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Publication Date

1989-08-01

Peer reviewed

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Working Paper No. 89-116

**Phases in the Development of
The International Monetary System**

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August 1989

Key words: exchange rates, international monetary system

JEL Classification: 400

Prepared for the ESRC Conference on States and International Markets, Emmanuel College, Cambridge, September 13-15, 1989. This paper is part of a research program supported by grants from the National Science Foundation, the German Marshall Fund, and the Institute of International Studies of the University of California at Berkeley. UC Berkeley's Institute of Business and Economic Research provided logistical support.



The last century divides into four periods characterized by very different degrees of reliance on the exchange rate as an instrument of economic policy. In the heyday of the classical gold standard (1880-1913), exchange rate changes were few and far between. Countries on the periphery of the international monetary system suffered bouts of inconvertibility, but these episodes were exceptions to the general rule. In the interwar period, in contrast, reliance on exchange rate changes was more extensive. Following a brief interlude of fixed rates (centered on the years 1927-1928), there occurred a global round of competitive currency depreciation in which virtually every nation participated. With the establishment of the Bretton Woods System after World War II, utilization of the exchange rate instrument again was relatively rare. Instances of devaluation were limited mainly to developing world, although a few notable exchange rate adjustments were undertaken by industrial countries. Since 1971, exchange rate changes have again been more common, although the European Monetary System, which limits the scope for exchange rate changes by its members, represents an important countercurrent.

There are two obvious categories of explanation for these successive transformations of international monetary relations.^{1/} The first emphasizes the role of domestic politics in the formulation of international monetary policies. Currency depreciation tends to benefit certain domestic interest groups at the expense of others. Shifts in the propensity to utilize the instrument should therefore reflect changes in the political influence of different interest groups, or changes in economic structure that alter the costs and benefits they derive from alternative policies.

The other category of explanation emphasizes the role of international factors in the formulation of domestic policies. There may be an explicit set of international rules defining acceptable exchange rate policies for members of the community of nations. There may be

supranational institutions changed with enforcing those rules. Alternatively, nations may reach an informal understanding about the circumstances under which exchange rate changes are acceptable. Countries which violate that understanding may be subject to criticism or retaliation by their foreign counterparts. Countries which adhere to it may receive foreign assistance in times of crisis. These international considerations may override domestic pressures to pursue particular exchange rate policies.

This distinction is evident in several literatures. The literature on public choice (Becker, 1983) emphasizes the domestic political factor. Policies like currency depreciation are likely to have significant macroeconomic and distributional consequences. Governments therefore select the option that enhances the welfare of the groups with the greatest political power. One can distinguish variants of the model according to their definition of interest groups.^{2/} Coalition models concentrate on sectoral or distributional alliances that form in support or opposition to policies. Devaluation, for instance, is assumed to benefit debtors and exporters, but to hurt creditors and producers of nontraded goods.^{3/} Exchange rate policy is then determined by which of these potential alliances forms the dominant coalition. Working-class strength explanations emphasize the role of the exchange rate as an instrument of employment policy. Devaluation can be used to stimulate aggregate demand and to increase employment, perhaps at the risk of inflation. In periods of unemployment, devaluation is more likely to be favored by workers than by other social classes. Exchange rate policy is therefore determined by working-class strength in the political arena. One can also distinguish variants of the model according to their assumptions about the mechanism by which interest groups shape policy outcomes. In electoral models, a pro-devaluation government is voted into office when the beneficiaries of the policy outnumber those who suffer from its implementation. In lobbying models, the faction that most effectively sways elected officials dictates the outcome. International considerations may figure in each of

these models, insofar as foreign criticism or retaliation can alter the balance of costs and benefits of domestic policies. But the international factor generally plays a subsidiary role.

The literature on international organization, as its name suggests, reverses the weights attached to domestic and international influences. It emphasizes the potential for institutions like the General Agreement on Tariffs and Trade, the International Monetary Fund and the Bank for International Settlements to constrain the choices available to domestic policymakers. These institutions may possess articles of agreement which they are responsible for enforcing. Acceptable international economic policies may be defined and unacceptable ones proscribed. International institutions may possess sanctions which can be imposed on countries which violate their rules, or rewards for countries in good standing. Admittedly, domestic developments in member states help to shape the influence exerted by these international institutions. Domestic interest groups and coalitions figure in their establishment as well. But the emphasis in this literature is on the international factor.

For many observers, it is hard to take seriously the enforcement capability of these institutions. The literature on international relations consequently has evolved from an emphasis on international organizations to an emphasis on international regimes. A regime is defined as a set of rules, norms and procedures that guides the behavior of states and other actors.^{4/} Norms may emerge as convenient rules of thumb that approximate maximizing behavior by agents for whom optimization is costly. They can be seen as a solution to the free rider problem that leads otherwise to the inadequate provision of international public goods.^{5/} An understanding may evolve, for example, about the circumstances in which certain international economic policies may be pursued. This understanding can be interpreted as a solution to the defection problem with which international economic policymakers seeking to cooperate are often faced.

The following example illustrates the point. Unilateral devaluation may leave the initiating country better off. But it may be in the interest of other countries to retaliate in kind. Devaluation with retaliation may leave all countries worse off.^{6/} The Nash solution to the policy game -- devaluation with retaliation -- is inefficient compared to the cooperative solution, but the cooperative solution may be unsustainable absent an enforcement mechanism. A fixed exchange rate regime -- a set of norms and understandings proscribing beggar-thy-neighbor exchange rate changes -- can be seen as an implicit contract to refrain from pursuing certain noncooperative strategies that give rise to prisoner's dilemmas. It is international acceptance of these norms -- equivalently, the viability of the international regime -- that allows governments to resist domestic political pressures when formulating international economic policies.

The first question I address in this paper is whether the distinction between domestic and international factors can shed light on the checkered history of the international monetary system, particularly on shifts in the propensity to employ activist exchange rate policy. Do these shifts reflect changes in the balance of domestic political power between the advocates and opponents of devaluation, changes in their ability to effectively influence the formulation of economic policy, or changes in the benefits they derive from different policies? Alternatively, do the shifts reflect changes in the international regime -- that is, in the formal institutions which condition the formulation of exchange rate policies, or in the norms (the implicit code of conduct) defining acceptable international monetary policies for the community of nations?

To address these questions, I consider evidence from the last century of international monetary history. I assess the roles of domestic and international factors in the formulation of exchange rate policies during the four principal phases in the modern history of the international monetary system: the classical gold standard years (1880-1913), the interwar

period, the Bretton Woods era, and the post-1971 float. Space limitations require that I paint this history with an extremely broad brush.

The answer turns out to be obvious enough. Both domestic and international factors have consistently influenced conduct in the international monetary sphere. In part, changes in the prevalence of devaluation reflect shifts in the costs and benefits of the policy for the domestic interest groups that influence the formulation of policy. They also reflect shifts in the balance of power between interest groups. Equally, international norms and institutions defining admissible international economic policies have profoundly influenced reliance on exchange rate changes. In part, changes in the prevalence of exchange rate changes reflect variations in the success with which policymakers constructed an institutional framework capable of imposing sanctions and extending rewards for certain international monetary policies. More importantly, however, they reflect changes in norms (changes in regime). In some periods (1880-1913, 1925-1931, 1958-71) exchange rate changes were simply something not to be done, quite independent of formal institutional incentives. My overall conclusion is that any account which focuses exclusively on domestic or international determinants of exchange rate policy will be partial and misleading.

A more interesting question is why the combination of domestic and international factors that has influenced the formulation of international monetary policies produced a succession of phases characterized by very different degrees of reliance on active exchange rate policies. To put the question another way, what has been the underlying source of shifts in the desire and capability of different domestic interest groups to influence exchange rate policy? What has been the underlying source of shifts in the international regime -- of changes in the institutional structures and norms that shape and constrain the formulation of domestic exchange rate policies?

One finds in the literature two answers to these questions, one each on the domestic and international sides.^{7/} Domestic explanations stress changes over time in the perceived ability of nominal exchange rates to affect real variables, due to factors that fall under the general heading "changes in structure that accompany economic development." The arguments cut both ways. For example, it is argued that wages and prices now respond more quickly to currency depreciation, attenuating the capacity of nominal exchange rate changes to alter the real exchange rate and the path of other variables responsive to relative prices. This tends to diminish pressure for exchange rate changes by eliminating some of its benefits. At the same time, it is argued that international capital flows now respond more quickly to interest differentials, reducing the autonomy of domestic monetary policies. This tends to intensify pressure for exchange rate changes to restore freedom of policymaking. Shifts in the relative speed of these two processes could produce alternating periods of pressure for and against active exchange rate policy.

