the dynamics of international monetary systems, specifically systems of fixed nominal exchange rates. The broad question is how such systems can arise and become stable over time. More specifically, I focus on explaining how and why the classical gold standard arose, and how and why it was as stable as it was before World War One. This explanation provides the tools to understand why subsequent attempts at establishing fixed-rate systems have met with less stability and success. I end by exploring some of the implications of the analysis of the gold standard for prospects of success in the ongoing process of European monetary integration and ultimate movement toward a single currency.

A Fixed-Rate International Monetary System: Description, Definitions, and Analysis

An international monetary system can be compared to a domestic monetary standard on the three traditional roles of money: unit of account, medium of exchange, and store of value. The international monetary regime establishes a way to equate currency values for the purposes of measuring or accounting for relative prices, either by way of a fixed rate among currencies or against a commodity such as gold, or by way of market-based floating rates. For international payments, monetary systems use as a medium of exchange either national currencies—usually a limited number of key currencies—or such a common tender as precious metals. And some mix of national currencies and common tender are held for investment (store of value) purposes.

All of these purposes *can* theoretically be served by atomistically derived and maintained markets in which national currencies are traded freely. However, historically most international monetary systems have included some function for explicit government policy regarding the exchange rate. One such set of policies is that which constitutes a fixed-rate international monetary system. In a fixed-rate system, currencies are tied to each other at established parities, and governments commit themselves not to alter these parities. The most famous such system was the classical gold standard of the late nineteenth and early twentieth century, in which the currencies of the world's leading economies were fixed to gold by their national governments at some legal rate. Typically (with some exaggeration) each national monetary authority on the gold standard stood ready to exchange gold for its currency, or its currency for gold, at the established rate and on demand.

Traditional discussions of the international monetary system focus on the efficiency effects of a particular system, that is, its effects on global welfare (trade, payments, economic growth). In less grandiose discussions the implications of exchange-rate arrangements on national welfare or on specific groups within nations are considered. These discussions are primarily normative and policy-oriented. From an analytical perspective, we can ask two parallel sets of questions along these lines, one at the global and the other at the national level.

The first set of analytical questions is concerned with how at the international level an exchange-rate regime is adopted and sustained. In posing such questions, we abstract from global welfare considerations to ask how it is that nation states are able to cooperate in establishing and maintaining a global standard. In this regard,

international monetary coordination is an exercise in collective action, with the normal free rider and informational problems and criteria for overcoming them.

Indeed, there is some reason to regard an international monetary regime as a public good. From a global standpoint, as with domestic money, any standard is almost certainly better than none at all. Some generally agreed rules of the game—even if only to allow free trading in national currencies—are needed to provide the stability necessary for international trade and payments. In the context of a fixed-rate regime, and inasmuch as international exchange-rate stability is something of a public good, there is an incentive (especially for small countries) to defect. A country can, for example, reap specific benefits by devaluing its currency. This makes its exports more competitive but does not challenge the stability of the system. Of course, if enough countries act similarly, the regime will collapse.

The experience of international monetary relations suggests one set of dynamics, at the international level, that can help create and reinforce a regime such as the gold standard. The more countries participate in such a system, the greater the incentives to any one country to affiliate with it. This is because participation in the system gives greater access to trade and investment with other members. All else equal, firms and individuals are more likely to trade with, invest in, and borrow from countries whose currency values are more predictable. So such a system can exhibit a synergistic feedback mechanism or virtuous circle: the more countries are members of the system, the more attractive is membership. Of course, the circle can be vicious as well: once the size of the regime begins to decline, the system can collapse rapidly as countries defect.

In this context, the crucial question is how the synergistic process gets started and reinforced. Experiences from other such processes suggest the importance of a focal point around which actors can converge—in the international monetary realm, perhaps a major trading and investing nation that can lead others toward a mutually beneficial agreement on international monetary norms.¹

Although interstate considerations are important, in the final analysis exchange-rate regimes are the result of a series of national choices. Analysts thus need to examine a second set of questions, those that concern the determinants of national policies toward the international monetary system. How, in other words, do countries come to make and sustain a commitment to an international currency standard? Determinants of such a choice include both “national interest” calculations of the optimal national policy and more political considerations based on the role of interest groups within national societies.

The national welfare implications of different monetary regimes have especially to do with the degree to which they allow national policymakers to sustain or restore internal and external macroeconomic balance.² Perhaps the best way to examine this is by way of the contrast between fixed and floating rates. Fixed rates provide for stability and predictability, while floating rates allow national policymakers more independence to respond to country-specific economic conditions. This is especially true in a world in which capital can move freely from country to country.

Where capital is not mobile across borders, there is no contradiction between fixed rates and national monetary autonomy, as the monetary authorities can affect domestic macroeconomic conditions by altering the interest rate. However, where capital is mobile, interest rates are by definition set on world markets; the exchange rate is the only tool the monetary authorities have for affecting macroeconomic conditions. This sets up a trade-off between the benefits of exchange-rate stability and the benefits of national policy autonomy. This trade-off can be (and typically is) evaluated on a national-interest basis in terms of such characteristics of the country as how open to trade the economy is, how vulnerable it is to unique shocks, and so on. For example, consideration of such aggregate national-level characteristics leads to the conclusion that small open economies dependent on the export of a few commodities whose prices tend to fluctuate widely are almost certainly better off with floating than fixed rates. In this context, the choice of regime is affected by structural characteristics of the national economy.

This suggests a second set of dynamics in the evolution of international monetary regimes. As a stable regime grows in importance and extent, and more countries associate with it, the level of foreign trade and payments for each member grows as well. In other words, not only does the existence of the system attract more members but the existence of a stable system leads these members to trade, invest, and borrow more. As this happens the countries become more open on current and capital accounts, and their economies become more integrated and less vulnerable to unique shocks. These trends in turn give the countries stronger national-welfare reasons to maintain their commitment to the regime. So another feedback mechanism or virtuous circle can operate: the growth of a stable international monetary regime increases its members' international trade and investment and, therefore, their interest in ensuring regime stability.

National welfare considerations are important, but domestic distributional considerations are also central to the choice of exchange-rate regimes. In explaining any national policy, we must

carefully delineate the ways in which national welfare considerations translate into pressures on policymakers and therefore into influences on outcomes. We know all too well that the fact that a policy is welfare-improving from the standpoint of society as a whole does not guarantee its adoption. The process is mediated through the interests of domestic groups and the effects of domestic political institutions.