On the international side, the dominant explanation is the theory of hegemonic stability.^{8/} According to this theory, the institutions and norms required for the maintenance of exchange rate stability can be established and maintained only when the world economy is dominated by a hegemonic power. This is because exchange rate stability is an international public good. The benefits of a stable exchange rate accrue not only to the country that maintains it but to other countries as well. The free rider problem that leads to the underprovision of national public goods also operates internationally. If left to formulate policy independently, nations rely excessively on exchange rate changes because they have no reason to internalize the negative externalities suffered abroad. Only a dominant power, like a dominant firm in an imperfectly competitive market, can compel other countries to internalize the externalities created by their policies, by imposing sanctions and extending rewards and by establishing international institutions to serve these functions. The literature

contrasts two periods of hegemony and stable exchange rates -- Pax Britannica from 1880 to 1913 and Pax Americana from 1945 to 1971 -- with two periods (1919-1939 and the post 1971 period) marked by the absence of a hegemon and by a significantly greater prevalence of exchange rate changes.

Both explanations have appeal on a theoretical level. But I argue in what follows that neither fits the facts. The timing and character of the changes in economic structure upon which domestic explanations focus do not in fact provide a consistent explanation for the successive shifts in exchange rate regimen that have occurred over the last century. Furthermore, the contrast between the periods of British and American hegemony on the one hand and of decentralized economic power on the other has been greatly exaggerated. Changes in international configurations of economic power are too complex to provide a simple explanation.

I therefore suggest another explanation for these phases in the development of the international monetary system. This is the role of economic history. A central tenet of economic history is that events in the distant past continue to influence economic outcomes in the present. I argue that history has profoundly conditioned the formulation of international economic policy and the course of institutional reform. It is impossible to understand the exchange rate policies adopted domestically and the international norms and institutions developed to harmonize those policies internationally without acknowledging the roles of historical memory and of transitory historical shocks in permanently altering international monetary relations.

In the international monetary sphere, historical memory is short. Policymakers seem capable of recalling only their own experience and perhaps that of their immediate predecessors. The international monetary policies and international monetary regime of the interwar period, for example, were a reaction to the perceived virtues of the immediately

preceding gold standard system. The Bretton Woods System was a reaction against the perceived failings of the interwar regime. The post-1971 "nonsystem" has been a reaction against the perceived failings of Bretton Woods. Occasionally attitudes are significantly influenced by more recent events; for example, countries which suffered collapse of their floating exchange rates in the 1920s were loath to consider exchange rate changes in the 1930s. More occasionally attitudes are shaped by more distant events; part of the explanation for the unusually widespread support for fixed exchange rates in Europe today, for example, is the searing memory of hyperinflation in the 1920s and currency warfare in the 1930s. But the dominant dynamic seems to be reaction against the perceived shortcomings of the system with which the current generation of policymakers have lived, and inability to recall the shortcomings of the alternative arrangements that preceded it.

1. The Classical Gold Standard Era

The gold standard was not the normal mode of organizing international monetary affairs prior to 1913. As late as the second half of the 19th century, currencies and exchange rates were still regulated in different ways in different countries. Only Great Britain had been on a gold standard for a substantial period of time. The de facto gold standard established in 1717 resulted from a policy error: Sir Isaac Newton, then Master of the Mint, set too high a silver price of gold and drove all full-bodied English silver coins from circulation.^{9/} Only a few silver coins which had been so worn that they were no longer profitable to melt and export remained. But silver retained its unlimited legal tender status until 1774. The official policy of bimetallism was terminated in 1816, and exclusive gold convertibility was established in 1821.

There are two explanations for the century-long lag between the establishment of the de facto and de jure gold standards in Britain. One is that monetary statutes are costly to

reform. The 18th century system was working well enough; why tamper with it? Only when the Napoleonic Wars forced Britain to suspend convertibility did reconsideration of monetary statutes become inevitable. The authorities then took the opportunity to rationalize the monetary system.

The other explanation emphasizes technological change that facilitated the introduction of token coinage.¹⁰ The problem with a full gold standard was that the metal was too valuable to support a monetary system that relied exclusively on gold coin. In 1615 the smallest gold coin, weighing barely two grams, still represented more than a week's wages for a laborer. Smaller pieces were easily lost and not accepted by the public. Hence the attraction of bimetallism, under which small denomination silver coins circulated side by side with gold. The problem with bimetallism was that mineral discoveries continuously altered the relative price of silver and gold, wreaking havoc with the coinage system. A gold standard with token silver coinage, in which the value of silver coin exceeded the market value of its metal content, was feasible only if silver coins were costly to counterfeit. It is argued that the introduction of steam power in the Mint made counterfeiting costly starting in the early 19th century.

A question raised by this account is why other countries with access to steam power did not immediately emulate the British example. Some were operating happily on silver standards, which did not present a problem of small coinage. Others remained officially bimetallic, either altering the par values of the two metals in an effort to keep both in circulation, or shifting from de facto silver to de facto gold standards in response to price movements. The U.S., for example, was on a de facto silver standard before 1834, a de facto gold standard thereafter. When it was on gold, the problem of small-denomination currency was solved by the banking system, with free banks issuing small-denomination notes for which they themselves held the backing.

Starting in 1870, there was widespread movement onto gold. Germany adopted the gold standard in 1871, having taken her Franco-Prussian war reparations in specie. The bimetallic countries of Europe, including the members of the Latin Monetary Union, quickly followed her lead. In the U.S., where the currency had been inconvertible since the outbreak of the Civil War, the Coinage Act of 1873 omitted any mention of resumption of minting silver dollars. The U.S. ended the greenback period and instituted gold convertibility in 1879. Russia and Japan adopted the gold standard almost simultaneously. What started out as a means of regulating domestic monetary affairs evolved into an international monetary system complete with a network of fixed exchange rates.

The desire to reform the international monetary system and to limit exchange rate fluctuations was an element in this process. Changes in the market prices of silver and gold displaced the exchange rate between gold- and silver-standard countries. Exchange-rate fluctuations were criticized as an impediment to trade and economic growth. A series of international economic conferences was held with the goal of unifying international monetary arrangements (Russell, 1898). The participants were not in full agreement on the desirability of the gold standard, however. In 1878, for example, the U.S. proposed the international adoption of bimetallism, with a higher price of gold.

Two factors, one domestic and one international, mitigated against this alternative. Massive silver discoveries had flooded the market. Between 1861 and 1874, the silver price of gold had risen by some nine per cent, and worse was yet to come. Bimetallic countries attempting to peg the official price of silver at levels above the market price faced exhaustion of their gold reserves, while silver standard countries faced inflation. Thus, the choice between gold on the one hand and silver or bimetallism on the other had significant distributional consequences. Debtors stood to benefit from inflation, creditors to suffer. The sensitivity of the former, particularly agricultural mortgagees, to price level trends had

already been heightened by several years of deflation in the gold countries. The choice of monetary system also had important implications for the silver-mining interests. A commitment by the monetary authorities to peg silver in terms of gold would protect them against a further fall in its price. In part, the choice of the gold standard reflected the political influence of creditors relative to debtors. Large landowners and investors dominated politics in many countries which went onto gold. Where opposition was strongest, as in the United States, it might give rise to a free silver movement or a populist revolt. While this opposition threatened the gold standard, it failed to prevent its adoption.

International factors also contributed to the movement toward gold. By the middle of the 19th century, Britain had emerged as the leading exporter of manufactures and financial capital and the leading market for foreign producers. There was always the possibility that, by emulating her financial arrangements, other countries could emulate her economic growth. More concretely, adoption of the gold standard and maintenance of a stable sterling exchange rate simplified trade with Britain and inspired the confidence of British foreign investors. Thus, the gold standard could facilitate growth by stimulating exports and encouraging capital imports.

In a sense, then, Britain's leading position in international markets in the second half of the 19th century was conducive to the evolution of a gold-based international monetary system. To credit British hegemony with the emergence of the gold standard goes too far, however. Britain accounted for only half of exports of manufactures and of the net overseas private long-term assets of the principal European creditor countries in 1885.¹¹ She could not compel foreign countries to follow her example. Other factors, notably domestic opposition to inflation, contributed importantly to their decision.