In fact, different exchange-rate policies have different effects on domestic socioeconomic interest groups. For those heavily engaged in international trade and payments, the stability and predictability of a fixed rate is eminently desirable. However, in a financially integrated world (as today and before 1914), a fixed rate eliminates the possibility for independent national monetary policy (as discussed above). This may matter little to those whose economic horizons are global (international banks, multinational corporations, major exporters), but it is a real sacrifice for those tied to the domestic market. For this reason, we expect internationally oriented economic actors to favor fixed rates, and domestically oriented economic actors to favor floating or adjustable rates. By the same token, those that favor a devaluation (essentially producers of import or export-competing tradable goods) tend to oppose a fixed-rate system that prohibits devaluations.

National choices on whether and how to associate with an international monetary regime are the consequence of domestic bargaining among interested groups in national society and within national political institutions. The stronger those who favor a fixed rate, the more likely it will be adopted. Here again, a virtuous-circle feedback mechanism can be at work. The more encompassing the international monetary regime, the greater the interest of internationally oriented firms in national societies in encouraging their governments to associate with the regime. Once a government becomes a member of the regime, the proportion of the economy that is oriented to foreign trade and payments is likely to grow, and with it the influence of that sector's policy preferences—especially to remain committed to the system. Of course, here as elsewhere the mechanism can operate in reverse: as an international monetary system collapses it pulls the political rug out from under its supporters in national political economies by reducing the economic influence of internationally oriented groups and lessening their commitment to the system.

In summary, two important analytical questions dominate the discussion of any international monetary regime. First, what are the "national interests" in play and what are their domestic political determinants? Second, how do independent nation states interact in

their policies toward the international monetary arena? In answering both questions I have identified important dynamic effects. At the subnational level, the more extensive and stable the international monetary regime, the greater the incentives for internationally oriented groups within any individual country to pressure their government to affiliate. At the national level, the larger the international monetary regime, the higher the level of national trade and payments of each member country and the more linked the markets among countries, and thus the stronger the national welfare argument for each country to affiliate with the regime. At the interstate level, the greater the number of countries that are members of the regime, the greater the incentive for additional countries to affiliate.

This is really one set of dynamics—a feedback mechanism that includes both strategic interaction among states and politics within them—but it can usefully be divided between its international and domestic components. Internationally, we should observe convergence of ever greater numbers of states around an international monetary focal point as such a focal point becomes more and more attractive and credible. Domestically, we should observe more domestic support for affiliation with this focal point (regime) as it grows in extent and credibility.³ In the next section I trace these interrelated processes through the history of the classical gold standard.

The Rise of the Gold Standard: International Dynamics

It is unclear when the classical gold standard began, for the world's major countries went on gold at different times. For example, from the 1820s onward the United Kingdom, France, and the United States were all on a specie standard quite similar to the subsequent monometallic gold standard.⁴ By 1880, however, every major trading and financial nation on earth had tied its currency legally to gold at a fixed rate. This situation was to prevail—indeed, more and more countries were to join the regime—until 1914, when World War One brought the system down. During these decades, the advanced industrial countries of the world, and many developing countries as well, grew at unprecedented rates. International trade and payments increased continually until the world economy was probably more integrated than it has ever been before or since. In purely economic terms, the gold standard era was something of a truly golden age.

The near automaticity assumed to inhere to the gold standard was expressed eloquently, and not without some nostalgia, by John Maynard Keynes in 1920:

The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend. He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality, could despatch his servant to the neighboring office of a bank for such supply of the precious metals as might seem convenient, and could then proceed abroad to foreign quarters, without knowledge of their religion, language, or customs, bearing coined wealth upon his person, and would consider himself greatly aggrieved and much surprised at the least interference. But, most important of all, he regarded this state of affairs as normal, certain, and permanent.⁵

The classical gold standard was a remarkably uncomplicated mechanism. To be "on gold," a country simply fixed a legal value in national currency at which the monetary authorities (typically the mint or the central bank) would buy or sell gold. This effectively established a fixed legal rate of exchange between gold and the currency, and thus between all other gold-standard currencies and the national currency. A number of subsidiary "rules of the game," not formal but widely understood, were designed to ensure that the government would be able to guarantee free convertibility of the currency into gold.⁶

The economic implications of the gold standard were also quite simple and were understood in late medieval times. If a country ran a persistent trade deficit, gold would flow out and the money supply would contract.⁷ This would drive domestic prices down relative to world prices, thus increasing exports and reducing imports—and bringing trade back into balance. The process ran in reverse for countries with persistent surpluses.

To repeat the points made more generally above, a credible commitment to gold provided economic agents with a marvelously predictable exchange rate, but it also greatly restricted the ability of national governments to affect national monetary conditions. This trade-off was also widely recognized, especially in the common practice of all governments of going off gold during major crises, such as wars, in which policy autonomy was unarguably more important than exchange-rate stability.

The classical gold standard's prehistory began in 1717, when Britain's master of the mint, Sir Isaac Newton, set the price of an ounce of gold at £3 17s 10 1/2d.⁸ Silver remained coin, and the country was legally bimetallic, but at this rate gold was overvalued at the mint, so silver gradually disappeared from circulation.⁹ Silver was demonetized in 1774 in recognition of the fact that only gold circulated in the United Kingdom.

In 1797, in the midst of the Napoleonic Wars, the British government suspended gold convertibility. The country remained off gold until 1821, and this "paper pound" period led to one of the most famous debates in the history of economics, the Bullionist Controversy. Inconvertibility had been accompanied by inflation in Britain, and discussion of the causes of inflation raged throughout the suspension. Of the position that prevailed in the parliamentary Bullion Committee report of 1810, David Laidler has written, "No other discussion of economic policy issues prepared by working politicians has had so sound an intellectual basis and has stood the test of time so well."¹⁰ The report presaged much of modern monetary theory, pointing out that inconvertibility allowed the monetary authorities to increase the money supply at will and thus created the potential for inflation.¹¹ It similarly argued for a commitment to gold as a safeguard against such a danger. In other words, it recognized the trade-off between the ability of the government to affect monetary conditions and commitment to a fixed exchange rate.

At much the same time as Britain was going back to gold, France was settling into a stable bimetallic standard. The gold-silver rate was, in other words, set so that neither metal was overvalued relative to the other. In these conditions, bimetallicism was consonant with the gold standard. The United States, after shifting the rates a bit in the search for balance, settled in the 1830s on a rate that essentially drove silver out of circulation and put the country on gold. Almost all other countries were on a monometallic silver standard.

Conditions were disturbed somewhat by California and Australia gold discoveries, which increased annual world gold production from about \$36 million in the 1840s to about \$119 million in the 1850s.¹² Countries solely on silver or gold were safe, but those on a bimetallic standard found gold increasingly overvalued at the previous mint price—the market price was dropping while the legal price remained the same. Most bimetallic countries, which tended to favor silver over gold, readjusted the gold-silver rate to avoid a *de facto* shift to gold; some demonetized gold.

In some ways, this experience can be taken as the starting point of our dynamic international story. By the 1850s, two things were clear.

First, the United Kingdom was irrevocably on the gold standard. Neither changing gold market conditions nor intermittent panics would shake the Bank of England's commitment to the general principles of the gold standard.¹³ Second, the United Kingdom was the world's financial and commercial center. London had come to dominate international finance, shipping, and trade; the country as a whole was far and away the world's most important economy; and the pound sterling was becoming the vehicle currency for most international trade and payments.¹⁴ This process was especially clear in the financial realm: after averaging £5.5 million a year in the 1830s and 1840s, British net foreign investment rose to £20 million a year in the 1850s and £37.2 million a year in the 1860s.¹⁵

The centrality of the British economy to the global economy, and unshakable British commitment to gold, exerted a gradually increasing pull on the rest of the world. The areas of recent settlement both in and out of the British Empire, which were tightly integrated into British trade and payments in this era, were early adherents to gold. They relied on London for almost all their foreign finance, and foreign finance was quite important to their economies (especially to the construction of a transportation infrastructure). Their all-important commodity exports also found their major market in London.

The rationale was straightforward. British importers and investors were more likely to sign contracts with countries whose currencies had stable values against sterling. The simplest way to signal such predictability was to go onto gold. British traders and financiers could (and often did) specify payment in sterling, but currency instability in the foreign country added an unnecessary risk to business transactions. From the standpoint of the foreign country's economic agents, of course, local currency movements were especially unsettling if contracts were in sterling: an unexpected fluctuation of the local currency could bankrupt a sterling debtor. For both reasons, those drawn into the British commercial and financial orbit had strong reasons to gravitate toward gold as well.

Germany was perhaps the single most important such case. From 1837 on the process of unification went hand in hand with movement toward currency union, largely around silver. However, internationally oriented financial and commercial interests after 1860 pressed continually for conversion to gold. This was facilitated after the country's victory over France in 1871, which led to a substantial French indemnity payment in gold. The resulting increase in the government's gold reserves allowed it to go onto gold with little difficulty between 1871 and 1873.

The French resisted longer. In 1865 France, Belgium, Switzerland,

and Italy created the Latin Monetary Union, which attempted to establish a stable bimetallic standard with realistic gold-silver rates. An international monetary conference convened at French initiative in 1867 attempted to arrive at internationally coordinated bimetalism, with no success. Indeed, only the French were enthusiastic about bimetalism *per se*; the other members of the union preferred going onto gold.

In the Latin Monetary Union as in other countries wavering between gold and bimetalism, the issue was forced after 1873, as silver dropped in price after major discoveries in the United States. Bimetallic countries were faced with either having to buy silver at an overvalued rate, thus driving gold out of monetary use, or engaging in another round of recalibrations of the gold-silver rate. The latter course seemed unstable, as silver continued to flood onto the market. The former course meant forgoing the use of gold as money at a time in which gold

was more and more important to international trade and payments. Virtually all countries chose gold over silver, commitment to the international regime over domestic policy independence.

By 1878 the members of the Latin Monetary Union had declared for gold. Meanwhile another international monetary conference, called at US initiative to try to salvage bimetalism, was a fiasco. Britain, Germany, Belgium, and Switzerland refused to go along, and while a few countries were sympathetic to the American position they did not represent a critical mass.¹⁶ For Italy the issue was a bit contrived. In the face of chronic fiscal imbalances, the country went to inconvertibility in 1866 and did not go back to gold until 1884, only to go off again in 1894.

Italy was the exception. As Germany went to gold between 1871 and 1873, Sweden, Norway, and Denmark followed suit. With Britain and Germany accounting for the vast majority of their trade and payments, their way was clear. The three Scandinavian countries also formed a Scandinavian Monetary Union, which largely consisted of provisions to allow each country's currency to circulate freely in all three nations. By 1875 the Netherlands was *de facto* on gold, and in that year the United States (which had suspended convertibility during the Civil War) announced that it was going back to gold by 1879. In 1877 Finland, politically dependent upon Russia but economically similar to the Scandinavian countries, linked to gold.

Austria-Hungary and Russia had been on depreciated paper currencies since 1848 and 1839 respectively. As silver prices dropped, the paper currencies actually rose *above* their legal silver prices in the 1870s. In 1879 Austria-Hungary announced its intent to go to gold,

which it achieved in 1892. In 1885 Russia went to bimetallism but was forced off silver and onto gold alone between 1893 and 1895. Even Japan went from bimetallism to gold in 1871, only to be forced off during a financial crisis in 1878. Fifteen years later the government declared its intention to go back to gold, and the process was assisted by a military victory over China in 1895 and the subsequent payment of a £39 million gold indemnity.

As this account indicates, the process exhibited much of the synergistic feedback expected. The incentives to go to a monometallic gold standard increased especially after international financial flows out of London became very large in the 1850s and 1860s. The issue was forced by the drop in the market price of silver over the course of the 1870s. German accession to the gold standard in 1871–1873 pulled Scandinavia, the Netherlands, and Finland along by 1877. Japan went to gold in 1871 and the U.S. in 1875, while Belgium, France, and Switzerland were officially monometallic by 1878. By this point, a precipitate seven-year rush toward gold had placed virtually every major trading and financial nation on earth on the gold standard. This would appear to be clear evidence of the upward spiral or feedback effect at the international level, in which each additional member (especially larger members) served in a dynamic way to attract further members of the regime until the gold standard was essentially universal among major nations.

The Rise and Reign of Gold: Domestic-International Dynamics

The international dynamic described above relied upon a more nuanced domestic dynamic. Countries' choices to go on or off gold were made in the context of often bitter debates among groups in society that had vested interests for or against the fixed-rate standard. The contours of these distributional divisions were outlined above; in this section I discuss how international trends and national policies interacted to speed the rise and strengthen the reign of the classical gold standard.