For most of the industrial countries, manipulation of the exchange rate was not an option prior to 1914. There was no clearly articulated theory of the channels through which

devaluation cum monetary expansion affected output and employment. In most countries the working class which would have embraced such a theory was not enfranchised in sufficient numbers to make its influence felt. Even in countries like Britain, where Fabian socialism and a national efficiency movement created pressure for welfare reform and public policies to improve the condition of the working class, there was little active opposition to the gold standard. Bagehot's rule, to lend freely at a punitive rate in the event of crisis, went some way toward reconciling convertibility with domestic financial stability. With the credibility of the official commitment to gold beyond doubt, capital tended to flow in stabilizing directions in response to destabilizing shocks.

The debate over the monetary standard, where it persisted, revolved around distributional issues. In the United States, the populist revolt against deflation and high interest rates combined with the free silver movement to produce pressure for silver coinage. Although the advocates of free silver denied its incompatibility with the existing gold parity, clearly they were willing to dispense with the latter if it conflicted with their central goal. The Bland-Allison Act of 1878 committed the U.S. Treasury to purchase \$2 - \$4 million worth of silver monthly. As silver flowed into the government's coffers, gold flowed out. The Sherman Silver Purchase Act of 1890, passed by the silverites with the support of Easterners who demanded the McKinley tariff as quid pro quo, doubled the monthly purchase rates. The rise in domestic credit and decline in gold reserves posed a double threat to the gold standard. U.S. interest rates rose relative to those prevailing abroad to reflect the perceived probability of devaluation. The government employed bond sales to support the external position. The Sherman Act was repealed. A foreign loan, arranged by Pierpont Morgan, August Belmont and others, was needed to defend the monetary standard. Only with William Jennings Bryan's defeat in 1896 and passage of the Gold Standard Act of 1900 did the U.S. draw back from the brink (Simon, 1968).

Distributional issues also dominated the debate in Latin America, although they took a different form and produced a different result. The traditional account stresses that currency depreciation benefited exporters by raising prices relative to costs (Hirschman, 1973). The disproportionate importance of commodity exports to the Latin American economies -- coffee in Brazil, wheat and meat in Argentina, minerals in Chile -- vested their producers with disproportionate influence over the political process. Combining with small landowners who, as in the United States, favored inflationary policies, they successfully pressed for expansionary policies that led ultimately to the suspension of convertibility.^{12/} A revisionist view (Fishlow, 1987) argues that other interest groups, specifically officials and financiers who desired liberal provision of liquidity to promote economic growth and financial deepening, in fact played a more important role in shaping policy. But like its predecessor, this view emphasizes domestic determinants of Latin American policy.

Complementing this argument emphasizing differences across countries in the influence of interest groups are arguments emphasizing differences in the costs and benefits of those alternative policies. Latin American countries were more likely to suspend convertibility and depreciate their currencies, the argument runs, not only because the groups that stood to gain were relatively powerful, but also because, averaging across groups, the costs of retaining the gold standard were relatively high. In the late-19th century, primary-product exporting nations suffered unusually pronounced terms of trade shocks and severe internal dislocation. The fact that shocks to the export sector, upon which their economic growth was predicated, rendered them less desirable places in which to invest meant that they were subjected simultaneously to a decline in the availability of foreign capital. There was an argument for currency devaluation to help restore profitability to the export industries and to encourage the reflux of capital from abroad. Not only was currency depreciation harder to avoid than in industrial countries, but its benefits were more compelling.

International norms too played a role in the more successful maintenance of the gold standard at the center. Defense of the gold parity by even so prominent a country as Britain on several occasions required international collaboration. In 1890, in response to the Baring Crisis, the Bank of England was loaned gold by the Bank of France and the Russian government. In 1907, in response to the drain caused by the American financial crisis, the Bank of England obtained support from the Bank of France, which purchased sterling bills on the market. In 1890 that support was requested by the Bank of England; in 1907 it does not even appear to have been solicited. On that occasion France stepped in, of its own volition, to defend the British gold standard. This kind of support was not extended to countries on the periphery of the gold standard system. A Latin American country confronted with a convertibility crisis might successfully borrow from the London banking house with which it had a long-standing customer relationship, but it was not offered aid by the Bank of England or the Bank of France.

Another point revealed by these crises is that the stability of the gold standard was not simply a function of British dominance of the international economy. Some observers argue that the classical gold standard was stabilized by a British hegemon which maintained an open market, engaged in countercyclical lending and acted as international lender of last resort (Cohen, 1987). While Britain did in fact maintain open markets throughout the period, this account should make clear that British lending was anything but stable, and that Britain could as easily be international borrower of last resort as international lender. The stability of the gold standard at the center depended on effective international collaboration by a core of industrial countries.

2. The Interwar Period

World War I brought to a close the era of the classical gold standard. The convertibility of currencies into gold was suspended. Monetary and fiscal policies were reoriented from their traditional targets toward pursuit of the war. Inflation rates accelerated and diverged internationally, displacing exchange rates from traditional levels. Capital controls were widely adopted in an effort to minimize exchange rate fluctuations. The United States intervened in the foreign exchange market on behalf of her allies, supporting the French franc and the British pound.

With the conclusion of hostilities, these support operations were terminated. Exchange controls were relaxed. Exchange rates were allowed to float freely, and were subjected to competing pressures. On the one hand, divergences in national price levels had greatly exceeded divergences in exchange rates. If nothing changed, the restoration of international equilibrium clearly required further divergences in exchange rates, specifically a further fall in the depreciated European currencies against the U.S. dollar. On the other hand, policymakers worldwide affirmed their commitment to restore exchange rates to traditional levels. In the immediate postwar years, exchange rates were pushed and pulled by these competing pressures, rising or falling depending on whether the mood of the market was dominated by current conditions or future expectations.

The overwhelming desire for restoration of the gold standard and of prewar parities has been studied intensively, especially by British historians (Moggridge, 1969; Pollard, 1970). Domestic politics figure prominently in their accounts. Industry and employment in Britain were sacrificed, it is alleged, on the altar of finance. Restoring the prewar parity reaffirmed the authorities' overriding commitment to maintain the value of sterling, encouraging foreigners to deposit their money in London and to obtain financial and insurance services

there. The political influence of the financiers who stood to benefit from the policy proved too much for industry and labor to counter.

Scrutiny of this coalition-based explanation reveals too many holes for it to hold much water. Opposition was all but nonexistent on the part of those distributional coalitions which stood to lose from the restoration of sterling's prewar parity. Even the short-lived First Labour Government embraced the policy. The desire to restore the prewar parity was equally strong in other countries where financial interests were not as influential.

Rather than coalition-based influences, the all-but-universal support for reconstructing the prewar system reflected the influence of historical memory. There was an overwhelming belief, especially in Europe, that the prewar system had worked well. Trade had expanded rapidly relative to production and had served as the engine of economic growth. The gold standard was credited with having provided stability and certainty conducive to the expansion of trade.^{13/}

If memory was so powerful, why then did some countries succeed in restoring their prewar parities while others failed? Unlike Britain, Sweden and a number of other countries which succeeded in restoring their prewar parities in 1924-25, Belgium and France succeeded in stabilizing only at devalued rates and only following years of inflation and depreciation. Germany, Austria, Hungary and Poland stabilized only after the debacle of hyperinflation and currency reform. Authors writing in the domestic politics tradition would argue that those who benefited from inflation succeeded in delaying the return to gold.^{14/} But there was no conscious manipulation of the exchange rate during the floating period for purposes of promoting growth or redistributing income. Rather, the persistence of depreciation reflected an abject failure to implement the policies required for stabilization. The necessary policies entailed balancing government budgets and funding floating debts. So long as budgets remained out of balance, there was always the prospect of monetization to finance the deficit.

So long as debts remained unfunded, there was the danger that investors would refuse to roll over their maturing bills, forcing the monetary authorities to purchase them instead. Hence the feasibility of stabilizing the exchange rate hinged upon implementation of the necessary tax increases and expenditure reductions.

In virtually every country, the prewar consensus concerning the distribution of the fiscal burden had been a casualty of war. Wartime inflation had arbitrarily redistributed incomes and tax burdens. New taxes had been imposed on virtually every form of income and consumption. Changes on the expenditure side had been equally far reaching: veterans' pensions and unemployment insurance were only two of the more prominent legacies. The postwar distribution of the fiscal burden was up for grabs. The instability of postwar European politics can only be understood in terms of the failure of successive governments to resolve the fiscal question. The French had the most colorful description of the revolving-door nature of postwar politics -- they referred to "the waltz of the portfolios" -- but the problem was widespread. And the longer the fiscal deadlock persisted, the longer inflation and depreciation continued, and the more difficult restoration of prewar parities became.