Even in Britain, the gold standard was controversial at a crucial turning point. The debate over resumption after the end of the Napoleonic Wars was not just about economic theory; it involved economic interests. Those tied to international trade and investment, such as Dutch-Portuguese Jewish merchant and financier David Ricardo, were favorable to early resumption of specie convertibility at the preexisting rate. Those producing tradable manufactures, especially in and around Birmingham, were opposed. They wanted a

depreciated currency, not the appreciated one resumption implied, even if this required staying on paper money.¹⁷ City of London (financial and commercial) interests prevailed, an outcome that accords with recent arguments about the political power of the city against manufacturing.¹⁸

In Germany, the politics of gold was more complex. The powerful rye farming interests, the Junkers, were strong supporters of silver, which implied a relatively depreciated currency. A weak currency would raise the amount of German currency received per pound of rye exported, and the domestic price of imported grain. The Junkers were dismayed after 1871, when the German government sold off its monetary silver in order to go to a monometallic gold standard. Silver sales drew money out of circulation and tended to appreciate the gold mark, thus making German rye less competitive on world markets. Debates over silver raged in tandem with debates over trade protection.

Both issues were decided when, in 1879, Bismarck shifted toward protectionism. The Junkers had previously been indifferent to agricultural protection (as exporters) and hostile to industrial protection. Bismarck essentially cut a deal with Junker soft-money supporters. In return for their support for high levels of industrial *and* agricultural tariffs, Bismarck halted the selling of monetary silver, thus arresting the real appreciation of the mark. This sop to the silver interests was sufficient to win them to the side of protection, and it was mild enough not to threaten the German commitment to gold.¹⁹ The Scandinavian countries were dominated by economic actors closely tied to the import-export trade and foreign finance; they strongly supported gold and were quickly triumphant.²⁰

In some cases the domestic-international dynamic was most clearly operative when the gold standard came under domestic political challenge. In these circumstances, political conflict over gold tended to divide those strongly tied to international commercial and financial activities, who had an interest in affiliation with the system, from those who either were domestically oriented or wanted a depreciated exchange rate, who had an interest either in paper currency or in devaluation (usually both). In the parlance of the day, these two positions were commonly known as "hard money" and "soft money," respectively.²¹

By far the most important and striking example of the domestic-international dynamic was the United States. Although international trade and payments affected only small portions of the American economy in the late nineteenth century, groups tied to the foreign sector were powerful. American financial markets were in fact closely linked with those abroad, especially in London.²²

Support for hard money came from Northeastern traders, bankers, and investors, and from most export-oriented manufacturers. Soft money, devaluation, and going off gold was preferred by farmers and manufacturers from the interior, whose markets were domestic and who worried primarily about the low domestic prices of their products. The division persisted throughout decades of conflict, which was exacerbated when international conditions made the preferences of either of the groups more intense—such as when the growth of British trade and finance increased the incentives for the internationalist groups to tie themselves to London, or when falling farm prices increased the desire of agricultural groups for a devaluation.

During the Civil War the United States went off gold as prices more than doubled under a paper currency (“greenback”) standard. After the Civil War, the Treasury shrank the money supply to appreciate the dollar and move toward resumption of gold convertibility at the prewar rate. This real appreciation put severe pressure on tradables producers, especially manufacturers. The Greenback movement first developed as a response among the iron and steel manufacturers of Pennsylvania. They were the country’s leading protectionists and recognized that devaluation cum reflation would reverse the relative price decline. This could only be accomplished if the country stayed off gold. The railroadmen concurred, as did investment bankers and others tied to these industries. Soft-money advocates worried little about the international credibility gold might bring, for they bought and sold next to nothing abroad. For them the world economy was a threat from which to be protected. As a Chicago merchant put it, “these gentlemen on the seaboard base all their calculations on gold, to bring them to par with foreign countries, leaving us in the West to take care of ourselves.”²³

Around 1873 two important groups were drawn into the soft-money camp. Farmers were originally indifferent, for farm prices held up quite well in the first years after the Civil War. However, the Panic of 1873 initiated a secular decline in farm prices. Like manufacturers, farmers recognized that devaluation would raise the domestic price of imported farm products and would raise farm prices relative to the prices of such nontradables as transportation and financial services.

The second important group brought into play after 1873 was silver miners. In 1873 silver was removed from circulation (“de-monetized”). As the price of silver declined relative to gold, miners and Greenbackers devised a common program to meet both their needs. If silver was “remonetized” at the old 16:1 rate against gold, the government would be forced to buy silver at well above the market

rate. This would act as a subsidy to the miners; it would inject money into the economy as the government bought up silver; and it would force the country off gold and onto a de facto (and depreciated) silver standard. A powerful alliance of Midwestern manufacturers, farmers, associated nontradable producers, and miners opposed the return to gold under the banners of greenback issue and free silver.²⁴

Supporters of gold were concentrated in the Northeast among the financial and commercial communities with strong ties to European trade and payments. As the New York Chamber of Commerce put it in complaining about the risk attached to a floating exchange rate: "Prudent men will not willingly embark their money or their merchandise in ventures to distant markets . . . with the possibility of a fall [in gold] ere their return can be brought to market."²⁵

This fundamental disagreement caused bitter political battles. In April 1874 Congress passed an inflation bill by a wide margin. The vote on the bill, which mandated expansion of the supply of paper money, illustrated the overlap of economic and regional differences. Over 95% of northeastern congressmen opposed the bill, while over three quarters of congressmen from the agrarian South and the agrarian and industrial West (including Pennsylvania) supported it. Northeastern hard-money interests immediately mounted a furious campaign to overturn the bill. President Ulysses Grant came through with a veto, but this cost the Republicans the congressional elections of 1874.

After the Republican electoral debacle, Grant and Republican Party leaders attempted a display of party unity to salvage their chances for the 1876 presidential elections. In January 1875 they convinced lame duck Republicans to vote for the Resumption Act, mandating a return to gold on January 1, 1879.