Thus, the explanation for differences across countries in exchange rate policies -- here I am conscious of using the word "policies" loosely -- reflected differences in the speed with which the fiscal deadlock was broken. In Britain, budget balance was achieved at a relatively early date. In France, in contrast, deficits were allowed to persist. Until 1925, French governments showed themselves to be incapable of imposing reductions in spending. The proponents of a capital levy, broad-based income taxation, and consumption taxes neutralized one another's efforts. One might argue that domestic coalition politics determined these outcomes: that in Britain industry and finance were sufficiently powerful to push through a menu of broad-based taxes (and to defeat the capital levy considered by the Colwyn Committee), while French politics remained deadlocked as a result of the failure of

any dominant distributional coalition to form. In this way, domestic politics, operating indirectly through the fiscal debate, might have been responsible ultimately for the formulation of exchange rate policies.

A detailed analysis of domestic politics could turn up many such differences across countries. But international comparisons of domestic coalition politics reveal many similarities as well. The one overwhelming difference lies in the role of reparations. Its role becomes clear if one thinks of the fiscal dilemma as a game of chicken. Every group felt that its welfare declined so long as deficits, inflation and depreciation were allowed to persist, but each group had an incentive to resist offering the concessions needed to eliminate them in the hope that someone else would give in first. Reparations superimposed a second noncooperative game upon the first, one which reinforced the incentive to remain intransigent. For countries like France and Belgium, fiscal deficits kept the pressure to pay on Germany and the other defeated powers. Budget balance would have suggested that reparations were not in fact needed to finance domestic reconstruction or veterans' pensions. For countries like Germany, fiscal deficits could be invoked as evidence of the impossibility of achieving transfers on the projected scale. The knowledge that the fruits of any and all domestic sacrifices would be transferred abroad discouraged all parties within Germany from offering concessions. French and Belgium stabilized only after events, specifically the failure of the Ruhr invasion and adoption of the Dawes Plan, had forced them to acknowledge the unrealism of their initial demands. The intervening inflation, by eroding the real value of the French public debt, eased the task of stabilization. Germany stabilized only once hyperinflation had demonstrated that using the budget as a means of passive resistance had costs even greater than its benefits. Again, the intervening inflation, by wiping out the government's domestic debts, considerably eased the task.

One might invoke the theory of hegemonic stability to account for the burden of reparations that ultimately explains differences across countries in postwar exchange rate behavior. France and Belgium were unwilling to eliminate reparations because the United States was unwilling to write off war debts owed it by its European allies. The U.S. failed to appreciate the indirect benefits of war-debt forgiveness either because it had not grown accustomed to its newly acquired hegemony, or because its role in the world economy had not yet achieved proportions where it made sense for American policymakers to internalize the international externalities thrown off by their actions.

Here too historical memory also plays a role, however. Throughout the postwar negotiations, policymakers cited the reparations paid by France to Germany in the wake of the Franco-Prussian war. A precedent had been established, one which French politicians in particular would have insisted on respecting, even if the overlay of war debts had not existed. The Treaty of Frankfurt had committed defeated France to pay victorious Prussia 5 billion francs, nearly a quarter of French national income at the time. (In addition, the Alsatian railways were transferred to Prussia as part of the settlement.) The transfer was successfully completed in under three years without destabilizing the paying or the receiving economies (O'Farrell, 1913). France financed it by issuing bonds, many of which were purchased by foreign nationals, and by transferring the principal to Prussia. This example figured prominently in French rejection of arguments against reparations.

By the second half of the 1920s, fiscal compromise had permitted fixed exchange rates to be restored. The interwar system of fixed rates differed from its prewar predecessor in a number of respects. First, the value of some currencies, the French franc for example, had been substantially reduced. To the extent that these currencies were undervalued, this increased the strains on the international system. Indeed, one of the paradoxes of the period is why countries such as France resisted domestic pressure to reverse the inflation of previous

years and restore their prewar parities. Part of the answer is that the costs of doing so were higher than in Britain, where prices had diverged from those in the United States to a much lesser extent. But in addition, the resolutions adopted at the Genoa Conference in 1922 had encouraged countries which had endured persistent inflation to adapt their exchange rates to prevailing prices rather than the other way around. Recognizing that persistent deflation might depress economic recovery, the delegates to Genoa recommended altering parities instead. Although the United States did not participate in the conference, this resolution found widespread support among other countries.

Second, the new system differed by the extent of reliance on foreign exchange reserves. Well before 1913 foreign assets had been used to supplement gold in the vaults of central banks (Lindert, 1969). But Belgium, Bulgaria, Finland, Italy and Russia had been the only European countries permitted to substitute foreign exchange for specie without limit. Austria-Hungary, Denmark, Greece, Norway, Portugal, Rumania, Spain and Sweden had been permitted to hold only limited shares of their reserves in the form of foreign exchange, other countries not at all. In response to the fear that the growth of global gold supplies had not kept pace with the growth of demands, Great Britain at the Genoa Conference proposed institutionalizing and extending the practice. The French and Americans, suspicious that this was a British ploy to create an artificial demand for a depreciated pound sterling, blocked implementation of the Genoa resolutions. But the practice spread informally, especially among members of the British Commonwealth and among countries for whom interest earnings on foreign reserves were a powerful lure. The pyramiding of an increasing quantity of domestic liabilities on a limited quantity of reserves was to prove a special source of weakness of the new gold standard.^{14/}

Third, institutional changes had altered the scope for central bank management of the system. A tidal wave of government bonds had flooded financial markets as a result of

wartime deficit finance. The traditional instrument of monetary control, the discount rate, which operated by influencing the willingness of intermediaries to discount commercial bills, no longer possessed the same leverage. Instead, open market operations were increasingly relied upon. The U.S. Federal Reserve System began to employ open market operations in 1922. Once the Fed established the instrument's efficacy, newly-established central banks in a variety of European and Latin American countries emulated U.S. example. Only the Bank of England and the Reichsbank had utilized open market operations on any significant scale prior to 1914. Now there was a substantial number of central banks that could and did intervene to influence domestic and international financial market conditions.^{15/} No longer was the scope for active management limited by the presence of a fully developed discount market.

Thus, the difference between the prewar and interwar situations lay not merely in the decline of British "hegemony" and in the rise of a more multipolar system. Rather, the scope for conflict between national policies widened as an increasing number of central banks acquired access to policy instruments.

Nurkse's (1944) explanation for the instability of the interwar system was that central banks utilized these newly-acquired levers to violate the "rules of the game." Rather than permitting reserve inflows and outflows to bring about proportionate changes in domestic money supplies, as dictated by the "rules of the game," central banks neutralized the domestic impact of reserve movements. It is important to note that these "rules" had never been formally codified.^{16/} Central banks had always possessed the option of intervening at their discretion. There had never existed international institutions, or even prominent norms, to discourage these actions.

Bloomfield (1959) challenged Nurkse's interpretation, pointing out that by Nurkse's own measure (the number of instances in annual data that the domestic and foreign assets of

central banks moved in opposite directions) violations of the rules of the game had been as prevalent prior to 1914 as between the wars. This finding was perplexing: how after all could the classical gold standard have been sustained if the central banks of deficit countries had systematically prevented reserve outflows from tightening domestic credit conditions? The answer, it would appear, is that violations of the rules really were more prevalent between the wars. Neither Nurkse nor Bloomfield distinguished central bank reactions in the short run, when there could be scope for sterilization without threatening the stability of the gold standard, from their reactions in the long run, when the stability of the system required that the domestic effects of reserve losses be validated.^{17/}

Violations of the rules of the game in the 1920s can be traced to growing domestic political pressure to adapt monetary conditions to domestic ends. Restoration of the gold standard had not abolished unemployment, as its proponents had promised. Authorities like Keynes, in his testimony to the Macmillan Committee, laid the blame for unemployment squarely on the doorstep of the monetary authorities. The growth of organized labor and of parliamentary labor parties in Europe intensified the pressure to adapt monetary policy to employment targets. Increasingly central bankers hesitated to take measures to restore external balance that also threatened to exacerbate internal problems. Although there was no radical transformation of central bank priorities, there was a subtle shift.^{18/} But through the induced reaction of the market, even a subtle shift could have far-reaching consequences. No longer did capital necessarily flow in stabilizing directions in anticipation of steps the authorities might take to counter any weakening of the balance of payments. Now capital might flow in destabilizing directions, as speculators bet that policymakers' actions would be too little too late. Frequently the authorities were forced to employ all of their resources to counter speculative pressures, rendering the interwar gold standard, compared to its prewar predecessor, both more fragile and more costly to defend.

The first countries to devalue their currencies were at the periphery of the international monetary system. Argentina and Uruguay suspended gold payments in December of 1929. Canada introduced new monetary restrictions tantamount to devaluation. Brazil, Chile, Paraguay, Peru, Venezuela, Australia and New Zealand, without officially suspending gold convertibility, permitted their currencies to slip below par. All of these countries suffered more severe external shocks than the nations of the industrial center. As primary-product exporters, they suffered the collapse of their export prices following the onset of the Great Depression. Simultaneously, U.S. foreign lending dried up, first because of the Wall Street boom, then because of the economic collapse. Starting in the summer of 1928, the capital accounts of the primary-product exporters deteriorated markedly; this was followed by the deterioration of their current accounts the following year. The magnitude of the external shock, which drained reserves from their central banks, requiring massive deflation and decline of living standards to maintain convertibility, greatly increased the costs of defending the gold standard.

Most of these countries could look back on a 19th century during which currency depreciation had been the standard response to external shocks. Under the classical gold standard, depreciation had not led to tariff retaliation, nor had countries been banished from the international capital market so long as exchange rate stability was restored subsequently. Given the circumstances, a temporary departure from the gold standard was entirely consonant with domestic precedents and international norms.

Britain's devaluation in 1931 was a different matter.^{19/} While the suspension of convertibility was not a matter of choice, it remained within Britain's power to restore gold convertibility subsequently, perhaps even at the traditional rate. There was no precedent for the alternative Britain pursued: capitalizing on the convertibility crisis and encouraging the exchange rate to fall. Policymakers were motivated by the realization that the return to gold

had had significant costs, in the form of the restrictive policies required to support the parity and the unemployment to which those policies contributed. Fixed rates had not delivered the anticipated benefits. They had failed to stimulate the rapid expansion of international trade. Now with the collapse of international markets, the trade-creation rationale for fixed rates had been diluted. Moreover, the notion that the credibility of the parity could be established by the return to gold at \$4.86 had been vitiated by the demonstration that the Bank of England could be forced to suspend convertibility at that rate. The decision to allow sterling to depreciate cannot be understood as a result of a significant strengthening of the pro-devaluation lobby. Rather, it reflected the all-but-total collapse of the case against exchange rate changes -- in other words, a reaction against the prevailing system.

International pressures for Britain to reestablish gold convertibility played only a minor role. France and a number of other gold standard countries did lobby Britain to return to gold. Tampering with the exchange rate, they argued, was unacceptable. British policymakers paid their arguments little heed, however, and foreign policymakers could offer little in the way of inducements. If other countries devalued their own currencies, as the U.S. did in 1933, Britain simply could allow sterling to fall further. If other countries raised their tariffs in retaliation against "exchange dumping," as France did, Britain could raise her own newly-adopted tariff barriers. Indeed, the wave of protectionism that had been underway since 1930 had done much to undermine the influence of the international economic norms that traditionally discouraged devaluation. The argument that countries had a collective responsibility to maintain open markets by stabilizing exchange rates carried little weight when coming from countries that had used tariffs to barricade their own markets.

It is difficult to assess the argument that the devaluation of sterling and the subsequent collapse of fixed rates could have been avoided had the United States acknowledged its responsibility for stabilizing the system (Kindleberger, 1973). Direct action would have

required massive international loans, in amounts that would have been extremely large by historical standards. Britain and other weak-currency countries in fact obtained short-term credits of about \$1 billion, equivalent to 10 per cent of total international short-term indebtedness and to five per cent of global imports.^{20/} These proved inadequate. Providing more would have been difficult even for the United States. An outward transfer of capital would have further strained a fragile balance of payments. Already sterling's difficulties were shaking confidence in the dollar, and the Fed had begun to worry about the problem of free gold. Larger loans would have required not unilateral action by the "hegemon" but more extensive international cooperation. They would have had to be arranged with the cooperation of France, Switzerland, the Netherlands and perhaps other countries.

A more compelling alternative to the argument that the U.S. failed to stabilize the system is that it destabilized it through imposition of the Smoot-Hawley Tariff. The largest single component in the deterioration in the British balance of payments was the decline in interest and dividends from abroad. Default in Latin America and the decline in dividends paid by enterprises overseas, which were the underlying sources of the decline in British interest receipts, were largely attributable to the deterioration in the export earnings of primary-producing nations. The U.S. was the single largest importer of primary products, accounting for nearly one half of the world total. Hence the collapse of U.S. demands for commodity imports contributed directly to the problems of the primary product exporters. But Smoot-Hawley was only one factor in the collapse of U.S. import demands. Surely the 9 per cent decline in U.S. GNP between 1929 and 1930 and the 25 per percent decline in industrial production between August 1929 and December of the following year had more to do than Smoot-Hawley with the collapse of U.S. imports.^{21/}

Sterling's devaluation encouraged other countries to follow suit. It increased the cost of maintaining prevailing exchange rates. The devaluation of sterling was a beggar-thy-neighbor

policy which put downward pressure of prices and incomes throughout the gold standard world. By promising to weaken the trade balances of other countries, it led speculators to revise upward the probabilities they attached to devaluation abroad. Countries like Sweden and the United States experienced capital outflows. Defending the gold parity required monetary stringency in the depths of a depression, a costly policy the Americans opted for and the Swedes opted against.

The devaluation of sterling represented a fundamental challenge to the international norms governing exchange rate policy. The unwritten rule, for industrial countries, was that they should take whatever domestic measures were required to defend their exchange rates. When so prominent a financial power as Britain violated that rule without evincing regret or incurring sanctions, it became more acceptable for other countries to do likewise. By the time the U.S. devalued in 1933, France's argument that the U.S. had a responsibility to lead the way toward reconstruction of international financial arrangements carried less force than the power of the British counterexample.

Sweden, Denmark, Norway and most members of the British Commonwealth were quick to devalue and to push their currencies down to sterling's level. But a substantial block of countries, France, Belgium, the Netherlands, Switzerland and the United States prominent among them, initially refused to follow. The configuration of domestic interests provides part of the explanation. Remaining on gold threatened to undercut the competitiveness of exports to Britain. In nearly all of the countries to devalue, Britain was the leading export market. Hence the cost to exporters of maintaining the existing parity was particularly high, and they had an incentive to lobby with special fervor. Where producers of traded goods were numerous and influential, as in Sweden and Denmark, they were more likely to dominate the policy debate. In Switzerland, Holland and the United States, the argument that the country's

status as an international financial center would be undermined by devaluation, in conjunction with the political power of the financial interests, carried the day.

But it would be misleading to characterize the decision purely in these terms. To do so neglects the single most influential determinant of countries' willingness to devalue in the 1930s, namely exchange-rate experience in the 1920s. Those countries which had suffered persistent inflation and exchange rate depreciation, arbitrary income redistribution and political and social turmoil were loath to risk a repetition of that experience. This is clearest for countries like Germany and Austria, which had endured hyperinflation. Popular accounts of their hyperinflations singled out exchange rate depreciation as the culprit (Helfferich, 1927). Exchange rate changes allowed speculative pressures to be vented and freed policymakers from the discipline of the gold standard. Even after suffering balance-of-payments crises, these countries sought to maintain at least the facade of the gold standard. Rather than devaluing, they imposed exchange control. The legacy of 1920s experience was equally powerful in countries like France and Belgium where inflation and depreciation had reached only double digit levels. There too inflation had been deeply divisive. Exchange rate changes were associated with political instability -- with the fall of successive governments that had characterized the first half of the 1920s. Devaluation would reopen the Pandora's Box of distributional issues that had finally been closed part of the 1925-26 stabilization, something French and Belgian policymakers were willing to go considerable lengths to avoid.

In countries like Britain and Sweden, in contrast, memory of the experience of the 1920s did not create the same aversion to devaluation in the 1930s. Even there, however, devaluation was associated with inflation, this in a period when prices were spiraling downward.^{22/} But the fear of inflation had not reached phobic proportions as in Germany or

France. It left the public and policymakers more willing to countenance exchange rate changes.

The macroeconomic effects of exchange rate changes in the 1930s remain the subject of dispute. The dominant position in the literature is that these effects were negative. Devaluation was a beggar-thy-neighbor policy which lowered prices and incomes abroad. At the same time, it failed to raise prices or incomes in the initiating country. Hence a global round of currency depreciation left all participating countries worse off.^{23/} To this must be added the uncertainties created by haphazard devaluation. The unpredictability of exchange rates discouraged international trade, preventing increased exports from leading the way out of the Great Depression. The danger of capital losses on foreign balances led to the liquidation of foreign balances, the destruction of international reserves, and downward pressure on money supplies.