In 1876 Republican Rutherford B. Hayes, a supporter of hard money, was elected. The new Congress remained dominated by soft-money interests, and one of its first acts in February 1877 was to pass the moderately silverite Bland-Allison Act; President Hayes's veto was easily overridden. However, in late 1877 an attempt to repeal the Resumption Act was barely defeated: it passed the House and failed by one vote in the Senate. Hayes's Treasury secretary, John Sherman, had in fact worked with Republicans and Democrats alike to find a compromise and had determined that Bland-Allison was the price of defeating repeal of the Resumption Act. Even so, Hayes was forced to wield the blunt instrument of patronage in order to gather enough votes to save the gold standard.²⁶

In the meantime, some soft-money supporters became disgusted with the two major parties. They founded the Greenback Party, which stood

strongly for devaluation and a flexible exchange rate. The party ran Peter Cooper for president in 1876, with little success, but did better in the 1878 congressional elections. However, by then Hayes and Sherman had traded for or bought enough votes in Congress to save resumption, and the country went back to gold at the beginning of 1879.

American commitment to its fixed rate against gold was relatively unquestioned during the 1880s. However, silver sentiment erupted amid the agricultural depression that began in 1888. Farm prices dropped precipitously, and—unlike in manufacturing—productivity advances were not sufficient to counteract this trend. Reflation and devaluation under the silverite banner would have mitigated the farm crisis, and farmers were well aware of this. The silver miners, for obvious reasons, continued to support silver monetization.

The most striking reflection of agrarian interests was the rise of Populism. In 1890 the Farmers' Alliance movement scored major electoral successes in the western states. In 1892 the People's (Populist) Party was formed by the southern and western alliances, along with labor groups; in that year the Populists got over a million votes for president and sent hundreds of legislators to state houses and Congress.

Devaluation cum inflation ranked at the top of the Populists' demands. They called for a paper money-silver standard, with the dollar fluctuating against gold. The Treasury would have been directed to regulate the money supply to avoid deflation. Gold clauses, tying contracts to the value of gold as a hedge against devaluation, would have been made illegal.²⁷

In the opposing corner, northeastern commercial and financial interests remained at the core of the hard-money camp. The bankers' position had if anything hardened. World trade and payments were at their high point, and huge amounts of European money were flowing into the United States through New York. Indeed, many on Wall Street had come to hope that New York would soon be an international financial center, for which commitment to gold was a prerequisite.

Manufacturers were more receptive to hard-money arguments than they had been in the 1870s for three reasons. First, declining prices of manufactured products were more than compensated for by rapid productivity increases, so few manufacturers felt substantially disadvantaged by the real appreciation. Second, by the 1890s larger portions of American industry were internationally oriented: manufactured exports had expanded and foreign direct investment was increasing.²⁸ Third, the manufacturers' interest in the money question had become secondary to their concern to defend tariff protection, which was under attack from agricultural interests.

Republican Benjamin Harrison beat eastern Democrat and gold supporter Grover Cleveland in the 1888 election by promising support for silver. Harrison made good on his promise with the 1890 Sherman Silver Purchase Act. This doubled the amount of silver purchased by the Treasury under the Bland-Allison Act. The bill was too mild to satisfy antigold interests, and it was coupled with the prohibitive McKinley Tariff of 1890, which generated agrarian opposition. The result was that the Republicans lost the House in the 1890 midterm elections, then lost both chambers and the presidency to Cleveland in 1892.

The Democrats had run on a silverite platform, but Cleveland was known as a gold supporter—a “Gold Democrat” in contemporary parlance. In 1893 the country was hit by a severe panic, which the financial community blamed on uncertainty about commitment to the gold standard. Despite his party’s platform, President Cleveland pushed Congress to repeal the Sherman Act. Cleveland allied with gold Republicans against the majority of his own party and, as Grant and Hayes before him, used patronage to bludgeon key Democrats into submission. This repudiation of soft money was responsible for the Democrats losing the 1894 midterm elections. In turn, the gold conservatives lost the battle for control of the Democratic Party to free silver supporters.

The 1896 election was fought largely over the gold standard. Democrats and Populists jointly fielded William Jennings Bryan, who ran against the “cross of gold” upon which, Bryan thundered, the country was being crucified. The Republicans, in response, cobbled together a hard money-high tariff coalition with presidential candidate William McKinley as the link. He had impeccable protectionist credentials, having designed the tariff of 1890; despite his long-standing support for silver, he switched to gold in 1896. This made the McKinley candidacy a peculiar coalition of hard-money eastern trading and financial interests and high-tariff Midwestern manufacturers. McKinley’s striking reversal on gold lost him the western states’ silver Republicans. However, once the election became a referendum on money, the Republicans became the conduit for millions of dollars in eastern business contributions to ensure the victory of gold.²⁹

The narrow defeat of Bryan effectively sealed the fate of silver, and in any event antigold sentiment dampened over the next few years as economic conditions improved. In 1900 Congress passed the Gold Standard Act, Bryan was defeated a second time, and the country’s commitment to the gold standard was firm.

The stories told until now might be read to indicate that the domestic order simply, albeit often slowly and painfully, validated

national-welfare arguments for a decision to link to gold. This would be a mistake, as the decision was not always and everywhere taken. One fascinating example is that of Argentina.³⁰ The pampean country was economically and politically dominated by wheat farmers and cattle ranchers. In the 1870s a secular decline in farm prices began. In this context, farm producers clamored for a currency depreciation to increase their peso returns from declining sterling prices for wheat and beef. The dominant tradables producers, in other words, wanted a paper currency that could depreciate and compensate them (in peso terms) for the decline in the world prices of their goods. This they achieved in 1880, when Argentina went off gold and onto inconvertible paper money.

However, Argentina went back to gold in 1900 and stayed on until World War One. The reason for this is not hard to discover. In 1897 world prices of beef and wheat began to rise. This meant an increased inflow of foreign currency into Argentina, and a decline in its price relative to paper pesos—in other words, an appreciation of the paper peso. In these circumstances, farmers were receiving *fewer* pesos for every pound of beef or wheat exported. In response, they demanded that the exchange rate be fixed against gold at a depreciated rate—to avoid the real appreciation that would make their export earnings less valuable in peso terms. This they achieved in 1900. In other words, Argentine policy toward gold was purely and entirely a function of the interests of the beef and wheat producers: whatever exchange-rate policy would maximize their earnings was adopted—floating rates and depreciation as farm prices fell, a low fixed rate as farm prices rose.

The American episodes, along with the parallel Argentine experience, illustrate the dynamic interaction of international economic trends and the domestic politics of gold. As farm and silver prices dropped, farmers and silver producers pushed for the government to go off gold and onto a depreciated silver standard; in Argentina the demand was for a depreciated paper currency. However, internationally oriented trading and financial groups pressed for maintenance of the gold commitment in order to ensure their fullest possible participation in world trade and payments. For reasons that are far beyond the scope of this paper, in the United States gold won, while in Argentina gold lost until the interests of export-based farmers and ranchers shifted in the late 1890s.