These conclusions have been disputed. British policymakers ascribed the end of deflation and the vigorous recovery of the British recovery to the improvement in competitiveness and policy of cheap money permitted by the devaluation of sterling. Many subsequent observers agreed (Arndt, 1944). Admittedly, the policy had beggar-thy-neighbor effects abroad. But there was nothing to prevent governments worldwide from devaluing their currencies, expanding their money supplies and reflating their way out of the Great Depression.^{24/}

Two specific criticisms of exchange rate changes in the 1930s cannot be disputed, however. First, any benefits of currency depreciation were minimized by the haphazard way in which exchange rate changes took place. Failure to coordinate those changes internationally created uncertainties which disrupted trade and otherwise interfered with recovery. Second, currency questions were a source of considerable international political and diplomatic tension. The argument that exchange rate disputes set the stage for other

forms of international hostility gained considerable currency following the outbreak of World War II.

3. The Bretton Woods Years

The experience with exchange rate flexibility in the 1930s was viewed as fundamentally unsatisfactory. Floating exchange rates, observers concluded, tended to be destabilized by speculators. The global macroeconomy, they continued, tended to be destabilized by haphazard exchange rate changes (Nurkse, 1944). It was in reaction against the perceived drawbacks of adjustable rates that the Bretton Woods System was constructed. The Bretton Woods negotiations are too well known to require lengthy discussion here (Gardner, 1956). The exchange arrangements represented a compromise between the American position that rates should be fixed once and for all, and the British desire to retain the option of changing them to reconcile payments balance with full employment. The compromise was to accept the American priority of fixed rates but to attach the escape clause demanded by the British. Although exchange rates would be pegged within one per cent bands and controls on current account transactions would be prohibited, countries would be able to propose changes in the par value of their currencies as needed to correct "fundamental disequilibria." The term was left vague as a way of skirting residual differences between the Americans and the British. Thus, the Bretton Woods Agreement provided scope for exchange rate changes without specifying unambiguous indicators of when they were warranted or required.

The Bretton Woods settlement frequently is characterized in terms consistent with the theory of hegemonic stability. International agreement required strong national leadership. 44 nations assembled at Bretton Woods but only after the agenda had been set by two years of Anglo-American negotiations. The dominance of the United States in the postwar international economy was beyond question. But while the framework adopted at Bretton

Woods more closely resembled the American than the British proposals, significant compromises were still required of the United States (Eichengreen, 1989a). International consensus, not simply American hegemony, was the prerequisite for the Bretton Woods Agreements. Consensus existed because of a shared perception of the shortcomings of interwar financial arrangements.

Exchange rate instability at the core of the new system proved relatively rare. Each of the changes in Europe -- the British devaluations of 1947, 1949 and 1967, the French devaluations of 1957 and 1958, the German and Dutch revaluations of 1961, to name the most prominent -- became the subject of literatures, itself an indication of their exceptional nature. The postwar period therefore represented a complete turnaround from the international monetary relations of the 1930s. The point is not simply that an international agreement to stabilize exchange rates was negotiated after World War II, but that the new system in fact produced the kind of exchange rate stability envisaged by its architects.

It is hard to see how the growth of exchange-rate stability reflected shifts in the balance of political power between those standing to gain and lose from parity changes. Spero (1985, p. 49) for one argues it did: she suggests that policymakers avoided exchange rate changes because these had politically risky distributional consequences. But why should such risks have risen discontinuously after World War II? Rather, the principal shift was the priority attached to full employment. Just as in the 1920s, there was a desire to promote the expansion of international trade as an engine of economic growth, and stable exchange rates were viewed as a means to this end. But whenever fixed exchange rates represented a constraint on full employment policies, they became an enemy, not a friend. It was far from clear whether the new emphasis on employment and growth would encourage or discourage the maintenance of fixed rates.

What truly differentiated the 1950s from the 1920s was a willingness to suppress distributional conflicts in the interest of economic growth. One interpretation of the disasters of the 1920s was that distributional conflicts had been allowed to disrupt the growth process. Memory of this experience and of the widespread unemployment to which it had led subdued labor militancy and suppressed the distributional struggle which had traditionally dominated discussions of exchange rate policy.

International sanctions and explicit codes of conduct played little role in the maintenance of stable exchange rates. The U.S. had hoped to establish formal rules governing exchange rate changes. To prevent beggar-thy-neighbor devaluations, it proposed investing the IMF with veto power over all par changes. The British, worried not about competitive devaluation but about the deflationary bias that would be imparted to the world economy by a system which placed the burden of adjustment on deficit countries, had proposed taxing surplus countries on their foreign balances and even canceling credit balances as a way of forcing the elimination of surpluses. Neither sanction was adopted, however. The Fund was given the opportunity to object to changes in parity that exceeded 10 per cent, but no such objections were ever registered. A scarce currency clause, authorizing discriminatory exchange restrictions on transactions with surplus countries, was adopted but never invoked.

Thus, countries sought to maintain stable rates not because a formal set of sanctions had been constructed at Bretton Woods, but because of the lesson drawn from the experience of the 1930s that exchange rate changes were counterproductive. They succeeded in part because the United States adopted policies that minimized the costs of maintaining stable rates. The U.S. pursued expansionary fiscal policies that helped to eliminate its immediate postwar surpluses. It extended foreign aid to deficit countries, notably through the Marshall Plan. It allowed the restoration of convertibility to be delayed. It abandoned restrictions on the reindustrialization of the Axis countries. It encouraged the formation of the European

Coal and Steel Community, overlooking its discriminatory nature. It allowed Japan to impose restrictions against American goods and the European Payments Union to discriminate against the dollar. Clearly, if the theory of hegemonic stability ever applies to the history of the international monetary system, it applies to the first decade of Bretton Woods.

Those few exchange rate adjustments undertaken by the industrial countries were exceptional.^{25/} Their common correlate was the incompatibility of the prevailing exchange rate with the targets of domestic policy. A high level of deficit spending by government figures in the French devaluation of 1957, the British devaluation of 1967 and the American devaluation of 1971 alike. In each case, military exigencies or employment targets constrained fiscal retrenchment. France's external difficulties in 1957, for example, could be traced to war expenditures in Algeria and to the import boom associated with government budget deficits. Devaluation was made necessary by the loss of 45 per cent of reserves in five quarters starting with 1956-I. But the 1957 devaluation failed to restore current account balance because it was not accompanied by fiscal correction. The persistence of inflation, in the presence of a stable exchange rate, continued to erode industrial competitiveness. The 1958 devaluation worked better because it was accompanied by the necessary fiscal measures.

The 1967 devaluation of the British pound reflected a combination of rising money wages and industrial productivity that lagged behind productivity growth abroad.^{26/} Between 1961 and 1964 the IMF extended three stand-by arrangements to Britain. The fall of unemployment to little more than one per cent in 1966 put growing pressure on labor costs. Higher costs translated into higher prices which reduced competitiveness and worsened the trade balance. Fiscal retrenchment which reduced the demand for imports would have moderated the balance-of-payments problem but was viewed as inconsistent with the goal of full employment. Import surcharges and rationing foreign exchange to tourists were inadequate palliatives; they could only delay the crisis. The approach of an election in

March 1966 further delayed retrenchment on the fiscal front. Large imports of military aircraft and a dock strike combined to give another fillip to import demand. Devaluation was the inevitable result.

The 1971 devaluation of the dollar fits the mold. While the causes of the crisis are debated, one point upon which observers agree is that deficit spending, associated with the Vietnam War, created both inflationary pressure which eroded the competitiveness of U.S. exports and demand pressure which stimulated imports. External deficits were the result. The willingness of foreign countries to absorb dollar reserves, in part because a stable dollar was viewed as the linchpin of the fixed rate system, put off the day of reckoning, but did not eliminate it.^{27/}

Prior to the 1956-57 Suez crisis, which brought pressure to bear on sterling and the franc, the IMF played little role in these events. Until 1956 gross drawings on the Fund and stand-by arrangements never exceeded \$500 million per annum, a negligible sum. Even in the 1960s, regular meetings of European central bankers at the Bank for International Settlements and of the Group of Ten finance ministers played a more important role in the operation of the international monetary system (Tew, 1988). The central bankers supported weak currencies and coordinated their activities in the gold market to minimize pressure on the dollar. The finance ministers devised ad hoc arrangements to support the pound. While the U.S. played a prominent role in these negotiations, the extraordinary period of U.S. hegemony was over. Once again crisis management was a matter for collective action, not a U.S. responsibility.

As the 1960s wore on, policymakers voiced complaints that international monetary disturbances were destabilizing domestic economies. With the reserve-currency country running inflationary policies, fixed exchange rates came to be seen as incompatible with price stability. In 1969 and 1971, in a replay of the situation ten years before, Germany was

forced to absorb dollars to prevent an acceleration of inflation. With governments hesitant to devalue or to adopt other policies to restore external balance, "hot money" flows across borders forced sudden shifts in domestic policy in order to defend the existing set of rates. The U.S., once largely insulated from international pressures, was profoundly affected: interest rate reductions in April-May 1971 provoked capital outflows and had to be reversed abruptly. "Stop-go" policies were viewed as responsible for the slow but disturbing rise in unemployment. Rather than part of the solution, fixed exchange rates increasingly came to be seen as part of the problem.

Proposals to enhance exchange rate flexibility proliferated. In 1968 the finance ministers of the Group of Ten discussed the possibility of adjusting par values. In 1969 the executive directors of IMF held secret discussions on the question. Four meetings of prominent businessmen were held in 1969 and 1970 to assess the prospects (Marris, 1970). In 1970 the Fund published a public report trumpeting the benefits of greater exchange rate flexibility. There were signs that countries were taking these suggestions to heart: in 1969 France devalued the franc and Germany revalued the mark. But these measures could not resolve the fundamental problem of the dollar. Although the U.S. might have devalued, American officials argued, perhaps self-servingly, that this would have simply provoked competitive devaluations by other countries. Even if no competitive devaluations took place, dollar devaluation would have undermined confidence in the gold-dollar standard. Central banks would have suffered capital losses on their dollar reserves. And once the U.S. had demonstrated its willingness to devalue the dollar, there would be little reason to doubt that it could do so again. Foreign countries would have had an incentive to shift out of dollars and into gold, forcing the U.S. to suspend gold convertibility and wreaking havoc with the reserve base of the international system.28/

Why had the system of fixed rates proved so difficult to manage? Perhaps policymakers had underestimated the extent to which fixed exchange rates required harmonization of national economic policies (Cooper, 1968). They failed to anticipate the rapid internationalization of financial markets (Bell, 1973) -- the establishment of foreign branches by banks and the rise of the Eurodollar market -- or the growth of multinational production (Krause, 1972). They did not anticipate the rise in international capital mobility following the restoration of convertibility in 1958.

Alternatively, policymakers may have been aware of the extent of interdependence, but willingly tolerated it only when the reserve currency country to which they pegged exerted a stabilizing influence over the world economy. According to this hegemonic stability interpretation (McKinnon, 1979), U.S. inflation brought down the system. The rebuttal is that the gold-dollar standard would have collapsed eventually of its own weight (Triffin, 1960). A growing world economy required an elastic supply of reserves, which in practice meant an elastic supply of foreign dollar liabilities. U.S. deficits reflected the demand for incremental reserves by the rest of the world, not excessive absorption in the United States. As foreign dollar liabilities came to exceed U.S. gold reserves, confidence in the ability of the U.S. to maintain gold convertibility was inevitably eroded. A different variant of this argument emphasizes the failure of the surplus countries to eliminate their own payments imbalances (Hinshaw, 1971). Germany and the Netherlands in particular were criticized for failing to reflate or revalue their currencies, much as the U.S. and France had been accused of destabilizing the international monetary system by running persistent payments surpluses in the late 'twenties and early 'thirties.

A final explanation, compatible with the preceding, is that the 'fifties and 'sixties had reminded policymakers of the drawbacks of fixed rate systems, while the shortcomings of the alternative arrangements that preceded Bretton Woods had receded from memory.

4. The Post-1971 Nonsystem

When devaluation of the dollar in 1971 and 1973 brought the Bretton Woods era to a close, there was little desire to construct a new fixed-rate system in its image. The Smithsonian Agreement of December 1971 was a stopgap measure: it restored fixed rates temporarily but raised the dollar price of gold, realigned exchange rates, and widened fluctuation bands from 1 to 2.25 per cent. Dollar exchange rates could fluctuate within a 4 1/2 per cent "tunnel." Richard Nixon called the Smithsonian Agreement "the greatest monetary agreement in the history of the world," by which he presumably meant that it was the first time that a multilateral realignment of parities had been negotiated. This was a gross overstatement. The arrangement survived for barely a year.

Exchange rates were allowed to float and, as in the 1930s, were subjected to sporadic intervention. An amendment to the IMF Articles of Agreement in 1976 acknowledged the new reality, officially permitting member countries to maintain floating exchange rates but to intervene in the market. Members were instructed to collaborate with the Fund and to pursue policies consistent with the stability of floating rates. Exchange rates were supposed to adjust smoothly to offset international inflation differentials, and to provide policymakers with the insulation to pursue their desired mix of domestic policies. Officials in the U.S. and Europe alike were naively optimistic about the performance of floating rates.^{29/} The lessons of interwar experience had been largely forgotten. Subsequent developments were easily predicted on the basis of that experience (Dornbusch and Frankel, 1987). Floating exchange rates proved highly volatile. They showed little tendency to adjust smoothly to eliminate current account imbalances. They provided little insulation for domestic policymakers.

From the beginning, European policymakers were dissatisfied with these arrangements. All of the factors emphasized in this paper contributed to their position. Domestic politics played a role through the operation of the Common Agricultural Policy (CAP). Economic

and monetary unification in Europe, underway since 1955, hinged on maintaining the support of the powerful agricultural lobby. The complex system of subsidies and marketing arrangements established through the CAP were readily disrupted by exchange rate fluctuations. Since minimum domestic currency prices of agricultural commodities were established in each country, exchange rate changes could create tremendous incentives for cross-border transactions. Barriers to such trade were porous at best. Stabilizing exchange rates within Europe considerably eased the administration of this program.

International considerations were equally prominent. The European economies were much more open on average than the United States. But they were open mainly to trade with one another. Stabilizing exchange rates within Europe therefore went a long way toward stabilizing trade-weighted effective exchange rates there (Giavazzi and Giovannini, 1989).

Finally, history continued to influence attitudes toward floating exchange rates more powerfully in Europe than in other parts of the world. It was in Europe where currency warfare in the 1930s was seen as having set the stage for other forms of hostilities.^{30/} Consequently it was in Europe where opposition to floating was most intense.

European policymakers first objected to the 4 1/2 dollar bands envisaged under the Smithsonian agreement, which allowed European currencies to fluctuate by fully nine per cent if one rose to its maximum against the dollar while the other fell to its minimum. They opposed this degree of flexibility for all three reasons detailed above. Consequently, they moved toward an agreement to stabilize exchange rates within Europe while permitting them to continue to float against the dollar. In a sense, this offered the best of both worlds: exchange rate stability vis-a-vis their most important trading partners, and insulation through exchange rate adjustments from destabilizing impulses emanating from the United States.

The first step was the "snake," adopted in 1972, which limited the fluctuation of European currencies to half the limits prescribed by the Smithsonian Agreement. The dollar and the DM were allowed to float against one another, while the other European currencies were stabilized against the DM. The snake had its ups and downs: a number of countries defected, notably following Britain's devaluation in 1973, while others joined. France left the snake in January 1973, rejoined in July 1975 and left again in March 1976. The arrangement was never wholly satisfactory: the recurrent danger of speculative crisis and forced devaluation undermined exchange rate stability. The participants failed to harmonize their national economic policies sufficiently to stabilize bilateral rates. 2 1/4 per cent bands were neither wide enough for policy autonomy nor narrow enough for exchange rate stability.

The agreement had to be revised in the direction of either greater stability or greater flexibility. By December 1978 most of the principal members of the European Community had agreed to an initiative to fix exchange rates among themselves. The European Monetary System (EMS) produced by their agreement has evolved in stages. The first stage, from 1979 through 1983, was characterized by little policy convergence within Europe, wide inflation differentials, and frequent speculative crises and realignments. These years saw a succession of major realignments, hardly a return to exchange-rate stability. The second stage, from 1984 through 1988, was characterized by a marked convergence of monetary and fiscal policies, a narrowing of inflation differentials, and a decline in the frequency of exchange rate changes.^{31/} In the third stage, beginning in 1989, interest differentials between the principal European countries have all but disappeared, as capital controls are relaxed with an eye toward 1992.