The historical record, then, shows how the growth of the solidity and scope of the classical gold standard reinforced the gold sentiments of internationally oriented economic actors within national policy debates. However, increased international competition (especially

the secular decline in farm prices) drove many others, primarily export-competing farmers, to desire a devaluation against gold. This sort of feedback mechanism is an important intermediate step in the growth of the gold standard. Indeed, the mechanism by which this feedback operated often ran through groups in domestic societies who saw their interests closely linked to national commitments to gold.

The Demise of Gold: The Circle Becomes Vicious

The dynamic described here operated in reverse as the gold standard unraveled. This is analytically reassuring, for an explanation of how the presence of certain international and domestic factors can lead to the adoption and stability of an international fixed-rate regime should also predict that their absence would make such an outcome less likely. This is in fact what we observe in the interwar period; both the lack of an international focal point and the tenuous nature of domestic political support for international monetary cooperation made a return to the classical gold standard untenable.³¹

The failure to reconstitute the gold standard was not for lack of trying. Many international monetary conferences were held in the 1920s, but they were unable to arrive at the sort of commitment to gold—or anything else—that had evolved in the 1870s.³² It is indeed ironic that the conferences of this era, which tended to take place and end with a show of unity of purpose, were accompanied by a weakening of international monetary cooperation and that the conferences of the 1860s and 1870s, which were failures, were accompanied by a continual increase in international monetary stability.

The causes of the interwar difficulties were, as expected, twofold. First was the lack of an international focal point: there was no stable commercial and financial core around which expectations could converge. No one country played the same crucial role in world trade and payments that Great Britain had in the 1860s and 1870s. The United States was arguably as important to the world economy in the 1920s as the UK had been in a previous epoch, but the US consistently refused to participate fully in international monetary affairs, which made it a most unsuitable leader.³³ Leadership might have been provided by an Anglo-French-German consortium, but the three countries were at loggerheads on a whole range of international economic and noneconomic issues, and such a consortium was most unlikely.

In the absence of a suitable focal point at the global level, the interwar gold standard was highly unstable. Most countries took years after the end of World War One to go back to gold; many cheated on the implicit "rules of the game"; and almost all went off gold when the Depression hit.

The international dynamic was reinforced by the second factor identified: the lack of domestic political support for a fixed-rate system. The domestic political environment had been altered by several circumstances. Many of those previously strongly committed to gold had lost influence with the collapse of the prewar system; and the Depression of the 1930s further reduced the sociopolitical clout of these groups. Even where, as in Great Britain, the financial and commercial sectors remained powerful, the weakness of the interwar gold standard tempered their commitment to it.³⁴ Elsewhere, the war and associated political developments had strengthened such groups as labor, which had far more interest in domestic economic growth than in links to the world economy.³⁵

Domestic ambivalence about going back to gold made government commitments less than fully credible, even where gold convertibility was resumed rapidly.³⁶ And as the Depression hit, everyone from labor to import-competing manufacturers and farmers clamored for governments to go off gold. This clamor typically led to an abandonment of the gold standard in short order.

The result, on both counts, was a very weak interwar gold standard. The U.S. resumed convertibility in 1919, but it was not until 1928 that the major European countries were all on gold; Japan did not resume until December 1930. Almost as soon as the gold link was relatively widely established, the Depression brought it down: Great Britain, Germany, Scandinavia, most of Central and Eastern Europe, Canada, and Japan went off gold in 1931, while the United States waited until 1933.³⁷

The tentative nature of the interwar monetary system, and its precipitous collapse under the strain of the Depression, illustrate the importance of the two dynamics discussed in relationship to the happier experience of the pre-World War One gold standard. The lack of a strong and visible international focal point around which national policies could converge weakened the interwar gold standard. Similarly, the tenuous nature of domestic political support for the economic policies necessary to a commitment to gold further weakened the system. Attempts to build, or rebuild, an international fixed-rate system need to take these two factors to heart.

Contemporary Implications: The European Monetary System and Beyond

The most striking contemporary analogue to the classical gold standard is the ongoing process of European monetary integration.³⁸ From the late 1960s through 1979, the members of the European Community (EC) attempted to stabilize their currencies against each other. This attempt foundered for reasons similar to those discussed above. First, there was no clear focal point for the system—especially given continual jockeying for position between France and Germany. Second, domestic political forces were quite unfavorable to the loss of policy independence represented by fixed exchange rates within Europe. Most important, powerful groups in France and Italy opposed the austerity measures that would have been necessary to bring their inflation rates in line with those of Germany.

In 1979, the EC announced the formation of a European Monetary System (EMS) with an exchange-rate mechanism that would link member currencies together on a narrow band. Most commentators at the time expected the EMS to go the way of previous unsuccessful attempts at European monetary union. Indeed, in the early 1980s the system seemed shaky at best, experiencing frequent realignments. However, by 1985 the EMS was quite firmly in place, and despite subsequent disturbances it appears to have been the prelude to gradual movement toward a single EC currency.

This development recalls the movement toward gold in the 1870s. Indeed, the international and domestic dynamics present there also came to the fore in the EC of the 1980s. First, German predominance in European money and finance meant that the Deutschmark served as an anchor for the EMS. This led to some grumbling, especially from the French, but Germany's growing economic predominance within Europe made the mark a powerful focal point for other EC members. Second, domestic political conditions had changed since the 1970s. More and more economic agents had become heavily committed to EC trade and payments as the EC liberalized commercial and financial relations. Indeed, the commitment to a single market by the end of 1992 quickened the pace of monetary union by suggesting that firms from countries not linked to the EMS would be at a disadvantage—and might not even be able to participate fully in the reinvigorated European market. This strengthened the backbone of internationally oriented (especially European-wide) businesses and tended to erode the opposition of more domestically based groups in business and labor. The evolution of the system has indeed shown that German leadership and solid domestic support within member counties are

crucial to the possibility of an ever-stronger EMS leading to a single European currency.

Although movement toward stable exchange rates is somewhat more advanced in Europe than elsewhere, there have been suggestions that EC experience might presage similar developments elsewhere. Members of the Group of Seven have discussed attempts to reduce exchange-rate volatility among their currencies for years, with little success. Bilateral talks over the dollar-yen relationship have also been very limited in their results. And discussions about the possibility of a currency union among Mexico, Canada, and the United States to accompany the North American Free Trade Area are only in the most embryonic of stages.