U.S. opinion has been slower to react against floating. Initially, American policymakers had been skeptical of the merits of adjustable rates. But the first two years of floating succeeded in greatly attenuating America's external problem. The effective dollar exchange

rate fell by 19 per cent in the three years from mid-1970 to mid-1973, and the American balance of payments strengthened. But following this agreeable experience, disturbances became more frequent as policies continued to diverge. The dollar began to fluctuate more widely. By 1977, U.S. policymakers had added their voice to the chorus of complaints about floating rates. But with the U.S. economy less open to foreign trade than its European counterparts, American policymakers attached less importance to the costs of real exchange rate fluctuations. They were more sympathetic than their European counterparts to the notion that exchange rate flexibility preserved the autonomy of domestic policy.

U.S. policy oscillated between intervention and neglect of the foreign exchange market. In the second half of the 'seventies, the U.S. dollar tended to fall as a result of the money-fueled recovery of the U.S. economy from the 1973-75 recession. In 1978 and again in 1979, the U.S. intervened in an effort to stem the dollar's fall, while other industrial countries intervened to moderate the rise of their currencies. By 1981, the switch to tight money (and loose fiscal policy) had transformed the dollar's position from weakness to strength, and the new U.S. administration adopted a hands off policy toward the foreign exchange market. As the U.S. Treasury Under Secretary put it, in a remarkable inability to see that the exchange rate is the relative price of two currencies, "Let them worry about their exchange rates and we will worry about ours."32/

By 1985, the Reagan Administration finally concluded that the rise of the dollar had gotten out of hand. Internationally coordinated foreign exchange market intervention in September 1985 (The "Plaza Agreement") helped to start the dollar back down.33/ Even within the free-market oriented Reagan Administration one began to hear more talk of managed floating and more automaticity in the management of exchange rates. A new phase in the development of attitudes, if not yet in the development of the international monetary system itself, was underway.

5. Conclusion

Viewed from an historical perspective, the dominant characteristic of the last century of international monetary experience has been instability -- if not of exchange rates themselves, then of the arrangements through which their movement is governed. This paper has considered alternative explanations for that instability. It has resisted the notion that the standard domestic and international explanations, in particular the coalition-based variant of the former and the hegemonic-stability variant of the latter, provide an adequate account of the forces producing the successive phases in the evolution of international monetary relations. Rather, these phases only become intelligible when the conventional domestic and international explanations are supplemented with the role of economic history.

As noted in the introduction, in the international monetary sphere, historical memory is short. Policymakers seem capable of recalling only the shortcomings of the immediately preceding set of arrangements. This model suggests that by the turn of the century there will develop intense pressure for a shift back to a system of fixed exchange rates.

FOOTNOTES

1. See for example the introduction to Frieden and Lake (1987).
2. The following distinction draws on the taxonomy offered by Weir and Skocpol (1985).
3. This, as we shall see, is a summary of Hirschman's (1973) description of the distributional consequences of currency depreciation in 19th century Latin America. One finds a similar argument in Gerschenkron's (1943) analysis of the Bismarckian tariff.
4. The concept of international regime was introduced into the international relations literature by Ruggie (1975). This definition is taken from Keohane (1980). I pass over this theory quickly, since I have considered it previously in two places (Eichengreen, 1989a, 1989b).
5. The literature on norms has a long tradition in sociology, and is echoed by a literature on such practices as gift exchange in anthropology.
6. Note the prominence of the word "may." The logic in the text is the conventional wisdom, particularly in histories of international monetary relations in the 1930s. I challenge its generality below.
7. There exist other explanations, as the account which follows should make clear. Here I focus on the two dominant explanations in order to portray the literature as starkly as possible.
8. The original sources of the argument are Brown (1940) and Kindleberger (1973). The phrase was coined by Keohane (1980).
9. Feavearyear (1931), p. 142.
10. This discussion follows Redish (1988).
11. Hilgerdt (1945), Table IX; Fishlow (1986), Table 1.
12. Ford (1962) advances this explanation for Argentina, Fritsch (1983) for Brazil, and Fetter (1931) for Chile.
13. "There can be no question," as T.E. Gregory wrote somewhat later, "that the development of an international gold standard in the second half of the 19th century and the enormous growth of international trade and investment which then took place are no mere coincidences." Gregory (1935), p. 10.
14. Bloomfield (1959), pp. 45-46. It should be noted that postwar reforms of central bank statutes in some cases limited the scope for engaging in open market operations. See Eichengreen (1986).

15. Growing exchange rate stability, capped by the devaluation of sterling in 1931, led to the liquidation of a large proportion of global foreign exchange reserves, hastening the collapse of the fixed rate system. See Eichengreen (1988).
16. So far as I can determine the phrase "rules of the game" was only coined by Keynes in 1925. See the discussion in Eichengreen, Watson and Grossman (1985).
17. Pippinger (1984) shows that prior to 1913 the Bank of England often violated the rules of the game in the short run but that it generally obeyed them in the long run. Econometric analyses of central bank reaction functions for the interwar period appear in Eichengreen, Watson and Grossman (1985) and Eichengreen (1989c).
18. Thus, Eichengreen, Watson and Grossman (1985) find that a rise in unemployment increased the likelihood that the Bank of England would reduce its discount rate. Eichengreen (1989c) similarly finds, for a cross section of some two dozen countries, that a fall in industrial production increased the likelihood that central banks would reduce their discount rates or otherwise alter policy in ways that would increase the ratio of domestic to international assets.
19. This discussion of the 1931 devaluation of sterling draws on my account in Cairncross and Eichengreen (1983), chapter 3.
20. The figures are from Moggridge (1981), who shares this paper's negative assessment of the scope for U.S. loans to stabilize the system.
21. Implicit in this distinction is the belief that Smoot-Hawley did not contribute directly to the depth of the American depression, as I argue in Eichengreen (1989d).
22. British policymakers' inflationary fears are documented in Eichengreen (1981). The situation in Sweden is described by Montgomery (1938).
23. This is the argument of Kindleberger (1973). I have analyzed it at more length in Eichengreen (1988).
24. Theoretical and empirical support for this argument is presented in Eichengreen and Sachs (1985).
25. This generalization leaves aside the exchange-rate changes touched off by the 1949 devaluation of sterling. These devaluations, which involved nearly every country but Japan, Switzerland and the United States, were viewed as necessary to eliminate the postwar dollar shortage by realigning exchange rates to sustainable levels, and were encouraged even by the United States. A complete list of exchange rate changes between 1960 and 1971 would include, in addition to those discussed in the text and in footnote 27, devaluations by Canada in 1962, Denmark in 1967 and France in 1969, and revaluations by Austria and Switzerland in 1971.
26. This account draws on Cairncross and Eichengreen (1983), chapter 5.

27. The German and Dutch revaluations in 1961 require a different explanation. In Germany, policymaking was still dominated by memory of hyperinflation. With the rapid recovery and growth of the German economy in the 1950s (including exports, which increased at an average rate of 16 per cent per annum in volume terms), reserves had risen significantly. But the standard adjustment mechanism -- expanding the money supply and allowing domestic prices to rise relative to the price of foreign goods -- was precluded by fear of inflation. Increasingly foreigners, especially officials of weak currency countries like Britain, criticized German surpluses for potentially destabilizing the international system. Yet the IMF possessed no sanctions that could be used to force Germany to stimulate demand and eliminate its surplus. The one way of restoring external balance without courting inflation was revaluation. As policymakers contemplated this option, speculative capital began to flow toward Germany, intensifying the problem. Once exchange rate stability and inflation came to be viewed as compatible, not incompatible as in the 1920s, pressure built for revaluation. The anti-inflationary influence of revaluation allowed the authorities to adopt other more expansionary policies, and the combination sufficed to eliminate the external surplus temporarily.

The Netherlands had also been running substantial current account surpluses since the early 1950s. Capital movements had been inward for the same reasons as in Germany. Inflationary fears were not quite so intense, but failure to follow Germany's lead would have subjected the economy to a sudden rise in import prices, given that Germany accounted for fully one fifth of Dutch foreign trade.

28. The U.S. therefore argued that it was preferable for other countries to revalue their currencies against the dollar. Unfortunately, this created problems of collective action: every country had the incentive to let the others revalue but to resist doing so itself in order to enhance its international competitiveness. Moreover, revaluation still would have reduced the domestic-currency value of dollar reserves and created the same problem of capital losses.

29. See the quotations by U.S. and German officials in Tew (1988), chapter 17.

30. A subsequent agreement for coordinated intervention was achieved at the Louvre in February 1987. On these negotiations see Funabashi (1988).

31. This argument is advanced by Giavazzi and Giovannini (1988).

32. Beryl Sprinkel, quoted in Gilpin (1987), p. 155.

33. This periodization extends that of Artis (1987).

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August 14, 1989

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