Early as it may be to look toward broader extensions of current European trends, there are reasons to expect the topic to continue to be important. Inasmuch as the discussion here is relevant, it implies that positive results depend on favorable international and domestic conditions. Internationally, there needs to be some nucleus around which coordination can be organized, whether this is one currency or a cooperative effort. Domestically, there needs to be support for the national economic policies to sustain a commitment to such a system, especially from groups strongly oriented toward the international economy. It is not hard to imagine scenarios in which these two factors are present, and so we cannot rule out some form of reconstituted fixed-rate international monetary system as the 1990s progress.

Conclusions

An international monetary system requires implicit or explicit agreement among member states about the characteristics and requirements of membership. This agreement in turn appears, both analytically and historically, to be more likely to ensue if two sets of dynamics are operative. First, at the international level, governments cohere best when there is a clear focal point around which their policies can converge. This process of cohesion is interactive inasmuch as the greater the number of countries that converge around the focal point, the stronger the focal point. Second, at the domestic level, governments are able to commit to convergence more successfully when they can muster domestic political support to sustain national policies required by the system in question.

Under the classical gold standard, both such dynamics were present. The United Kingdom so dominated world trade and investment that the incentives for other countries to gravitate toward Britain and its gold-backed currency were great, and they grew ever greater as more

countries so gravitated. The extraordinary growth of world trade and payments in the nineteenth century greatly increased the size, wealth, and political power of those groups within national societies that stood to gain from being part of the gold standard. The greater the influence of these groups, the more likely their governments were to link to gold; the more governments linked to gold, the more rapid the growth of world trade and investment; the more the world economy grew, the stronger the incentives for groups in yet other countries became to press for *their* governments to go onto the gold standard; and so on.

A linked international and domestic dynamic drew more and more of the world onto the classical gold standard; the absence of this dynamic doomed the interwar gold standard to failure. An analogous process appears to account for the success so far of European monetary integration and may be relevant to broader attempts at building a new international monetary system.

Notes

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1. For a related discussion of such considerations in general, see the articles in Stephen Krasner, Ed. *International Regimes* (Ithaca: Cornell University Press, 1983).

2. For more on this topic see my "Invested interests: The politics of national economic policies in a world of global finance," *International Organization* 45, No. 4 (Autumn 1991), pp. 425-451.

3. The two dimensions discussed here are similar to those that serve to orient Barry Eichengreen, *Golden Fetters* (New York: Oxford University Press, 1992). Eichengreen focuses on the twin pillars of cooperation and credibility. Cooperation, the collaborative efforts of national monetary authorities, is comparable to the inter-state component of my discussion. Credibility, the reliability of national commitments to cooperative ventures, is related to the domestic aspects of my discussion.

4. The principal divergence from "classical" gold rules was that both the United States and France were legally bimetallic. As will be discussed further on, this was not a problem until the gold-silver rate began to shift, especially in the 1870s. In other words, inasmuch as the gold-silver rate was stable, being on a bimetallic standard (as many countries were or came to be over the course of the early nineteenth century) was tantamount to being on gold. In this sense we can push the origins of the international gold standard back to the 1820s.

5. John M. Keynes, *The Economic Consequences of the Peace* (New York: Harcourt, Brace and Howe, 1920), pp. 11–12.

6. The best collection on the mechanism is *The Gold Standard in Theory and History* Ed. Barry Eichengreen (London: Methuen, 1985).

7. This ignores all of the fascinating complexities of the mechanism, such as slippage between gold reserves and currency issue and the role of capital movements. These are not important for our purposes. That at some level the rules operated as constraints is all that matters here. For the debates see Eichengreen, *The Gold Standard*; and *A Retrospective on the Classical Gold Standard, 1821–1931* Ed. Michael Bordo and Anna Schwartz (Chicago: University of Chicago Press, 1984).

8. This history is drawn especially from Marcello de Cecco, *Money and Empire: The International Gold Standard, 1890–1914* (Oxford: Basil Blackwell, 1974); R. G. Hawtrey, *The Gold Standard in Theory and Practice* (London: Longmans, Green, and Company, 1927); and Jacques Merten, *La naissance et le développement de l'étalon-or 1696–1922* (Louvain: Editions Warny, 1944). Other sources include the essays in Eichengreen, *The Gold Standard* and in Bordo and Schwartz, *A Retrospective*; Arthur Bloomfield, *Monetary Policy Under the International Gold Standard* (New York: Federal Reserve Bank of New York, 1959); and Charles Kindleberger, *A Financial History of Western Europe* (London: George Allen and Unwin, 1984), pp. 55–70. The facts are relatively uncontroversial, and specific citations will only be provided for specific quotations or somewhat more controversial data. For a perspective on the events that focuses especially on gold as a commitment mechanism, see Michael Bordo and Finn Kydland, "The Gold Standard as a Rule" (mimeo, 1991).

9. To clarify the process for those unfamiliar with it, where the mint price of a precious metal (the price the government offered) was below the market price, private agents would not bring the metal to the mint for coining but would instead sell it at the higher market price. Where the mint price was above the market price (as Newton's rate accomplished), gold would be brought in for coining. On a bimetallic standard, if the mint price of one metal is overvalued relative to the other, the undervalued metal will disappear from circulation. Both metals can be maintained in circulation if their mint prices are kept in line with market prices, which requires adjustments in the event of major discoveries of one or the other metal. This relationship was important in the latter part of the nineteenth century, discussed further on.

10. In *The New Palgrave*, under "Bullionist Controversy." The classic study of the process and its aftermath is Frank W. Fetter, *Development of British Monetary Orthodoxy 1797–1875* (Cambridge: Harvard University Press, 1965).

11. On the actual experience, see Ian Duffy, "The Discount Policy of the Bank of England During the Suspension of Cash Payments, 1797–1821," *Economic History Review* 35 (February 1982), pp. 67–82.

12. Calculated from David Martin, "The Impact of Mid-Nineteenth Century Gold Depreciation Upon Western Monetary Standards," *Journal of European Economic History* 6 (Winter 1977), p. 643.

13. Ironically, this perception was probably reinforced by the Bank's issue of uncovered banknotes during the Panic of 1847, as this indicated that temporary quasi-suspension in times of dire crisis would not threaten long-term adherence to the rules of the game. Bordo and Kydland, "The Gold Standard as a Rule," discuss this use of a contingent rule. On this see also Rudiger Dornbusch and Jacob Frankel, "The Gold Standard and the Bank of the England in the Crisis of 1847," in Bordo and Schwartz, Eds., *A Retrospective*, pp. 233–264.

14. On the theory of which see Paul Krugman, "Vehicle Currencies and the Structure of International Exchange," *Journal of Money, Credit, and Banking* 12, No. 3 (August 1980), pp. 513–526. The rise of a vehicle currency is closely related to the development of an international monetary regime, of course.

15. Michael Edelstein, *Overseas Investment in the Age of High Imperialism* (New York: Columbia University Press, 1982), p. 21.

16. On these international episodes see Charles Kindleberger, "International Monetary Reform in the Nineteenth Century," in Richard Cooper, Peter Kenen, Jorge Braga de Macedo, and Jacques van Ypersele, Eds. *The International Monetary System Under Flexible Exchange Rates* (Cambridge: Ballinger, 1982), pp. 203–216.

17. Charles Kindleberger, "British Financial Reconstruction, 1815–22 and 1918–25," in Charles Kindleberger and Guido di Tella Eds., *Economics in the Long View* (London: Macmillan, 1982), pp. 105–120. See also Fetter, pp. 64–95.

18. See especially P.J. Cain and A.G. Hopkins, "The Political Economy of British Expansion Overseas, 1750–1915," *Economic History Review* 33, No. 4 (November 1980), pp. 463–490.

19. On the German case see Mertens, pp. 142–147; and Paul McGouldrick, "Operations of the German Central Bank and the Rules of the Game, 1879–1913," in Bordo and Schwartz, Eds., *A Retrospective*, pp. 311–349.

20. On which see Lars Jonung, "Swedish Experience under the Classical Gold Standard, 1873–1914," in Bordo and Schwartz, *A Retrospective*, pp. 361–399.

21. It should be noted that the dichotomous division masks nuances. It is possible to support a fixed but depreciated rate, for example. However, inasmuch as devaluation implied going off gold, preferences over the level of the exchange rate tended to coalesce with preferences over its flexibility. Soft-money advocates typically wanted both a flexible rate against gold (paper or silver currency) and a low (depreciated) rate; hard-money advocates typically wanted both a fixed rate and a high (appreciated) rate. For more on this see my "Invested Interests."

22. For a couple of representative studies, see Larry Neal, "Integration of International Capital Markets: Quantitative Evidence from the Eighteenth to Twentieth Centuries," *Journal of Economic History* 45, No. 2 (June 1985), pp. 219–226; and Lawrence Officer, "The Efficiency of the Dollar-Sterling Gold Standard, 1890–1908," *Journal of Political Economy* 94, No. 3 (1986), pp. 1038–1073.

23. Cited in Irwin Unger, *The Greenback Era: A Social and Political History*

of *American Finance, 1865–1879* (Princeton: Princeton University Press, 1964), p. 157. See also James Kindahl, "Economic Factors in Specie Resumption in the United States, 1865–1879," *Journal of Political Economy* 69 (February 1961), pp. 30–48.

24. It is interesting in this context to note that Junker silver interests in Germany at the time wanted the government to stop selling off its monetary silver, while American silver interests wanted the government to buy up silver for monetary purposes. The results of course would have been parallel.

25. Cited in Unger, *The Greenback Era*, p. 151.

26. Unger, *The Greenback Era*, p. 371. Against the argument that resumption of gold payments at the pre-Civil war parity was economically or morally inevitable, we can cite a source above suspicion for its monetary responsibility: "Our own judgement in retrospect is that, given that a gold standard was to be reestablished, it would have been preferable to have resumed at a parity that gave a dollar-pound exchange rate somewhere between the pre-Civil War rate and the rate at the end of the war" (Milton Friedman and Anna Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton: Princeton University Press, 1963, p. 82n). This would put Friedman and Schwartz somewhere between the moderate greenbackers and the strong silverites.

27. The classic study is John Hicks, *The Populist Revolt* (Minneapolis: University of Minnesota Press, 1931).

28. See David A. Lake, *Power, Protection, and Free Trade* (Ithaca: Cornell University Press, 1988), pp. 91–118, for a survey of American trade policy in this period.

29. How many millions is not clear; the formal audit showed \$3.5 million, with \$3 million from New York; the actual figure could have been twice or three times this. Herbert D. Croly, *Marcus Alonzo Hanna* (New York: Macmillan, 1912), p. 220. For details of these two episodes—Republican commitment to gold and reliance on corporate contributions—see pp. 192–204 and pp. 209–227.

30. The classic study of this is the masterful A.G. Ford, *The Gold Standard 1880–1914: Britain and Argentina* (Oxford: Clarendon Press, 1962), especially pp. 81–169.

31. This section draws heavily on Eichengreen, *Golden Fetters*, with which it shares a common analytical orientation as well.

32. See, for example, Stephen V.O. Clarke, *Central Bank Cooperation 1924–1931* (New York: Federal Reserve Bank of New York, 1967).

33. On American ambivalence in this period see my "Sectoral conflict and U.S. foreign economic policy, 1914–1940," *International Organization* 42, No. 1 (Winter 1988), pp. 59–90.

34. See, for example, Philip Williamson, "Financiers, The Gold Standard, and British Politics, 1925–1931," in *Businessmen and Politics* Ed. John Turner (London: Heinemann, 1984). Detailed studies of the British case are D. E. Moggridge, *British Monetary Policy 1924–1931: The Norman Conquest of \$4.86* (Cambridge: Cambridge University Press, 1972); and Diane Kunz,

The Battle for Britain's Gold Standard in 1931 (London: Croom Helm, 1987).

35. A broad-gauged interpretation of changes at this level and their implications for post-World War Two economic agreements is John G. Ruggie, "International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order," *International Organization* 36 (Spring 1982), pp. 379–415.

36. This is one of the principal points of Eichengreen, *Golden Fetters*.

37. A good survey is Ben Bernanke and Harold James, "The Gold Standard, Deflation, and Financial Crisis in the Great Depression: An International Comparison," NBER Working Paper No. 3488, October 1990.

38. The literature on this topic is now so enormous that it even a brief survey would be inadequate. Two good places to start are, on the earlier experiences, Peter Ludlow, *The Making of the European Monetary System* (London: Butterworth, 1982); and, on the more recent record, Francesco Giavazzi and Alberto Giovannini, *Limiting exchange rate flexibility: The European Monetary System* (Cambridge: MIT Press, 1989).